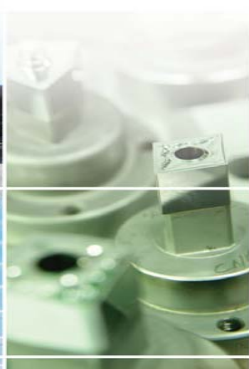
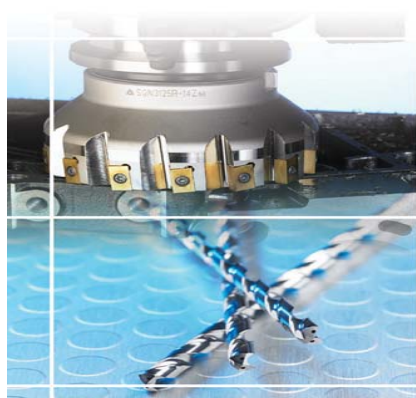


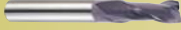
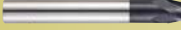
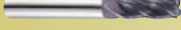
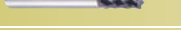
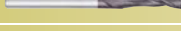
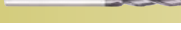
okTec

2024-2025



CARBIDE END MILLS

硬质合金 铣刀

Series 系列	CODE No. 型号	MODEL 形状	DESCRIPTION 描述	PAGE 页码
G-Mill for HRC 50	GFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	7
	GFL2		CARBIDE, 2 FLUTE, LONG LENGTH 硬质合金, 2刃, 加长型	8
	GFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	9
	GFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刃, 加长型	10
	GBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型	12
	GHS4(6)		CARBIDE, 4(6) FLUTE, 45° HELIX, SHORT LENGTH 硬质合金, 4(6)刃, 45°螺旋角, 短型	13
	GHL6		CARBIDE, 6 FLUTE, 45° HELIX, LONG LENGTH 硬质合金, 6刃, 45°螺旋角, 加长型	13
	GCR2		CARBIDE, 2 FLUTE, CORNER RADIUS 硬质合金, 2刃, 圆弧角	15
	GCR4		CARBIDE, 4 FLUTE, CORNER RADIUS 硬质合金, 4刃, 圆弧角	17
H-Mill for HRC 62	HFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	21
	HBLN2		CARBIDE, 2 FLUTE, LONG NECK BALL 硬质合金, 2刃, 颈部加长型, 球头	26
	HCLN2		CARBIDE, 2 FLUTE, LONG NECK CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	31
	HFS2		CARBIDE, 2 FLUTE, EXTENDED NECK 硬质合金, 2刃, 颈部延伸	33
	HFSE2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	34
	HFL2		CARBIDE, 2 FLUTE, LONG LENGTH 硬质合金, 2刃, 加长型	36
	HFS4		CARBIDE, 4 FLUTE, EXTENDED NECK 硬质合金, 4刃, 颈部延伸	38
	HFSE4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	39
	HFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刃, 加长型	41
	HBSE2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型	43
	HBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH WITH NECK 硬质合金, 2刃, 球头, 短型	44
	HBN2		CARBIDE, 2 FLUTE, BALL NOSE, STUB LENGTH, EXTENDED NECK 硬质合金, 2刃, 球头, 超短型, 颈部延伸	44
	HHSM		CARBIDE, 4(6) FLUTE, 45° HELIX, SHORT LENGTH 硬质合金, 4(6)刃, 45°螺旋角, 短型	46
	HHL6		CARBIDE, 6 FLUTE, 45° HELIX, LONG LENGTH 硬质合金, 6刃, 45°螺旋角, 加长型	46
	HCR2		CARBIDE, 2 FLUTE, CORNER RADIUS 硬质合金, 2刃, 圆弧角	48
	HCR4		CARBIDE, 4 FLUTE, CORNER RADIUS 硬质合金, 4刃, 圆弧角	50

CARBIDE END MILLS

硬质合金 铣刀

Series 系列	CODE No. 型号	MODEL 形状	DESCRIPTION 描述	PAGE 页码
V-Mill for HRC 65	VFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	53
	VFLN4		CARBIDE, 4 FLUTE, LONG NECK 硬质合金, 4刃, 颈部加长型	60
	VBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	62
	VCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	67
	VCLN4		CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 4刃, 颈部加长型, 圆弧角	71
	VFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	73
	VFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	75
	VBS2		CARBIDE, 2 FLUTE, SHORT LENGTH, BALL 硬质合金, 2刃, 短型, 球头	77
	VCS2		CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 2刃, 短型, 圆弧角	79
	VCS4		CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 4刃, 短型, 圆弧角	81
	VMC4		CARBIDE, 4 FLUTE, STUB LENGTH, MAXX CORNER RADIUS 硬质合金, 4刃, 超短型, MAXX, 圆弧角	83
	VFT2		CARBIDE, 2 FLUTE, TAPER 硬质合金, 2刃, 斜度	84
	VB2		CARBIDE, 2 FLUTE, TAPER, BALL 硬质合金, 2刃, 斜度, 球头	85
T-Mill for HRC 72	TFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	89
	TBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	92
	TCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	95
	TCLN4		CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 4刃, 颈部延伸, 圆弧角	97
	TFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	98
	TFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	99
	TBS2		CARBIDE, 2 FLUTE, SHORT LENGTH, BALL 硬质合金, 2刃, 短型, 球头	100
	TCS2		CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 2刃, 短型, 圆弧角	101
	TCS4		CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 4刃, 短型, 圆弧角	102
CU-Mill for COPPER 加工 铜	CFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	105
	CBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	108
	CCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	111

CARBIDE END MILLS

硬质合金 铣刀

Series 系列	CODE No. 型号	MODEL 形状	DESCRIPTION 描述	PAGE 页码
S-Mill for STAINLESS STEEL 加工 不锈钢	SQS4 SQL4		CARBIDE, 4 FLUTE, CORNER RADIUS, UNEQUAL FLUTE 硬质合金, 4刃, 圆弧, 不等刃	115
	SFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	116
	SFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刃, 加长型	116
	SRRM		CARBIDE, MULTI FLUTE, 45° HELIX, ROUGHING 硬质合金, 多种刃, 45°螺旋角, 螺纹	118
A-Mill for ALUMINUM 加工 铝	AHS2 AHL2		CARBIDE, 2 FLUTE, 45° HELIX 硬质合金, 2刃, 45°螺旋角	123
	AHS3 AHL3		CARBIDE, 3 FLUTE, 45° HELIX 硬质合金, 3刃, 45°螺旋角	125
	AHX3		CARBIDE, 3 FLUTE, 45° HELIX, EX-LONG LENGTH 硬质合金, 3刃, 45°螺旋角, 超长型	126
D-Mill for GRAPHITE 加工 石墨	DBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型	131
	DBL2		CARBIDE, 2 FLUTE, BALL NOSE, LONG LENGTH 硬质合金, 2刃, 球头, 加长型	132

HSS Co8 END MILLS

含钴8% 高速钢铣刀

CODE No. 型号	MODEL 形状	DESCRIPTION 描述	PAGE 页码
EFR2		HSS CO8, 2 FLUTE, REGULAR LENGTH HSS Co8, 2刃, 普通长度	135
EFR4		HSS CO8, 4FLUTE, CENTER CUTTING, REGULAR LENGTH HSS Co8, 4刃, 标准中心切削, 普通长度	137
ERSM		HSS CO8, COARSE PITCH, CENTER CUTTING, ROUGHING HSS Co8, 大螺距, 标准中心切削, 螺纹铣刀	139

DRILLS

钻头

CODE No. 型号	MODEL 形状	DESCRIPTION 描述	PAGE 页码
DTR		CARBIDE TITAN DRILL, REGULAR LENGTH 硬制合金TITAN 钻头普长	150
DHR		HSS STRAIGHT SHANK DRILL, REGULAR LENGTH HSS 直柄钻头普长	153
DHC		HSS Co8 STRAIGHT SHANK DRILL, REGULAR LENGTH HSS Co8 直柄钻头普长	155
DHN		HSS STRAIGHT SHANK DRILL with TiN COATED HSS TiN 涂层直柄钻头	157
NC090		HSS Co8 NC SPOT DRILL 90° HSS Co8 定心钻头 90°	159
NC120		HSS Co8 NC SPOT DRILL 120° HSS Co8 定心钻头 120°	159
DCT		HSS-E CENTER DRILL 60° HSS-E 中心钻 60°	160

SPECIAL TOOLS

特殊刀具

SPECIAL TOOLS		174
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G-Mill for HRC 50

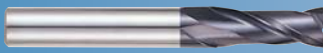
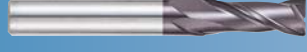
加工 HRC 50 以下

for MULTI PURPOSE
CARBIDE
END MILLS



G-Mill for MULTI PURPOSE for HRC 50

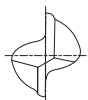
G-Mill 多功能用 HRC 50

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
GFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	7
GFL2		CARBIDE, 2 FLUTE, LONG LENGTH 硬质合金, 2刃, 加长型	8
GFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	9
GFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刃, 加长型	10
GBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型	12
GHS4(6)		CARBIDE, 4(6) FLUTE, 45° HELIX, SHORT LENGTH 硬质合金, 4(6)刃, 45°螺旋角, 短型	13
GHL6		CARBIDE, 6 FLUTE, 45° HELIX, LONG LENGTH 硬质合金, 6刃, 45°螺旋角, 加长型	13
GCR2		CARBIDE, 2 FLUTE, CORNER RADIUS 硬质合金, 2刃, 圆弧角	15
GCR4		CARBIDE, 4 FLUTE, CORNER RADIUS 硬质合金, 4刃, 圆弧角	17

CARBIDE, 2 FLUTE, SHORT LENGTH

硬质合金, 2刃, 短型

G-Mill GFS2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GFS2 010 04	1.0	4	3	50	○
GFS2 015 04	1.5	4	4	50	○
GFS2 020 04	2.0	4	6	50	○
GFS2 025 04	2.5	4	8	50	○
GFS2 030 04	3.0	4	8	50	○
GFS2 030 06	3.0	6	8	50	○
GFS2 035 04	3.5	4	10	50	○
GFS2 035 06	3.5	6	10	50	○
GFS2 040 04	4.0	4	11	50	○
GFS2 040 06	4.0	6	11	50	○
GFS2 045 06	4.5	6	11	50	○
GFS2 050 06	5.0	6	13	50	○
GFS2 055 06	5.5	6	13	50	○
GFS2 060 06	6.0	6	16	50	○
GFS2 065 08	6.5	8	16	60	○
GFS2 070 08	7.0	8	20	60	○
GFS2 075 08	7.5	8	20	60	△
GFS2 080 08	8.0	8	20	60	○
GFS2 085 10	8.5	10	20	75	△
GFS2 090 10	9.0	10	20	75	○
GFS2 095 10	9.5	10	22	75	△
GFS2 100 10	10.0	10	25	75	○
GFS2 110 12	11.0	12	30	75	△
GFS2 120 12	12.0	12	32	75	○
GFS2 140 16	14.0	16	40	100	○
GFS2 160 16	16.0	16	40	100	○
GFS2 180 20	18.0	20	40	100	○
GFS2 200 20	20.0	20	45	100	○

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

CARBIDE, 2 FLUTE, LONG LENGTH

硬质合金, 2刃, 加长型

G-Mill GFL2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GFL2 020 04	2.0	4	10	50	○
GFL2 030 04	3.0	4	15	60	○
GFL2 030 06	3.0	6	15	60	△
GFL2 040 04	4.0	4	20	60	○
GFL2 040 06	4.0	6	20	60	○
GFL2 050 06	5.0	6	25	75	○
GFL2 060 06	6.0	6	30	75	○
GFL2 080 08	8.0	8	35	100	○
GFL2 100 10	10.0	10	45	100	○
GFL2 120 12	12.0	12	45	100	○
GFL2 140 14	14.0	14	70	150	○
GFL2 140 16	14.0	16	70	150	△
GFL2 160 16	16.0	16	70	150	○
GFL2 180 20	18.0	20	75	150	△
GFL2 200 20	20.0	20	75	150	○

※ 上記产品的参数可根据特别的要求制作加工。

○: 标准在庫
△: 预订生产产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

CARBIDE, 4 FLUTE, SHORT LENGTH

硬质合金, 4刃, 短型

G-Mill GFS4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GFS4 010 04	1.0	4	3	50	○
GFS4 015 04	1.5	4	4	50	○
GFS4 020 04	2.0	4	6	50	○
GFS4 025 04	2.5	4	8	50	○
GFS4 030 04	3.0	4	8	50	○
GFS4 030 06	3.0	6	8	50	○
GFS4 035 04	3.5	4	10	50	○
GFS4 035 06	3.5	6	10	50	○
GFS4 040 04	4.0	4	11	50	○
GFS4 040 06	4.0	6	11	50	○
GFS4 045 06	4.5	6	11	50	○
GFS4 050 06	5.0	6	13	50	○
GFS4 055 06	5.5	6	13	50	○
GFS4 060 06	6.0	6	16	50	○
GFS4 065 08	6.5	8	16	60	△
GFS4 070 08	7.0	8	20	60	△
GFS4 075 08	7.5	8	20	60	△
GFS4 080 08	8.0	8	20	60	○
GFS4 085 10	8.5	10	20	75	△
GFS4 090 10	9.0	10	20	75	○
GFS4 095 10	9.5	10	22	75	△
GFS4 100 10	10.0	10	25	75	○
GFS4 110 12	11.0	12	30	75	△
GFS4 120 12	12.0	12	32	75	○
GFS4 140 16	14.0	16	40	100	△
GFS4 160 16	16.0	16	40	100	○
GFS4 180 20	18.0	20	40	100	○
GFS4 200 20	20.0	20	45	100	○

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

CARBIDE, 4 FLUTE, LONG LENGTH

硬质合金, 4刃, 加长型

G-Mill GFL4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Application in high speed machining, wet and dry cutting condition.

- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GFL4 020 04	2.0	4	10	50	○
GFL4 030 04	3.0	4	15	60	○
GFL4 030 06	3.0	6	15	60	△
GFL4 040 04	4.0	4	20	60	○
GFL4 040 06	4.0	6	20	60	○
GFL4 050 06	5.0	6	25	75	△
GFL4 060 06	6.0	6	30	75	○
GFL4 080 08	8.0	8	35	100	○
GFL4 100 10	10.0	10	45	100	○
GFL4 120 12	12.0	12	45	100	○
GFL4 140 14	14.0	14	70	150	△
GFL4 140 16	14.0	16	70	150	△
GFL4 160 16	16.0	16	70	150	○
GFL4 180 20	18.0	20	75	150	△
GFL4 200 20	20.0	20	75	150	○

※ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

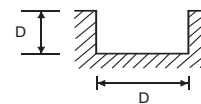
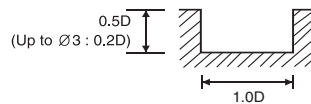
MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

2 FLUTE - FINISH, SLOTTING

2刃 - 精铣, 槽铣

G-Mill GFS2 / GFL2

材质	碳钢, 合金钢, 工具钢		合金钢, 预硬度钢		不锈钢		铸铁		铝合金	
MATERIAL	CARBON STEEL, ALLOY STEEL, TOOL STEEL		ALLOY STEEL, PRE-HARDENED STEEL		STAINLESS STEEL		CAST IRON		ALUMINUM ALLOY	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 50							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	14300	105	8500	65	7150	50	18700	205	44000	330
1.5	9350	150	5550	85	5600	80	12100	205	27500	385
2	7850	160	5150	100	4300	80	9350	220	22000	460
3	6100	180	3800	120	3150	100	6050	220	15400	460
4	5150	255	3150	155	2650	130	4600	220	11000	460
5	4300	270	2550	160	2150	135	3650	220	9150	460
6	3800	300	2300	190	1950	155	2950	255	7600	485
8	2850	325	1700	170	1450	155	2200	275	5700	485
10	2200	280	1350	135	1150	135	1850	285	4600	485
12	1850	240	1150	110	950	110	1450	295	3750	485
14	1700	215	1050	100	850	100	1300	310	3300	485
16	1500	185	950	95	700	95	1100	320	2850	485
20	1150	145	700	70	550	70	900	340	2200	485



※ The FEED, in long & extra long types, should be reduced by around 50%
进给量, LONG & EX-LONG 的时候, 应该大约减少50%

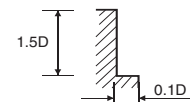
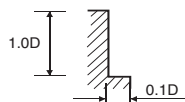
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

4 FLUTE - FINISH, SIDE CUTTING

4刃 - 精铣, 侧铣

G-Mill GFS4 / GFL4

材质	碳钢, 合金钢, 工具钢		合金钢, 预硬度钢		不锈钢		铸铁		铝合金	
MATERIAL	CARBON STEEL, ALLOY STEEL, TOOL STEEL		ALLOY STEEL, PRE-HARDENED STEEL		STAINLESS STEEL		CAST IRON		ALUMINUM ALLOY	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 50							
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	17600	150	10250	85	8650	75	18700	620	44000	1050
1.5	11800	215	7050	115	7050	120	12100	620	27500	1160
2	9850	240	6450	145	5350	120	9350	640	22000	1320
3	7600	270	4750	170	3950	145	6050	640	15400	1320
4	6450	485	3950	300	3300	240	4600	640	11000	1320
5	5350	510	3200	305	2700	255	3650	640	9150	1320
6	4750	560	2850	350	2400	280	2950	770	7600	1430
8	3550	605	2150	325	1800	300	2200	815	5700	1430
10	2750	520	1700	255	1450	255	1850	860	4600	1430
12	2350	440	1450	215	1150	205	1450	900	3750	1430
14	2100	395	1300	195	1050	190	1300	945	3300	1430
16	1850	350	1150	170	950	170	1100	970	2850	1430
20	1450	270	900	135	700	130	900	1035	2200	1430



※ The FEED, in long & extra long types, should be reduced by around 50%
进给量, LONG & EX-LONG 的时候, 应该大约减少50%

RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH

硬质合金, 2刃, 球头, 短型

G-Mill GBS2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Designed for milling of radius bottom slots, fillets and special contours.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 设计用于铣削圆形底部的槽, 带和特殊轮廓
- 适合于高速加工, 冷却液及干式切削条件



R0.1~R3 R3.5~R10

Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GBS2 002 04	R 0.1	0.2	4	0.4	50	○
GBS2 003 04	R 0.15	0.3	4	0.6	50	△
GBS2 004 04	R 0.2	0.4	4	0.8	50	○
GBS2 005 04	R 0.25	0.5	4	1	50	○
GBS2 006 04	R 0.3	0.6	4	1.2	50	○
GBS2 008 04	R 0.4	0.8	4	1.6	50	○
GBS2 010 04	R 0.5	1.0	4	2	50	○
GBS2 015 04	R 0.75	1.5	4	4	50	○
GBS2 020 04	R 1.0	2.0	4	5	50	○
GBS2 025 04	R 1.25	2.5	4	6	50	○
GBS2 030 04	R 1.5	3.0	4	6	50	○
GBS2 030 06	R 1.5	3.0	6	6	50	○
GBS2 040 04	R 2.0	4.0	4	8	50	○
GBS2 040 06	R 2.0	4.0	6	8	50	○
GBS2 050 06	R 2.5	5.0	6	10	50	○
GBS2 060 06	R 3.0	6.0	6	12	50	○
GBS2 070 08	R 3.5	7.0	8	14	60	△
GBS2 080 08	R 4.0	8.0	8	14	60	○
GBS2 090 10	R 4.5	9.0	10	18	75	△
GBS2 100 10	R 5.0	10.0	10	20	75	○
GBS2 120 12	R 6.0	12.0	12	24	75	○
GBS2 160 16	R 8.0	16.0	16	32	100	○
GBS2 200 20	R 10.0	20.0	20	40	100	○

❖ 上記产品的参数可根据特别的要求制作加工。

○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

CARBIDE, 4(6) FLUTE, 45° HELIX

硬质合金, 4(6)刃, 45°螺旋角

G-Mill GHS4(6)



- ▶ High speed cutting and finish milling with high feed rate.
- ▶ Excellent surface finishes.
- ▶ Application in high speed machining, wet and dry cutting condition.
- ▶ 高速切削和高进给量的精切削
- ▶ 卓越的工件表面粗糙度
- ▶ 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 NO. OF FLUTE	库存 STOCK
GHS4 010 04	1.0	4	3	45	4	△
GHS4 015 04	1.5	4	4	45	4	△
GHS4 020 04	2.0	4	6	45	4	△
GHS4 025 04	2.5	4	8	45	4	△
GHS4 030 04	3.0	4	8	50	4	△
GHS4 040 04	4.0	4	11	50	4	△
GHS6 050 06	5.0	6	13	50	6	△
GHS6 060 06	6.0	6	16	50	6	○
GHS6 080 08	8.0	8	19	60	6	○
GHS6 100 10	10.0	10	22	75	6	○
GHS6 120 12	12.0	12	26	75	6	○
GHS6 140 14	14.0	14	30	90	6	○
GHS6 160 16	16.0	16	32	100	6	○
GHS6 180 18	18.0	18	38	100	6	○
GHS6 200 20	20.0	20	38	100	6	△

※ 上記製品の参数可根据特别的要求制作加工。

G-Mill GHL6

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 NO. OF FLUTE	库存 STOCK
GHL6 060 06	6.0	6	25	80	6	○
GHL6 080 08	8.0	8	35	90	6	○
GHL6 100 10	10.0	10	45	100	6	○
GHL6 120 12	12.0	12	50	100	6	○
GHL6 160 16	16.0	16	65	150	6	○
GHL6 200 20	20.0	20	70	150	6	△

※ 上記製品の参数可根据特别的要求制作加工。

※ Ø4mm以下产品时, 为4FL.

○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

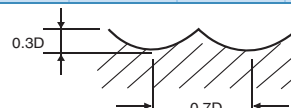
2 FLUTE, BALL NOSE

2刃, 球头

G-Mill GBS2

材质	碳钢, 合金钢, 工具钢		碳钢, 合金钢, 预硬度钢		硬化钢		铸铁		铝合金	
MATERIAL	CARBON STEEL, ALLOY STEEL, TOOL STEEL		CARBON STEEL, ALLOY STEEL, PRE-HARDENED STEEL		HARDENED STEEL		CAST IRON		ALUMINUM ALLOY	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 50		HRC 50 ~					
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²		1500N/mm ² ~					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	12350	640	9150	415	4000	125	10500	220	30800	395
3	11400	575	8550	390	3800	125	7050	230	20500	395
4	8950	630	7150	450	3600	150	5150	285	15400	395
5	7800	700	6200	490	3100	150	4150	330	12100	470
6	7250	870	5900	705	2700	160	3400	360	10300	470
8	6100	1090	4900	785	2050	190	2500	460	7900	540
10	5450	1330	4350	870	1750	190	2050	460	6150	540
12	4990	1500	3950	950	1500	210	1750	460	5150	630
14	4530	1495	3600	925	1300	210	1400	460	4300	630
16	4085	1470	3200	905	1150	210	1300	460	3850	540
18	3800	1425	3000	890	1050	210	1100	460	3400	540
20	3550	1425	2800	885	950	210	1050	420	2950	540

Ae: D1~D6=0.2mm
D8~D20=0.3mm
Ap: 0.2D



* The FEED, in long & extra long types, should be reduced by around 50%
进给量, LONG & EX-LONG 的时候, 应该大约减少50%

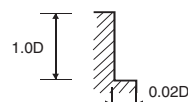
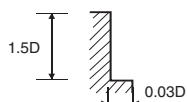
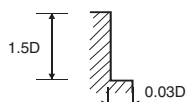
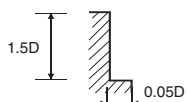
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

4(6) FLUTE, 45° HELIX

4(6)刃, 45°螺旋角

G-Mill GHS4(6) / GHL6

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		硬化钢			
MATERIAL	NON-ALLOY STEEL, ALLOY STEEL, CAST IRON		ALLOY STEEL, HEAT RESISTANT STEEL		HARDENED STEEL			
HARDNESS	~ HRC 30		HRC 30 ~ HRC 50		HRC 50 ~ HRC 60		HRC 60 ~ HRC 65	
STRENGTH	~ 1000N/mm ²		1000 ~ 1750N/mm ²		1750 ~ 2080N/mm ²		2080N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	19000	693	12750	468	10250	284	8000	179
2	13000	825	8750	555	7250	344	5500	212
3	8650	825	5750	555	4750	344	3750	212
4	6600	858	4400	581	3600	357	2800	221
5	6250	990	4150	660	3200	383	2550	245
6	5175	924	3450	627	2650	369	2100	231
8	3900	891	2600	594	2000	344	1600	218
10	3075	831	2050	555	1600	317	1275	204
12	2625	831	1750	555	1825	317	1050	198
16	1950	726	1300	482	1000	278	800	179
20	1550	641	1025	429	800	251	650	165



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 2 FLUTE, CORNER RADIUS

硬质合金, 2刃, 圆弧角

G-Mill GCR2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.

- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GCR2 030 R02	R0.2	3.0	6	10	70	○
GCR2 030 R03	R0.3	3.0	6	10	70	○
GCR2 030 R05	R0.5	3.0	6	10	70	○
GCR2 040 R02	R0.2	4.0	6	12	70	○
GCR2 040 R03	R0.3	4.0	6	12	70	△
GCR2 040 R05	R0.5	4.0	6	12	70	○
GCR2 040 R10	R1.0	4.0	6	12	70	○
GCR2 050 R02	R0.2	5.0	6	15	80	○
GCR2 050 R03	R0.3	5.0	6	15	80	○
GCR2 050 R05	R0.5	5.0	6	15	80	○
GCR2 050 R10	R1.0	5.0	6	15	80	○
GCR2 060 R02	R0.2	6.0	6	15	90	△
GCR2 060 R03	R0.3	6.0	6	15	90	△
GCR2 060 R05	R0.5	6.0	6	15	90	○
GCR2 060 R10	R1.0	6.0	6	15	90	△
GCR2 080 R03	R0.3	8.0	8	20	100	○
GCR2 080 R05	R0.5	8.0	8	20	100	△
GCR2 080 R10	R1.0	8.0	8	20	100	○
GCR2 080 R15	R1.5	8.0	8	20	100	△
GCR2 080 R20	R2.0	8.0	8	20	100	△
GCR2 100 R03	R0.3	10.0	10	25	100	△
GCR2 100 R05	R0.5	10.0	10	25	100	○
GCR2 100 R10	R1.0	10.0	10	25	100	○
GCR2 100 R15	R1.5	10.0	10	25	100	○
GCR2 100 R20	R2.0	10.0	10	25	100	○
GCR2 100 R25	R2.5	10.0	10	25	100	△
GCR2 120 R03	R0.3	12.0	12	30	110	△
GCR2 120 R05	R0.5	12.0	12	30	110	○
GCR2 120 R10	R1.0	12.0	12	30	110	○
GCR2 120 R15	R1.5	12.0	12	30	110	△
GCR2 120 R20	R2.0	12.0	12	30	110	○
GCR2 120 R25	R2.5	12.0	12	30	110	△
GCR2 120 R30	R3.0	12.0	12	30	110	△

✱ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

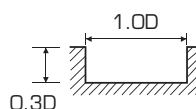
MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

2 FLUTE, CORNER RADIUS - SLOTTING

2刃, 圆弧角 - 槽铣

G-Mill GCR2

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		硬化钢	
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		HARDENED STEEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45		HRc 45 ~ HRc 55	
STRENGTH	~ 1000N/mm ²		1000N/mm ² ~ 1500N/mm ²		1500N/mm ² ~ 2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3	6255	140	4050	70	2970	50
4	5040	180	3240	90	2430	50
5	4320	220	2745	100	2115	70
6	3735	260	2385	130	1845	80
8	2835	190	1800	130	1440	80
10	1935	225	1530	130	1125	80
12	1620	180	1350	120	945	70
16	1620	190	990	90	670	50
20	1170	140	770	60	560	40



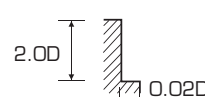
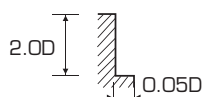
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

2 FLUTE, CORNER RADIUS - SIDE CUTTING

2刃, 圆弧角 - 侧铣

G-Mill GCR2

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		硬化钢	
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		HARDENED STEEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45		HRc 45 ~ HRc 55	
STRENGTH	~ 1000N/mm ²		1000N/mm ² ~ 1500N/mm ²		1500N/mm ² ~ 2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3	6255	180	4050	135	2970	90
4	5040	220	3240	150	2430	95
5	4320	225	2745	190	2115	110
6	3735	225	2385	190	1845	110
8	2835	240	1800	190	1440	110
10	1935	240	1530	190	1125	110
12	1620	190	1350	170	945	95
16	1620	170	990	125	760	80
20	1170	120	770	95	560	60



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 4 FLUTE, CORNER RADIUS

硬质合金, 4刃, 圆弧角

G-Mill GCR4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
GCR4 030 R02	R0.2	3.0	6	10	70	○
GCR4 030 R03	R0.3	3.0	6	10	70	○
GCR4 030 R05	R0.5	3.0	6	10	70	○
GCR4 040 R02	R0.2	4.0	6	12	70	○
GCR4 040 R03	R0.3	4.0	6	12	70	△
GCR4 040 R05	R0.5	4.0	6	12	70	○
GCR4 040 R10	R1.0	4.0	6	12	70	△
GCR4 050 R02	R0.2	5.0	6	15	80	○
GCR4 050 R03	R0.3	5.0	6	15	80	○
GCR4 050 R05	R0.5	5.0	6	15	80	○
GCR4 050 R10	R1.0	5.0	6	15	80	○
GCR4 060 R02	R0.2	6.0	6	15	90	○
GCR4 060 R03	R0.3	6.0	6	15	90	△
GCR4 060 R05	R0.5	6.0	6	15	90	○
GCR4 060 R10	R1.0	6.0	6	15	90	△
GCR4 080 R03	R0.3	8.0	8	20	100	△
GCR4 080 R05	R0.5	8.0	8	20	100	○
GCR4 080 R10	R1.0	8.0	8	20	100	○
GCR4 080 R15	R1.5	8.0	8	20	100	△
GCR4 080 R20	R2.0	8.0	8	20	100	△
GCR4 100 R03	R0.3	10.0	10	25	100	△
GCR4 100 R05	R0.5	10.0	10	25	100	○
GCR4 100 R10	R1.0	10.0	10	25	100	○
GCR4 100 R15	R1.5	10.0	10	25	100	△
GCR4 100 R20	R2.0	10.0	10	25	100	○
GCR4 100 R25	R2.5	10.0	10	25	100	△
GCR4 120 R05	R0.5	12.0	12	30	110	○
GCR4 120 R10	R1.0	12.0	12	30	110	○
GCR4 120 R15	R1.5	12.0	12	30	110	△
GCR4 120 R20	R2.0	12.0	12	30	110	○
GCR4 120 R25	R2.5	12.0	12	30	110	△
GCR4 120 R30	R3.0	12.0	12	30	110	△

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

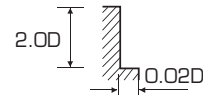
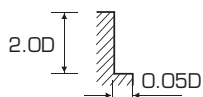
MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

4 FLUTE, CORNER RADIUS

4刃, 圆弧角

G-Mill GCR4

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		硬化钢	
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		HARDENED STEEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45		HRc 45 ~ HRc 55	
STRENGTH	~ 1000N/mm ²		1000N/mm ² ~ 1500N/mm ²		1500N/mm ² ~ 2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3	6255	180	4050	135	2970	90
4	5040	220	3240	150	2430	95
5	4320	225	2745	190	2115	110
6	3735	225	2385	190	1845	110
8	2835	240	1800	190	1440	110
10	1935	240	1530	190	1125	110
12	1620	190	1350	170	945	95
16	1620	170	990	130	760	80
20	1170	120	770	95	560	60



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

H-Mill for HRC 62

加工 HRC 62 以下

**for HARDENED
STEEL
CARBIDE
END MILLS**



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

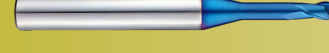
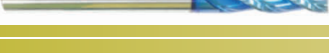
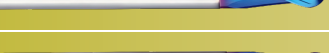
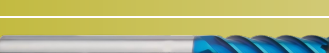
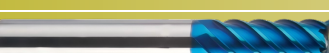
Drill

TAP

Special
Tools

H-Mill for HARDENED STEEL HRC 62

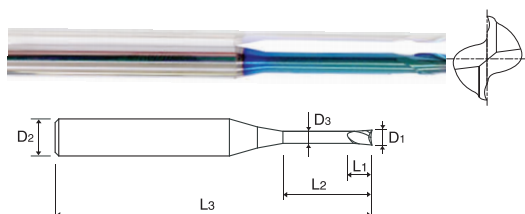
H-Mill 高硬度用 HRC 62

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
HFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刀, 颈部加长型	21
HBLN2		CARBIDE, 2 FLUTE, LONG NECK BALL 硬质合金, 2刀, 颈部加长型, 球头	26
HCLN2		CARBIDE, 2 FLUTE, LONG NECK CONER RADIUS 硬质合金, 2刀, 颈部加长型, 圆弧角	31
HFS2		CARBIDE, 2 FLUTE, EXTENDED NECK 硬质合金, 2刀, 颈部延伸	33
HFSE2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刀, 短型	34
HFL2		CARBIDE, 2 FLUTE, LONG LENGTH 硬质合金, 2刀, 加长型	36
HFS4		CARBIDE, 4 FLUTE, EXTENDED NECK 硬质合金, 4刀, 颈部延伸	38
HFSE4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刀, 短型	39
HFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刀, 加长型	41
HBSE2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刀, 球头, 短型	43
HBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH WITH NECK 硬质合金, 2刀, 球头, 短型	44
HBN2		CARBIDE, 2 FLUTE, BALL NOSE, STUB LENGTH, EXTENDED NECK 硬质合金, 2刀, 球头, 超短型, 颈部延伸	44
HHSM		CARBIDE, 4(6) FLUTE, 45° HELIX, SHORT LENGTH 硬质合金, 4(6)刀, 45°螺旋角, 短型	46
HHL6		CARBIDE, 6 FLUTE, 45° HELIX, LONG LENGTH 硬质合金, 6刀, 45°螺旋角, 加长型	46
HCR2		CARBIDE, 2 FLUTE, CORNER RADIUS 硬质合金, 2刀, 圆弧角	48
HCR4		CARBIDE, 4 FLUTE, CORNER RADIUS 硬质合金, 4刀, 圆弧角	50

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

H-Mill HFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HFLN2 004 01	0.4	4	0.6	1	45	0.37	△
HFLN2 004 02	0.4	4	0.6	2	45	0.37	○
HFLN2 004 03	0.4	4	0.6	3	45	0.37	△
HFLN2 004 04	0.4	4	0.6	4	45	0.37	△
HFLN2 004 05	0.4	4	0.6	5	45	0.37	△
HFLN2 005 02	0.5	4	0.7	2	45	0.45	△
HFLN2 005 03	0.5	4	0.7	3	45	0.45	△
HFLN2 005 04	0.5	4	0.7	4	45	0.45	△
HFLN2 005 06	0.5	4	0.7	6	45	0.45	○
HFLN2 005 08	0.5	4	0.7	8	45	0.45	△
HFLN2 006 02	0.6	4	0.9	2	45	0.55	○
HFLN2 006 03	0.6	4	0.9	3	45	0.55	△
HFLN2 006 04	0.6	4	0.9	4	45	0.55	○
HFLN2 006 06	0.6	4	0.9	6	45	0.55	△
HFLN2 006 08	0.6	4	0.9	8	45	0.55	△
HFLN2 006 10	0.6	4	0.9	10	45	0.55	○
HFLN2 008 02	0.8	4	1.2	2	45	0.75	○
HFLN2 008 04	0.8	4	1.2	4	45	0.75	○
HFLN2 008 06	0.8	4	1.2	6	45	0.75	○
HFLN2 008 08	0.8	4	1.2	8	45	0.75	△
HFLN2 008 10	0.8	4	1.2	10	45	0.75	○
HFLN2 008 12	0.8	4	1.2	12	45	0.75	△

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	h6
Ø3.5 以上~	- 0.020 ~ 0	

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

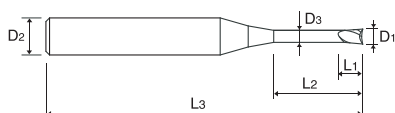
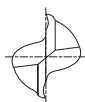
TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

H-Mill HFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	颈径 NECK DIAMETER D ₃	库存 STOCK
HFLN2 010 04	1.0	4	1.5	4	45	0.95	○
HFLN2 010 05	1.0	4	1.5	5	45	0.95	○
HFLN2 010 06	1.0	4	1.5	6	45	0.95	△
HFLN2 010 08	1.0	4	1.5	8	45	0.95	△
HFLN2 010 10	1.0	4	1.5	10	45	0.95	○
HFLN2 010 12	1.0	4	1.5	12	45	0.95	△
HFLN2 010 14	1.0	4	1.5	14	50	0.95	△
HFLN2 010 16	1.0	4	1.5	16	50	0.95	△
HFLN2 010 20	1.0	4	1.5	20	55	0.95	△
HFLN2 012 04	1.2	4	1.8	4	45	1.15	△
HFLN2 012 06	1.2	4	1.8	6	45	1.15	○
HFLN2 012 08	1.2	4	1.8	8	45	1.15	△
HFLN2 012 10	1.2	4	1.8	10	45	1.15	△
HFLN2 012 12	1.2	4	1.8	12	45	1.15	△
HFLN2 012 16	1.2	4	1.8	16	50	1.15	△
HFLN2 015 06	1.5	4	2.3	6	45	1.45	○
HFLN2 015 08	1.5	4	2.3	8	45	1.45	△
HFLN2 015 10	1.5	4	2.3	10	45	1.45	△
HFLN2 015 12	1.5	4	2.3	12	45	1.45	△
HFLN2 015 14	1.5	4	2.3	14	50	1.45	△
HFLN2 015 16	1.5	4	2.3	16	50	1.45	△
HFLN2 015 18	1.5	4	2.3	18	55	1.45	△
HFLN2 015 20	1.5	4	2.3	20	55	1.45	△

❖ 上記产品的参数可根据特别的要求制作加工.

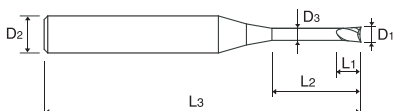
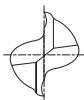
○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.015 ~ 0	h6
Ø3.5 以上~	-0.020 ~ 0	

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

H-Mill HFLN2



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Deep slotting is possible by reduced neck.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工件表面粗糙度.
- ▶ 由于颈部稍细能够加工深槽.
- ▶ 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HFLN2 020 06	2.0	4	3	6	45	1.95	△
HFLN2 020 08	2.0	4	3	8	45	1.95	△
HFLN2 020 10	2.0	4	3	10	45	1.95	○
HFLN2 020 12	2.0	4	3	12	45	1.95	△
HFLN2 020 14	2.0	4	3	14	50	1.95	△
HFLN2 020 16	2.0	4	3	16	50	1.95	△
HFLN2 020 18	2.0	4	3	18	55	1.95	△
HFLN2 020 20	2.0	4	3	20	55	1.95	△
HFLN2 020 22	2.0	4	3	22	60	1.95	△
HFLN2 020 26	2.0	4	3	26	60	1.95	△
HFLN2 020 30	2.0	4	3	30	70	1.95	△
HFLN2 025 08	2.5	4	3.7	8	45	2.4	△
HFLN2 025 10	2.5	4	3.7	10	45	2.4	△
HFLN2 025 12	2.5	4	3.7	12	45	2.4	△
HFLN2 025 14	2.5	4	3.7	14	50	2.4	△
HFLN2 025 16	2.5	4	3.7	16	55	2.4	△
HFLN2 025 18	2.5	4	3.7	18	55	2.4	△
HFLN2 025 20	2.5	4	3.7	20	60	2.4	△
HFLN2 025 26	2.5	4	3.7	26	70	2.4	△
HFLN2 025 30	2.5	4	3.7	30	80	2.4	△

❖ 上記产品的参数可根据特别的要求制作加工.

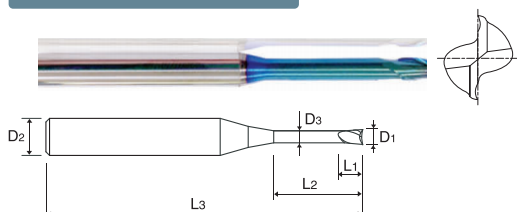
○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	h6
Ø3.5 以上~	- 0.020 ~ 0	

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

H-Mill HFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	h6
Ø3.5 以上~	- 0.020 ~ 0	

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HFLN2 030 08	3.0	6	4.5	8	45	2.85	△
HFLN2 030 10	3.0	6	4.5	10	45	2.85	△
HFLN2 030 12	3.0	6	4.5	12	50	2.85	△
HFLN2 030 14	3.0	6	4.5	14	50	2.85	△
HFLN2 030 16	3.0	6	4.5	16	55	2.85	△
HFLN2 030 18	3.0	6	4.5	18	55	2.85	△
HFLN2 030 20	3.0	6	4.5	20	60	2.85	△
HFLN2 030 26	3.0	6	4.5	26	70	2.85	△
HFLN2 030 30	3.0	6	4.5	30	70	2.85	△
HFLN2 030 36	3.0	6	4.5	36	80	2.85	△
HFLN2 030 40	3.0	6	4.5	40	90	2.85	△
HFLN2 040 10	4.0	6	6	10	50	3.85	△
HFLN2 040 12	4.0	6	6	12	50	3.85	△
HFLN2 040 16	4.0	6	6	16	60	3.85	△
HFLN2 040 20	4.0	6	6	20	60	3.85	△
HFLN2 040 26	4.0	6	6	26	70	3.85	△
HFLN2 040 30	4.0	6	6	30	70	3.85	○
HFLN2 040 36	4.0	6	6	36	80	3.85	△
HFLN2 040 40	4.0	6	6	40	90	3.85	△
HFLN2 040 46	4.0	6	6	46	90	3.85	△
HFLN2 040 50	4.0	6	6	50	100	3.85	△
HFLN2 050 16	5.0	6	7.5	16	60	4.85	△
HFLN2 050 20	5.0	6	7.5	20	60	4.85	△
HFLN2 050 26	5.0	6	7.5	26	70	4.85	△
HFLN2 050 30	5.0	6	7.5	30	80	4.85	△
HFLN2 050 36	5.0	6	7.5	36	80	4.85	△
HFLN2 050 40	5.0	6	7.5	40	80	4.85	△
HFLN2 050 50	5.0	6	7.5	50	110	4.85	△
HFLN2 060 20	6.0	6	9	20	80	5.85	△
HFLN2 060 30	6.0	6	9	30	90	5.85	△
HFLN2 060 40	6.0	6	9	40	100	5.85	△
HFLN2 060 50	6.0	6	9	50	110	5.85	△

※ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

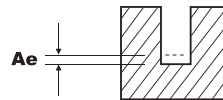
CARBIDE, 2 FLUTE, LONG NECK

2刃, 颈部加长型

H-Mill HFLN2

材质	非合金钢, 合金钢, 铸铁			合金钢, 耐热钢			硬化钢		
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON			ALLOY STEEL HEAT RESISTANT STEEL			HARDENED STEEL		
HARDNESS	~ HRc 30			HRc 30 ~ HRc 45			HRc 45 ~ HRc 62		
STRENGTH	~ 1000N/mm ²			1000N/mm ² ~ 1500N/mm ²			1500N/mm ² ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae (mm)	RPM	FEED	Ae (mm)	RPM	FEED	Ae (mm)
0.4	38610~43470	260~506	0.007~0.018	28080~31050	117~391	0.007~0.018	17550~18630	39~104	0.004~0.008
0.5	29700~37800	260~506	0.009~0.022	28080~31050	117~391	0.009~0.022	17550~18630	39~104	0.004~0.009
0.6	29700~37800	325~656	0.011~0.026	28080~31050	110~506	0.011~0.026	17550~18630	52~124	0.005~0.011
0.7	29700~37800	325~656	0.012~0.031	28080~31050	110~506	0.012~0.031	17550~18630	52~124	0.006~0.013
0.8	25650~33300	364~756	0.014~0.035	23985~26910	120~552	0.014~0.035	15210~16043	59~145	0.007~0.015
0.9	23400~29700	364~524	0.030~0.060	22230~24840	160~162	0.030~0.060	13455~13973	65~150	0.008~0.016
1	21600~27000	364~524	0.045~0.090	19305~21735	190~679	0.045~0.090	12285~13973	91~150	0.009~0.018
1.2	17550~21600	364~1024	0.055~0.100	16380~17595	190~679	0.055~0.100	10530~11385	91~150	0.010~0.022
1.4	15300~18900	364~1024	0.062~0.125	14040~15525	190~679	0.062~0.125	8775~9833	91~150	0.012~0.025
1.5	13950~18000	364~1024	0.070~0.135	12870~15008	190~679	0.070~0.135	8190~8798	91~150	0.014~0.028
1.6	13500~17100	364~1024	0.075~0.145	12870~13973	190~679	0.075~0.145	7605~8798	91~150	0.015~0.030
1.8	12600~16200	364~1024	0.080~0.160	11700~12420	190~679	0.080~0.160	7020~7763	91~150	0.016~0.032
2	11250~13950	364~1024	0.090~0.180	10530~11385	190~679	0.090~0.180	6435~7245	91~150	0.018~0.035
2.5	9000~11700	364~1024	0.112~0.235	8190~9315	190~679	0.112~0.235	5265~5693	91~150	0.022~0.045
3	7650~9450	364~1024	0.135~0.270	7020~7763	190~679	0.135~0.270	4095~4658	91~150	0.028~0.055
4	5850~7200	364~1024	0.180~0.360	5265~5693	190~679	0.180~0.360	3159~3623	91~150	0.036~0.072
5	4500~5850	364~1024	0.225~0.450	4095~4658	190~679	0.225~0.450	2574~2898	91~150	0.045~0.090
6	4050~4950	364~1024	0.270~0.540	3510~4140	190~679	0.270~0.540	2340~3105	91~150	0.054~0.108

(Depth of Cut per one pass)

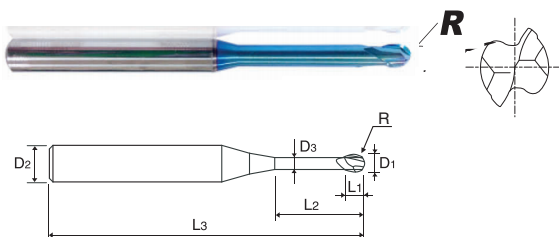


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)

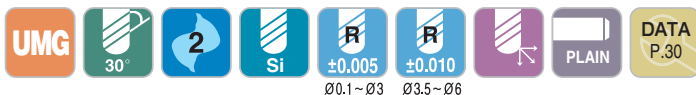
CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

H-Mill HBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	颈径 NECK DIAMETER D ₃	库存 STOCK
HBLN2 004 01	R0.2	0.4	4	0.4	1	45	0.37	△
HBLN2 004 02	R0.2	0.4	4	0.4	2	45	0.37	△
HBLN2 004 03	R0.2	0.4	4	0.4	3	45	0.37	△
HBLN2 004 04	R0.2	0.4	4	0.4	4	45	0.37	△
HBLN2 004 05	R0.2	0.4	4	0.4	5	45	0.37	△
HBLN2 005 01	R0.25	0.5	4	0.5	1	45	0.45	△
HBLN2 005 02	R0.25	0.5	4	0.5	2	45	0.45	△
HBLN2 005 03	R0.25	0.5	4	0.5	3	45	0.45	△
HBLN2 005 04	R0.25	0.5	4	0.5	4	45	0.45	△
HBLN2 005 05	R0.25	0.5	4	0.5	5	45	0.45	△
HBLN2 005 06	R0.25	0.5	4	0.5	6	45	0.45	△
HBLN2 005 08	R0.25	0.5	4	0.5	8	45	0.45	△
HBLN2 006 01	R0.3	0.6	4	0.6	1	45	0.55	△
HBLN2 006 02	R0.3	0.6	4	0.6	2	45	0.55	○
HBLN2 006 03	R0.3	0.6	4	0.6	3	45	0.55	△
HBLN2 006 04	R0.3	0.6	4	0.6	4	45	0.55	○
HBLN2 006 05	R0.3	0.6	4	0.6	5	45	0.55	△
HBLN2 006 06	R0.3	0.6	4	0.6	6	45	0.55	△
HBLN2 006 08	R0.3	0.6	4	0.6	8	45	0.55	△
HBLN2 006 10	R0.3	0.6	4	0.6	10	45	0.55	△

✦ 上記产品的参数可根据特别的要求制作加工.

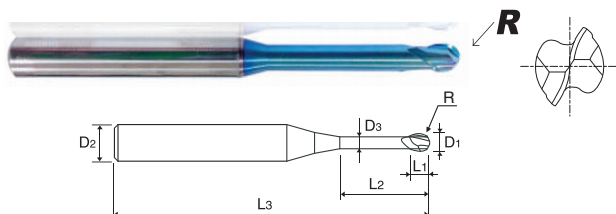
○ : 标准在庫
△ : 预订生产产品

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.015 ~ 0	h6
Ø3.5 以上~	-0.020 ~ 0	

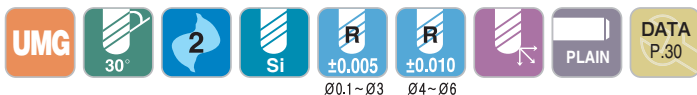
CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

H-Mill HBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	颈径 NECK DIAMETER D ₃	库存 STOCK
HBLN2 008 02	RO.4	0.8	4	0.8	2	45	0.75	○
HBLN2 008 04	RO.4	0.8	4	0.8	4	45	0.75	○
HBLN2 008 06	RO.4	0.8	4	0.8	6	45	0.75	△
HBLN2 008 08	RO.4	0.8	4	0.8	8	45	0.75	△
HBLN2 008 10	RO.4	0.8	4	0.8	10	45	0.75	△
HBLN2 010 03	RO.5	1.0	4	1	3	45	0.95	○
HBLN2 010 04	RO.5	1.0	4	1	4	45	0.95	△
HBLN2 010 05	RO.5	1.0	4	1	5	45	0.95	△
HBLN2 010 06	RO.5	1.0	4	1	6	45	0.95	○
HBLN2 010 07	RO.5	1.0	4	1	7	45	0.95	△
HBLN2 010 08	RO.5	1.0	4	1	8	45	0.95	△
HBLN2 010 10	RO.5	1.0	4	1	10	45	0.95	△
HBLN2 010 12	RO.5	1.0	4	1	12	45	0.95	○
HBLN2 010 14	RO.5	1.0	4	1	14	50	0.95	△
HBLN2 010 16	RO.5	1.0	4	1	16	50	0.95	△
HBLN2 010 20	RO.5	1.0	4	1	20	55	0.95	△
HBLN2 012 04	RO.6	1.2	4	1.2	4	45	1.15	○
HBLN2 012 06	RO.6	1.2	4	1.2	6	45	1.15	△
HBLN2 012 08	RO.6	1.2	4	1.2	8	45	1.15	△
HBLN2 012 10	RO.6	1.2	4	1.2	10	45	1.15	○
HBLN2 012 12	RO.6	1.2	4	1.2	12	45	1.15	△

❖ 上記产品的参数可根据特别的要求制作加工.

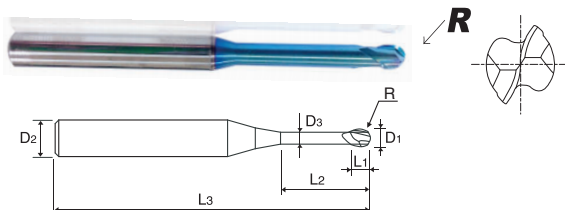
○:标准在庫
△:预订生产品

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.015 ~ 0	
Ø3.5 以上~	-0.020 ~ 0	h6

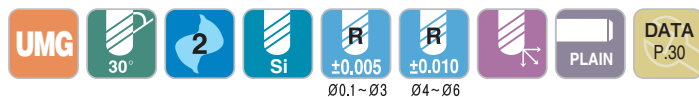
CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

H-Mill HBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	h6
Ø3.5 以上~	- 0.020 ~ 0	

Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HBLN2 014 08	RO.7	1.4	4	1.4	8	45	1.35	△
HBLN2 014 12	RO.7	1.4	4	1.4	12	45	1.35	△
HBLN2 014 16	RO.7	1.4	4	1.4	16	50	1.35	△
HBLN2 015 04	RO.75	1.5	4	1.5	4	45	1.45	○
HBLN2 015 06	RO.75	1.5	4	1.5	6	45	1.45	△
HBLN2 015 08	RO.75	1.5	4	1.5	8	45	1.45	△
HBLN2 015 10	RO.75	1.5	4	1.5	10	45	1.45	△
HBLN2 015 12	RO.75	1.5	4	1.5	12	45	1.45	△
HBLN2 015 14	RO.75	1.5	4	1.5	14	50	1.45	△
HBLN2 015 16	RO.75	1.5	4	1.5	16	50	1.45	△
HBLN2 015 20	RO.75	1.5	4	1.5	20	55	1.45	△
HBLN2 016 08	RO.8	1.6	4	1.6	8	45	1.55	△
HBLN2 016 12	RO.8	1.6	4	1.6	12	45	1.55	△
HBLN2 016 16	RO.8	1.6	4	1.6	16	50	1.55	△
HBLN2 016 20	RO.8	1.6	4	1.6	20	55	1.55	△
HBLN2 018 08	RO.9	1.8	4	1.8	8	45	1.75	△
HBLN2 018 12	RO.9	1.8	4	1.8	12	45	1.75	△
HBLN2 018 16	RO.9	1.8	4	1.8	16	50	1.75	△
HBLN2 018 20	RO.9	1.8	4	1.8	20	55	1.75	△
HBLN2 020 04	R1.0	2.0	4	2	4	45	1.95	○
HBLN2 020 06	R1.0	2.0	4	2	6	45	1.95	△
HBLN2 020 08	R1.0	2.0	4	2	8	45	1.95	○
HBLN2 020 10	R1.0	2.0	4	2	10	45	1.95	○
HBLN2 020 12	R1.0	2.0	4	2	12	50	1.95	△
HBLN2 020 14	R1.0	2.0	4	2	14	50	1.95	△
HBLN2 020 16	R1.0	2.0	4	2	16	50	1.95	△
HBLN2 020 18	R1.0	2.0	4	2	18	55	1.95	○
HBLN2 020 20	R1.0	2.0	4	2	20	55	1.95	△
HBLN2 020 22	R1.0	2.0	4	2	22	60	1.95	△
HBLN2 020 26	R1.0	2.0	4	2	26	70	1.95	△
HBLN2 020 30	R1.0	2.0	4	2	30	70	1.95	△

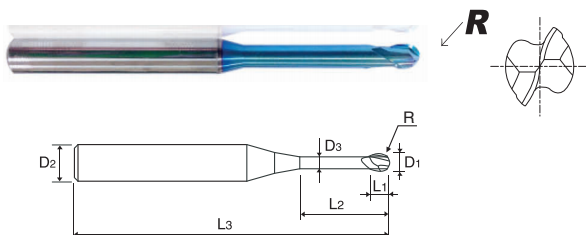
※ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

CARBIDE, 2 FLUTE, LONG NECK, BALL

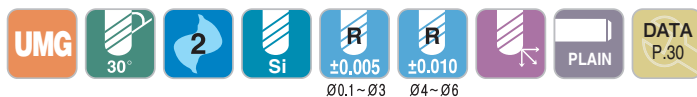
硬质合金, 2刃, 颈部加长型, 球头

H-Mill HBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	h6
Ø3.5 以上~	- 0.020 ~ 0	



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HBLN2 025 08	R1.25	2.5	6	2.5	8	50	2.4	△
HBLN2 025 10	R1.25	2.5	6	2.5	10	50	2.4	△
HBLN2 025 16	R1.25	2.5	6	2.5	16	55	2.4	△
HBLN2 025 20	R1.25	2.5	6	2.5	20	60	2.4	△
HBLN2 030 08	R1.5	3.0	6	3	8	50	2.85	○
HBLN2 030 10	R1.5	3.0	6	3	10	50	2.85	○
HBLN2 030 12	R1.5	3.0	6	3	12	50	2.85	○
HBLN2 030 14	R1.5	3.0	6	3	14	55	2.85	△
HBLN2 030 16	R1.5	3.0	6	3	16	55	2.85	△
HBLN2 030 18	R1.5	3.0	6	3	18	60	2.85	△
HBLN2 030 20	R1.5	3.0	6	3	20	60	2.85	△
HBLN2 030 26	R1.5	3.0	6	3	26	70	2.85	○
HBLN2 030 30	R1.5	3.0	6	3	30	70	2.85	△
HBLN2 030 36	R1.5	3.0	6	3	36	80	2.85	△
HBLN2 040 10	R2.0	4.0	6	4	10	60	3.85	△
HBLN2 040 12	R2.0	4.0	6	4	12	60	3.85	△
HBLN2 040 16	R2.0	4.0	6	4	16	60	3.85	△
HBLN2 040 20	R2.0	4.0	6	4	20	65	3.85	△
HBLN2 040 26	R2.0	4.0	6	4	26	70	3.85	△
HBLN2 040 30	R2.0	4.0	6	4	30	70	3.85	△
HBLN2 040 36	R2.0	4.0	6	4	36	80	3.85	△
HBLN2 040 40	R2.0	4.0	6	4	40	90	3.85	△
HBLN2 040 46	R2.0	4.0	6	4	46	90	3.85	△
HBLN2 040 50	R2.0	4.0	6	4	50	100	3.85	△
HBLN2 050 16	R2.5	5.0	6	5	16	60	4.85	△
HBLN2 050 20	R2.5	5.0	6	5	20	60	4.85	○
HBLN2 050 26	R2.5	5.0	6	5	26	70	4.85	△
HBLN2 050 30	R2.5	5.0	6	5	30	80	4.85	△
HBLN2 050 36	R2.5	5.0	6	5	36	80	4.85	△
HBLN2 060 20	R3.0	6.0	6	6	20	80	5.85	△
HBLN2 060 30	R3.0	6.0	6	6	30	90	5.85	△
HBLN2 060 40	R3.0	6.0	6	6	40	100	5.85	△
HBLN2 060 50	R3.0	6.0	6	6	50	110	5.85	△

※ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

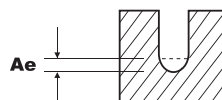
2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

H-Mill HBLN2

材质	非合金钢, 合金钢, 铸铁			合金钢, 耐热钢			硬化钢		
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON			ALLOY STEEL HEAT RESISTANT STEEL			HARDENED STEEL		
HARDNESS	~ HRc 30			HRc 30 ~ HRc 45			HRc 45 ~ HRc 62		
STRENGTH	~ 1000N/mm ²			1000N/mm ² ~ 1500N/mm ²			1500N/mm ² ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae (mm)	RPM	FEED	Ae (mm)	RPM	FEED	Ae (mm)
R 0.2	38610~43470	234~564	0.018~0.036	28080~31050	117~311	0.018~0.036	17550~19665	117~207	0.004~0.007
R0.25	38610~43470	234~564	0.023~0.045	28080~31050	117~311	0.023~0.045	17550~19665	117~207	0.005~0.009
R 0.3	38610~43470	293~725	0.027~0.054	28080~31050	140~398	0.027~0.054	17550~19665	140~259	0.005~0.011
R 0.4	38610~43470	293~725	0.036~0.072	28080~31050	140~398	0.036~0.072	17550~19665	140~259	0.007~0.014
R 0.5	35100~39330	322~797	0.045~0.090	25740~27945	164~445	0.045~0.090	15795~18113	164~290	0.009~0.018
R 0.6	29250~33120	322~890	0.055~0.100	21060~23805	164~445	0.055~0.100	13455~15008	164~290	0.010~0.022
R 0.7	25740~27945	322~890	0.062~0.125	18720~19665	164~445	0.062~0.125	11700~12938	164~290	0.012~0.025
R0.75	22340~25875	322~890	0.070~0.135	16965~19148	164~445	0.070~0.135	11115~11903	164~290	0.014~0.028
R 0.8	22230~25875	322~890	0.075~0.145	16380~18113	164~445	0.075~0.145	10530~11385	164~290	0.015~0.030
R 0.9	21060~23805	322~890	0.080~0.160	14625~16560	164~445	0.080~0.160	9360~10350	164~290	0.016~0.032
R 1	18720~20700	322~890	0.090~0.180	13455~15008	164~445	0.090~0.180	8775~9315	164~290	0.018~0.035
R 1.5	12870~14490	322~890	0.135~0.270	8775~9833	164~445	0.135~0.270	5850~6210	164~290	0.028~0.055
R 2	10530~12420	322~890	0.180~0.360	7137~8487	164~445	0.180~0.360	4680~5175	164~290	0.035~0.070
R 2.5	8190~9315	322~890	0.225~0.450	5850~6728	164~445	0.225~0.450	3808~4238	164~290	0.044~0.088
R 3	7020~8280	322~890	0.270~0.540	4680~5693	164~445	0.270~0.540	2925~3623	164~290	0.053~0.105

(Depth of Cut per one pass)

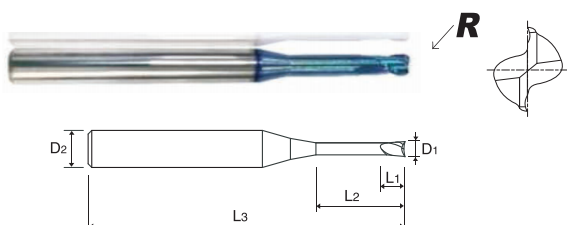


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

H-Mill HCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	库存 STOCK
HCLN2 010 04 R02	R0.2	1.0	4	1.2	4	45	○
HCLN2 010 06 R02	R0.2	1.0	4	1.2	6	45	○
HCLN2 010 10 R02	R0.2	1.0	4	1.2	10	45	○
HCLN2 010 12 R02	R0.2	1.0	4	1.2	12	45	△
HCLN2 010 16 R02	R0.2	1.0	4	1.2	16	50	○
HCLN2 010 06 R03	R0.3	1.0	4	1.2	6	45	△
HCLN2 010 10 R03	R0.3	1.0	4	1.2	10	45	△
HCLN2 015 08 R02	R0.2	1.5	4	1.6	8	45	○
HCLN2 015 10 R02	R0.2	1.5	4	1.6	10	45	△
HCLN2 015 08 R03	R0.3	1.5	4	1.6	8	45	△
HCLN2 015 10 R03	R0.3	1.5	4	1.6	10	45	△
HCLN2 020 08 R02	R0.2	2.0	4	2.2	8	45	○
HCLN2 020 10 R02	R0.2	2.0	4	2.2	10	45	△
HCLN2 020 12 R02	R0.2	2.0	4	2.2	12	45	△
HCLN2 020 08 R05	R0.5	2.0	4	2.2	8	45	○
HCLN2 020 10 R05	R0.5	2.0	4	2.2	10	45	△
HCLN2 020 12 R05	R0.5	2.0	4	2.2	12	45	△

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.015 ~ 0	
Ø3.5 以上~	- 0.020 ~ 0	h6

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

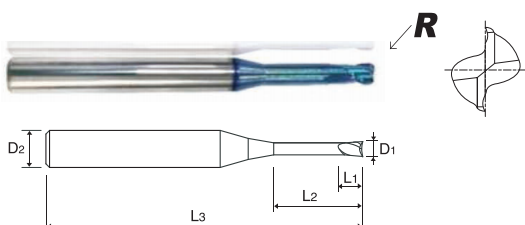
TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

H-Mill HCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	库存 STOCK
HCLN2 030 10 R02	R0.2	3.0	6	3.3	10	50	○
HCLN2 030 16 R02	R0.2	3.0	6	3.3	16	55	△
HCLN2 030 20 R02	R0.2	3.0	6	3.3	20	60	△
HCLN2 030 26 R02	R0.2	3.0	6	3.3	26	65	○
HCLN2 030 10 R05	R0.5	3.0	6	3.3	10	45	△
HCLN2 030 16 R05	R0.5	3.0	6	3.3	16	55	△
HCLN2 030 20 R05	R0.5	3.0	6	3.3	20	60	△
HCLN2 030 26 R05	R0.5	3.0	6	3.3	26	65	△
HCLN2 040 16 R02	R0.2	4.0	6	4.4	16	55	○
HCLN2 040 20 R02	R0.2	4.0	6	4.4	20	60	○
HCLN2 040 26 R02	R0.2	4.0	6	4.4	26	65	△
HCLN2 040 30 R02	R0.2	4.0	6	4.4	30	65	○
HCLN2 040 16 R05	R0.5	4.0	6	4.4	16	55	○
HCLN2 040 20 R05	R0.5	4.0	6	4.4	20	60	○
HCLN2 040 26 R05	R0.5	4.0	6	4.4	26	65	△
HCLN2 040 30 R05	R0.5	4.0	6	4.4	30	65	○
HCLN2 060 16 R05	R0.5	6.0	6	6.6	16	55	△
HCLN2 060 20 R05	R0.5	6.0	6	6.6	20	60	○
HCLN2 060 16 R10	R1.0	6.0	6	6.6	16	55	△
HCLN2 060 20 R10	R1.0	6.0	6	6.6	20	60	△
HCLN2 060 26 R10	R1.0	6.0	6	6.6	26	65	△
HCLN2 060 30 R10	R1.0	6.0	6	6.6	30	65	△

※ 上記产品的参数可根据特别的要求制作加工.

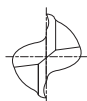
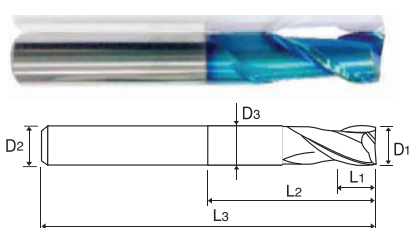
○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.015 ~ 0	h6
Ø3.5 以上~	-0.020 ~ 0	

CARBIDE, 2 FLUTE, EXTENDED NECK

硬质合金, 2刃, 颈部延伸

H-Mill HFS2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HFS2 004 04	0.4	4	0.8	-	40	-	○
HFS2 005 04	0.5	4	1	-	40	-	○
HFS2 006 04	0.6	4	1.2	-	40	-	○
HFS2 007 04	0.7	4	1.4	-	40	-	○
HFS2 008 04	0.8	4	1.6	-	40	-	○
HFS2 009 04	0.9	4	2	-	40	-	○
HFS2 060 06	6.0	6	6	15	55	5.85	○
HFS2 080 08	8.0	8	8	20	65	7.7	○
HFS2 100 10	10.0	10	10	25	75	9.7	○
HFS2 120 12	12.0	12	12	28	85	11.7	○
HFS2 160 16	16.0	16	16	32	90	15.7	△
HFS2 200 20	20.0	20	20	40	105	19.7	△

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.015 ~ 0	
Ø6.5 以上~	- 0.020 ~ 0	h6

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

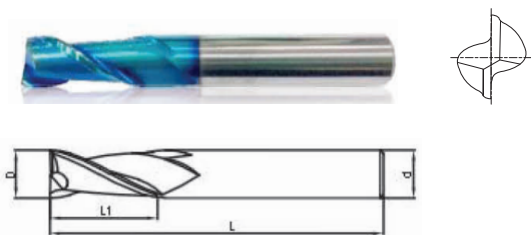
TAP

Special
Tools

CARBIDE, 2 FLUTE, 35° HELIX, SHORT LENGTH

硬质合金, 2刃, 35° 螺旋角, 短型

H-Mill HFSE2



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工件表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.015 ~ 0	h6
Ø6.5 以上~	- 0.020 ~ 0	

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HFSE2 010 04	1.0	4	3	50	○
HFSE2 015 04	1.5	4	4	50	○
HFSE2 020 04	2.0	4	6	50	○
HFSE2 025 04	2.5	4	8	50	○
HFSE2 030 04	3.0	4	8	50	○
HFSE2 035 04	3.5	4	10	50	○
HFSE2 040 04	4.0	4	11	50	○
HFSE2 030 06	3.0	6	8	50	○
HFSE2 035 06	3.5	6	10	50	○
HFSE2 040 06	4.0	6	11	50	○
HFSE2 045 06	4.5	6	11	50	△
HFSE2 050 06	5.0	6	13	50	○
HFSE2 055 06	5.5	6	13	50	△
HFSE2 060 06	6.0	6	16	50	○
HFSE2 065 08	6.5	8	16	60	△
HFSE2 070 08	7.0	8	20	60	△
HFSE2 075 08	7.5	8	20	60	△
HFSE2 080 08	8.0	8	20	60	○
HFSE2 085 08	8.5	10	20	75	△
HFSE2 090 10	9.0	10	20	75	△
HFSE2 095 10	9.5	10	22	75	△
HFSE2 100 10	10.0	10	25	75	○
HFSE2 110 10	11.0	12	30	75	△
HFSE2 120 12	12.0	12	32	75	○
HFSE2 140 14	14.0	16	40	100	△
HFSE2 160 16	16.0	16	40	100	○
HFSE2 180 18	18.0	20	40	100	○
HFSE2 200 20	20.0	20	45	100	○

❖ 上記製品の参数可根据特别的要求制作加工.

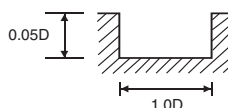
○: 标准在庫
△: 预订生产品

2 FLUTE, 35° HELIX, SHORT LENGTH - SLOTTING

2刃, 35°螺旋角, 短型 - 槽铣

● H-Mill HFS2 / HFSE2

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
0.5	18750	130	16875	100	15000	80	12375	50	9375	30
0.6	18750	165	16875	130	15000	100	11250	55	9375	40
0.8	18750	210	16875	150	11250	100	9375	60	7125	40
1	18000	260	14250	200	9560	130	7690	80	6000	50
2	12490	300	9750	240	6560	150	5440	90	4125	55
3	8175	300	6490	240	4310	150	3560	90	2810	55
4	6260	310	4950	250	3300	160	2700	95	2100	60
5	5890	350	4690	280	3110	180	2400	100	1910	60
6	4910	330	3880	270	2590	170	1990	100	1575	60
8	3705	330	2925	250	1950	160	1500	90	1200	60
10	2925	300	2310	240	1540	150	1200	85	960	50
12	2490	300	1970	240	1310	150	990	85	790	50



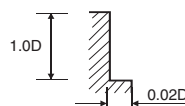
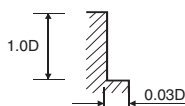
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

2 FLUTE, 35° HELIX, SHORT LENGTH - SIDE CUTTING

2刃, 35°螺旋角, 短型 - 侧铣

● H-Mill HFS2 / HFSE2

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
0.5	18750	90	16875	70	15000	55	12375	35	9375	20
0.6	18750	120	16875	90	15000	70	11250	40	9375	30
0.8	18750	150	16875	110	11250	70	9375	40	7125	30
1	18000	370	14250	290	9560	180	7690	110	6000	70
2	12490	420	9750	340	6560	210	5440	130	4125	80
3	8175	420	6490	340	4310	210	3560	130	2810	80
4	6260	440	4950	350	3300	220	2700	135	2100	85
5	5890	510	4690	405	3110	250	2400	140	1910	90
6	4910	475	3880	390	2590	240	1990	140	1575	90
8	3705	465	2925	360	1950	220	1500	130	1200	80
10	2925	420	2310	340	1540	210	1200	120	960	80
12	2490	420	1970	340	1310	210	990	120	790	80

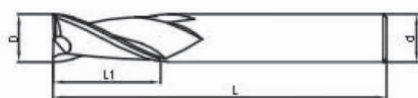


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 2 FLUTE, 35° HELIX, LONG LENGTH

硬质合金, 2刃, 35° 螺旋角, 加长型

H-Mill HFL2



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工作表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HFL2 020 04	2.0	4	10	50	△
HFL2 030 04	3.0	4	15	60	△
HFL2 040 04	4.0	4	20	60	△
HFL2 030 06	3.0	6	15	60	△
HFL2 040 06	4.0	6	20	60	△
HFL2 050 06	5.0	6	25	75	△
HFL2 060 06	6.0	6	30	75	△
HFL2 080 08	8.0	8	35	100	△
HFL2 100 10	10.0	10	45	100	△
HFL2 120 12	12.0	12	45	100	△
HFL2 160 16	16.0	16	70	150	△
HFL2 200 20	20.0	20	75	150	△

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

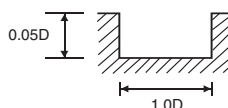
MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.015 ~ 0	h6
Ø6.5 以上~	-0.020 ~ 0	

2 FLUTE, 35° HELIX, LONG LENGTH - SLOTTING

2刃, 35°螺旋角, 加长型 - 槽铣

● H-Mill HFL2

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
0.5	18750	65	16875	50	15000	40	12375	25	9375	15
0.6	18750	80	16875	65	15000	50	11250	30	9375	20
0.8	18750	105	16875	75	11250	50	9375	30	7125	20
1	18000	130	14250	100	9560	65	7690	40	6000	25
2	12490	150	9750	120	6560	75	5440	45	4125	30
3	8175	150	6490	120	4310	75	3560	45	2810	30
4	6260	155	4950	125	3300	80	2700	50	2100	30
5	5890	175	4690	140	3110	90	2400	50	1910	30
6	4910	165	3880	135	2590	85	1990	50	1575	30
8	3705	165	2925	125	1950	80	1500	45	1200	30
10	2925	150	2310	120	1540	75	1200	40	960	25
12	2490	150	1970	120	1310	75	990	40	790	25



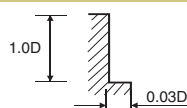
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

2 FLUTE, 35° HELIX, LONG LENGTH - SIDE CUTTING

2刃, 35°螺旋角, 加长型 - 侧铣

● H-Mill HFL2

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
0.5	18750	45	16875	35	15000	30	12375	15	9375	10
0.6	18750	60	16875	45	15000	35	11250	20	9375	15
0.8	18750	75	16875	55	11250	35	9375	20	7125	15
1	18000	185	14250	145	9560	90	7690	55	6000	35
2	12490	210	9750	170	6560	105	5440	65	4125	40
3	8175	210	6490	170	4310	105	3560	65	2810	40
4	6260	220	4950	175	3300	110	2700	70	2100	45
5	5890	255	4690	200	3110	125	2400	70	1910	45
6	4910	240	3880	195	2590	120	1990	70	1575	45
8	3705	230	2925	180	1950	110	1500	65	1200	40
10	2925	210	2310	170	1540	105	1200	60	960	40
12	2490	210	1970	170	1310	105	990	60	790	40

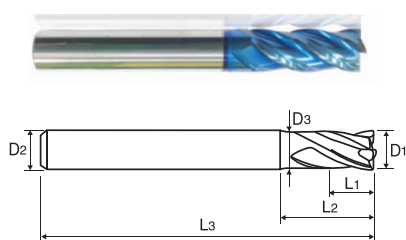


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 4 FLUTE, EXTENDED NECK

硬质合金, 4刃, 颈部延伸

H-Mill HFS4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	颈径 NECK DIAMETER D ₃	库存 STOCK
HFS4 010 06	1.0	6	1.5	3	50	0.95	△
HFS4 020 06	2.0	6	2	5	50	1.95	△
HFS4 030 06	3.0	6	3	8	55	2.85	△
HFS4 040 06	4.0	6	4	10	55	3.85	○
HFS4 050 06	5.0	6	5	13	55	4.85	△
HFS4 060 06	6.0	6	6	15	55	5.85	○
HFS4 080 08	8.0	8	8	20	65	7.7	○
HFS4 100 10	10.0	10	10	25	75	9.7	○
HFS4 120 12	12.0	12	12	28	85	11.7	○
HFS4 160 16	16.0	16	16	32	90	15.7	○
HFS4 200 20	20.0	20	20	40	105	19.7	△

上记产品的参数可根据特别的要求制作加工.

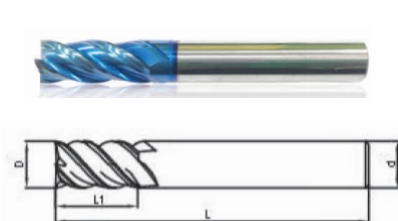
○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.015 ~ 0	h6
Ø7 以上~	- 0.020 ~ 0	

CARBIDE, 4 FLUTE, 35° HELIX, SHORT LENGTH

硬质合金, 4刃, 35°螺旋角, 短型

H-Mill HFSE4



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工件表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	h6
~Ø6 以下	- 0.015 ~ 0	
Ø6.5 以上~	- 0.020 ~ 0	



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HFSE4 010 04	1.0	4	3	50	○
HFSE4 015 04	1.5	4	4	50	○
HFSE4 020 04	2.0	4	6	50	○
HFSE4 025 04	2.5	4	8	50	○
HFSE4 030 04	3.0	4	8	50	○
HFSE4 035 04	3.5	4	10	50	△
HFSE4 040 04	4.0	4	11	50	○
HFSE4 030 06	3.0	6	8	50	△
HFSE4 035 06	3.5	6	10	50	○
HFSE4 040 06	4.0	6	11	50	○
HFSE4 045 06	4.5	6	11	50	△
HFSE4 050 06	5.0	6	13	50	○
HFSE4 055 06	5.5	6	13	50	△
HFSE4 060 06	6.0	6	16	50	○
HFSE4 065 08	6.5	8	16	60	△
HFSE4 070 08	7.0	8	20	60	△
HFSE4 075 08	7.5	8	20	60	△
HFSE4 080 08	8.0	8	20	60	○
HFSE4 085 08	8.5	10	20	75	△
HFSE4 090 10	9.0	10	20	75	△
HFSE4 095 10	9.5	10	22	75	△
HFSE4 100 10	10.0	10	25	75	○
HFSE4 110 12	11.0	12	30	75	△
HFSE4 120 12	12.0	12	32	75	○
HFSE4 140 14	14.0	16	40	100	○
HFSE4 160 16	16.0	16	40	100	△
HFSE4 180 18	18.0	20	40	100	△
HFSE4 200 20	20.0	20	45	100	○

❖ 上記製品の参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

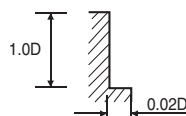
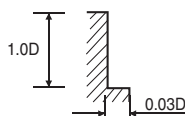
Special
Tools

4 FLUTE, 35° HELIX, SHORT LENGTH - SIDE CUTTING

硬质合金, 4刃, 35°螺旋角, 短型 - 侧铣

● H-Mill HFSE4 / HFS4

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	24000	810	19000	580	12750	390	10250	240	8000	150
2	16650	960	13000	590	8750	460	7250	290	5500	180
3	10900	960	8650	690	5750	460	4750	290	3750	180
4	8350	990	6600	715	4400	480	3600	300	2800	185
5	7850	1100	6250	825	4150	550	3200	320	2550	205
6	6550	1070	5175	770	3450	520	2650	310	2100	190
8	4940	1030	3900	740	2600	495	2000	290	1600	180
10	3900	960	3075	690	2050	460	1600	260	1275	170
12	3320	960	2625	690	1750	460	1325	260	1050	165
16	2450	825	1950	605	1300	400	1000	230	800	150
20	1950	715	1550	530	1025	360	800	210	650	140

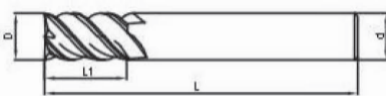
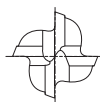


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 4 FLUTE, 35° HELIX, LONG LENGTH

硬质合金, 4刃, 35°螺旋角, 加长型

H-Mill HFL4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HFL4 020 04	2.0	4	10	50	○
HFL4 030 04	3.0	4	15	60	○
HFL4 040 04	4.0	4	20	60	○
HFL4 030 06	3.0	6	15	60	○
HFL4 040 06	4.0	6	20	60	○
HFL4 050 06	5.0	6	25	75	○
HFL4 060 06	6.0	6	30	75	○
HFL4 080 08	8.0	8	35	100	○
HFL4 100 10	10.0	10	45	100	○
HFL4 120 12	12.0	12	45	100	○
HFL4 160 16	16.0	16	70	150	○
HFL4 200 20	20.0	20	75	150	○

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产产品

MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.015 ~ 0	h6
Ø7 以上~	-0.020 ~ 0	

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

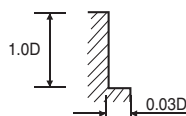
Special
Tools

4 FLUTE, 35° HELIX, LONG LENGTH - SIDE CUTTING

4刃, 35°螺旋角, 加长型 - 侧铣

● H-Mill HFL4

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	24000	410	19000	290	12750	195	10250	120	8000	75
2	16650	480	13000	340	8750	230	7250	140	5500	90
3	10900	480	8650	340	5750	230	4750	140	3750	90
4	8350	495	6600	360	4400	240	3600	150	2800	95
5	7850	550	6250	410	4150	275	3200	160	2550	100
6	6550	540	5175	385	3450	260	2650	150	2100	95
8	4940	520	3900	370	2600	250	2000	140	1600	90
10	3900	480	3075	350	2050	230	1600	130	1275	85
12	3320	480	2625	350	1750	230	1325	130	1050	80
16	2450	410	1950	300	1300	200	1000	120	800	75
20	1950	380	1550	270	1025	180	800	105	650	70

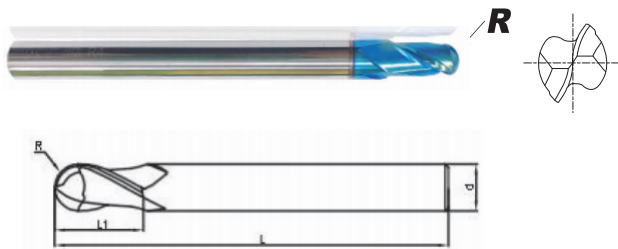


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 2 FLUTE, BALL, SHORT LENGTH

硬质合金, 2刃, 球头, 短型

H-Mill HBSE2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HBSE2 002 04	R0.1	0.2	4	0.4	50	△
HBSE2 003 04	R0.15	0.3	4	0.6	50	△
HBSE2 004 04	R0.2	0.4	4	0.8	50	△
HBSE2 005 04	R0.25	0.5	4	1	50	△
HBSE2 006 04	R0.3	0.6	4	1.2	50	△
HBSE2 008 04	R0.4	0.8	4	1.6	50	△
HBSE2 010 04	R0.5	1.0	4	2	50	○
HBSE2 015 04	R0.75	1.5	4	4	50	○
HBSE2 020 04	R1.0	2.0	4	5	50	○
HBSE2 025 04	R1.25	2.5	4	8	50	△
HBSE2 030 04	R1.5	3.0	4	6	50	○
HBSE2 030 06	R2.0	4.0	4	8	50	○
HBSE2 040 04	R1.5	3.0	6	6	50	△
HBSE2 040 06	R2.0	4.0	6	8	50	△
HBSE2 050 06	R2.5	5.0	6	10	50	○
HBSE2 060 06	R3.0	6.0	6	12	50	○
HBSE2 070 08	R3.5	7.0	8	14	60	△
HBSE2 080 08	R4.0	8.0	8	14	60	○
HBSE2 090 10	R4.5	9.0	10	18	75	△
HBSE2 100 10	R5.0	10.0	10	20	75	○
HBSE2 120 12	R6.0	12.0	12	24	75	○
HBSE2 160 16	R8.0	16.0	16	32	100	△
HBSE2 200 20	R10.0	20.0	20	40	100	△

※ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.015 ~ 0	h6
Ø7 以上~	- 0.020 ~ 0	

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

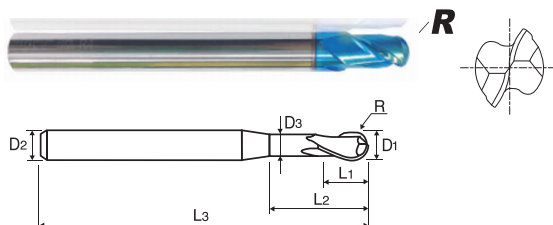
TAP

Special Tools

CARBIDE, 2 FLUTE, BALL NOSE, STUB LENGTH, EXTENDED NECK

硬质合金, 2刃, 球头, 超短型, 颈部延伸

H-Mill HBS2 / HBN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



~Ø6 以下 Ø7 以上~

Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
HBS2 008 04	R0.4	0.8	4	1.2	—	40	—	△
HBN2 010 04	R0.5	1.0	4	1	2.2	50	0.95	○
HBN2 012 04	R0.6	1.2	4	1.2	2.6	50	1.15	△
HBN2 015 04	R0.75	1.5	4	1.5	3	50	1.45	△
HBN2 020 06	R1.0	2.0	6	2	4	50	1.95	△
HBN2 030 06	R1.5	3.0	6	3	6	60	2.85	○
HBS2 040 06	R2.0	4.0	6	5	10	60	3.85	○
HBN2 040 06	R2.0	4.0	6	4	8	70	3.85	○
HBN2 050 06	R2.5	5.0	6	5	10	80	4.85	○
HBS2 050 06	R2.5	5.0	6	6	12	60	4.85	△
HBN2 060 06	R3.0	6.0	6	6	12	90	5.85	○
HBS2 060 06	R3.0	6.0	6	7	15	60	5.85	○
HBN2 070 08	R3.5	7.0	8	7	14	90	6.85	○
HBS2 080 08	R4.0	8.0	8	9	15	60	7.7	○
HBN2 080 08	R4.0	8.0	8	8	16	100	7.7	○
HBN2 090 10	R4.5	9.0	10	9	18	100	8.7	△
HBS2 100 10	R5.0	10.0	10	11	25	60	9.7	○
HBN2 100 10	R5.0	10.0	10	10	20	100	9.7	○
HBS2 120 12	R6.0	12.0	12	12	24	110	11.7	○
HBN2 120 12	R6.0	12.0	12	14	25	80	11.7	○
HBN2 140 14	R7.0	14.0	14	14	28	110	13.7	△
HBN2 160 16	R8.0	16.0	16	16	32	140	15.7	△
HBN2 180 18	R9.0	18.0	18	18	36	140	17.7	△
HBN2 200 20	R10.0	20.0	20	20	40	160	19.7	△

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

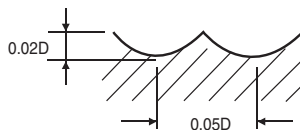
MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.015 ~ 0	h6
Ø7 以上~	- 0.020 ~ 0	

2 FLUTE, BALL NOSE

2刃, 球头

● H-Mill HBSE2 / HBS2 / HBN2

材质	硬化钢, 耐热钢		硬化钢							
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		HARDENED STEEL							
HARDNESS	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 62	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R0.1	25000	660	25000	578	22500	528	20000	424	17500	371
R0.15	25000	825	25000	743	22500	660	20000	531	17500	462
R0.2	25000	1045	25000	935	22500	825	20000	660	17500	578
R0.25	25000	1320	25000	1155	22500	1045	20000	825	17500	715
R0.3	25000	1595	25000	1375	22500	1210	20000	990	17500	880
R0.4	25000	2145	25000	1815	22500	1650	20000	1320	17500	1155
R0.5	25000	2640	25000	2310	22500	2090	20000	1650	17500	1430
R0.6	25000	2805	24000	2365	21500	2118	19000	1650	17000	1485
R0.75	25000	2970	24000	2475	21500	2200	18500	1705	16500	1485
R1	24850	3135	23900	2640	20000	2200	17500	1733	16000	1540
R1.5	16550	3300	15900	2915	13250	2200	11750	1733	10500	1540
R2	12450	3300	11950	2915	10000	2200	8750	1733	8000	1540
R2.5	9300	3190	8900	2695	7500	2063	6750	1678	5750	1403
R3	6950	2668	6700	2255	5500	1705	5000	1375	4400	1183
R4	5550	2310	5350	1925	4500	1485	4000	1183	3500	1018
R5	4650	2035	4450	1705	3750	1320	3300	1045	2900	908
R6	3475	1623	3340	1375	2800	1045	2500	853	2200	688
R8	2785	1458	2675	1210	2250	935	2000	743	1750	550
R10	2225	1293	2150	1073	1800	825	1600	660	1400	440



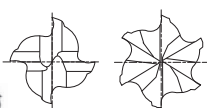
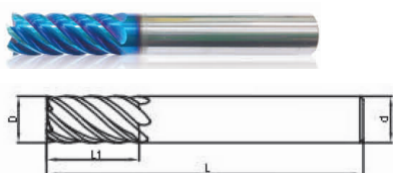
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 4(6) FLUTE, 45° HELIX

硬质合金, 4(6)刃, 45°螺旋角

H-Mill HHSM

SHORT LENGTH / 短型



- ▶ High speed cutting and finish milling with high feed rate.
- ▶ Excellent surface finishes.
- ▶ Application in high speed machining, wet and dry cutting condition.

- ▶ 高速切削和高进给量的精切削
- ▶ 卓越的工件表面粗糙度
- ▶ 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 NO. OF FLUTE	库存 STOCK
HHS4 010 04	1.0	4	3	45	4	△
HHS4 015 04	1.5	4	4	45	4	△
HHS4 020 04	2.0	4	6	45	4	△
HHS4 025 04	2.5	4	8	45	4	△
HHS4 030 04	3.0	4	8	50	4	△
HHS4 040 04	4.0	4	11	50	4	△
HHS6 050 06	5.0	6	13	50	6	△
HHS6 060 06	6.0	6	16	50	6	○
HHS6 080 08	8.0	8	19	60	6	○
HHS6 100 10	10.0	10	22	75	6	○
HHS6 120 12	12.0	12	26	75	6	△
HHS6 140 14	14.0	14	30	90	6	△
HHS6 160 16	16.0	16	32	100	6	△
HHS6 180 18	18.0	18	38	100	6	△
HHS6 200 20	20.0	20	38	100	6	△

※ 上記製品の参数可根据特别的要求制作加工。

H-Mill HHL6

LONG LENGTH / 加长型

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 NO. OF FLUTE	库存 STOCK
HHL6 060 06	6.0	6	25	80	6	△
HHL6 080 08	8.0	8	35	90	6	△
HHL6 100 10	10.0	10	45	100	6	△
HHL6 120 12	12.0	12	50	100	6	△
HHL6 160 16	16.0	16	65	150	6	△
HHL6 200 20	20.0	20	70	150	6	△

※ 上記製品の参数可根据特别的要求制作加工。

○: 标准在庫
△: 预订生产产品

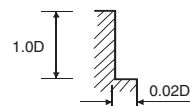
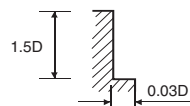
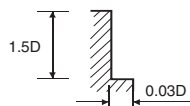
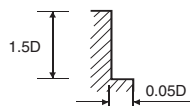
MILL DIA. TOLERANCE(mm) 刃径公差(mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.020	h6

4(6) FLUTE, 45° HELIX - SIDE CUTTING

4(6)刃, 45°螺旋角 - 侧铣

● H-Mill HHS4(6)

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		硬化钢			
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		HARDENED STEEL			
HARDNESS	~ HRc 30		HRc 30 ~ HRc 50		HRc 50 ~ HRc 60		HRc 60 ~ HRc 62	
STRENGTH	~ 1000N/mm²		1000 ~ 1750N/mm²		1750 ~ 2080N/mm²		2080N/mm² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	22800	830	15300	560	12300	340	9600	215
2	15600	990	10500	670	8700	410	6600	255
3	10380	990	6900	670	5700	410	4500	255
4	7920	1030	5280	710	4320	430	3360	265
5	7500	1190	4980	790	3340	460	3060	295
6	6210	1110	4140	750	3180	440	2520	280
8	4680	1070	3120	710	2400	410	1920	260
10	3690	1000	2460	670	1920	380	1530	245
12	3150	1000	2100	670	1590	380	1260	240
16	2340	870	1560	580	1200	335	960	215
20	1860	770	1230	515	960	300	780	200

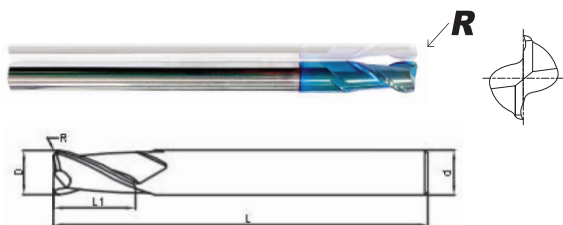


RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 2 FLUTE, CORNER RADIUS

硬质合金, 2刃, 圆弧角

H-Mill HCR2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.

- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件

Unit : mm

型号 CODE No.	圆弧角 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HCR2 030 R02	R0.2	3.0	6	10	70	△
HCR2 030 R03	R0.3	3.0	6	10	70	△
HCR2 030 R05	R0.5	3.0	6	10	70	○
HCR2 040 R02	R0.2	4.0	6	12	70	△
HCR2 040 R03	R0.3	4.0	6	12	70	△
HCR2 040 R05	R0.5	4.0	6	12	70	○
HCR2 040 R10	R1.0	4.0	6	12	70	△
HCR2 050 R02	R0.2	5.0	6	15	80	△
HCR2 050 R03	R0.3	5.0	6	15	80	○
HCR2 050 R05	R0.5	5.0	6	15	80	△
HCR2 050 R10	R1.0	5.0	6	15	80	○
HCR2 060 R02	R0.2	6.0	6	15	90	△
HCR2 060 R03	R0.3	6.0	6	15	90	△
HCR2 060 R05	R0.5	6.0	6	15	90	○
HCR2 060 R10	R1.0	6.0	6	15	90	△
HCR2 080 R03	R0.3	8.0	8	20	100	△
HCR2 080 R05	R0.5	8.0	8	20	100	○
HCR2 080 R10	R1.0	8.0	8	20	100	○
HCR2 080 R15	R1.5	8.0	8	20	100	△
HCR2 080 R20	R2.0	8.0	8	20	100	△
HCR2 100 R03	R0.3	10.0	10	25	100	△
HCR2 100 R05	R0.5	10.0	10	25	100	○
HCR2 100 R10	R1.0	10.0	10	25	100	○
HCR2 100 R15	R1.5	10.0	10	25	100	△
HCR2 100 R20	R2.0	10.0	10	25	100	○
HCR2 100 R25	R2.5	10.0	10	25	100	△
HCR2 120 R03	R0.3	12.0	12	30	110	△
HCR2 120 R05	R0.5	12.0	12	30	110	△
HCR2 120 R10	R1.0	12.0	12	30	110	○
HCR2 120 R15	R1.5	12.0	12	30	110	△
HCR2 120 R20	R2.0	12.0	12	30	110	○
HCR2 120 R25	R2.5	12.0	12	30	110	△
HCR2 120 R30	R3.0	12.0	12	30	110	△

※ 上記产品的参数可根据特别的要求制作加工。

○ : 标准在庫

△ : 预订生产品

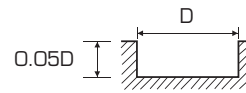
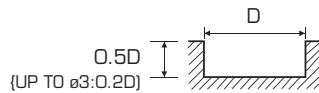
MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.020	h6

2 FLUTE, CORNER RADIUS - SLOTTING

2刃, 圆弧角 - 槽铣

● H-Mill HCR2

材质	硬化钢, 耐热钢		不锈钢		硬化钢					
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		STAINLESS STEEL		HARDENED STEEL					
HARDNESS	~ HRc 30				HRc 30 ~ HRc 45		HRc 45 ~ HRc 55		HRc 55 ~ HRc 62	
STRENGTH	~ 1000N/mm ²				1000N/mm ² ~ 1500N/mm ²		1500N/mm ² ~ 2000N/mm ²		2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	9250	190	5050	90	6050	120	4030	35		
3	7150	210	3700	120	4450	140	2690	40	1900	40
4	6050	300	3100	150	3700	180	2350	40	1480	40
5	5050	320	2530	160	3020	190	1860	50	1260	40
6	4450	350	2270	180	2690	220	1600	55	1100	40
8	3360	380	1680	180	2020	200	1350	75	840	40
10	2600	330	1350	160	1600	160	1090	60	680	35
12	2200	280	1090	130	1350	130	930	55	560	35
16	1760	220	850	110	1090	110	720	40	440	20
20	1350	170	670	80	580	80	550	30	320	20
25	1090	130	550	60	670	70	430	20	260	15



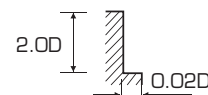
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

2 FLUTE, CORNER RADIUS - SIDE CUTTING

2刃, 圆弧角 - 侧铣

● H-Mill HCR2

材质	硬化钢, 耐热钢		不锈钢		硬化钢					
MATERIAL	HARDENED STEEL HEAT RESISTANT STEEL		STAINLESS STEEL		HARDENED STEEL					
HARDNESS	~ HRc 30				HRc 30 ~ HRc 45		HRc 45 ~ HRc 55		HRc 55 ~ HRc 62	
STRENGTH	~ 1000N/mm ²				1000N/mm ² ~ 1500N/mm ²		1500N/mm ² ~ 2000N/mm ²		2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	9250	247	5050	117	6050	156	4030	46		
3	7150	273	3700	156	4450	182	2690	52	1900	52
4	6050	390	3100	195	3700	234	2350	52	1480	52
5	5050	416	2530	208	3020	247	1860	65	1260	52
6	4450	455	2270	234	2690	286	1600	72	1100	52
8	3360	494	1680	234	2020	260	1350	98	840	52
10	2600	429	1350	208	1600	208	1090	78	680	46
12	2200	364	1090	169	1350	169	930	72	560	46
16	1760	286	850	143	1090	143	720	52	440	26
20	1350	221	670	104	580	104	550	39	320	26
25	1090	169	550	78	670	91	430	26	260	20



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

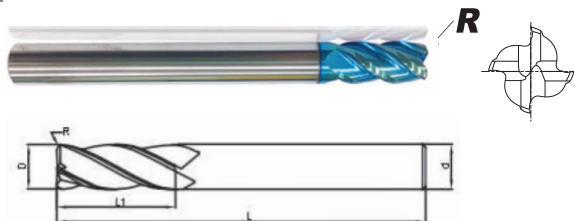
TAP

Special
Tools

CARBIDE, 4 FLUTE, CORNER RADIUS

硬质合金, 4刃, 圆弧角

H-Mill HCR4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件

Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
HCR4 030 R02	R0.2	3.0	6	10	70	△
HCR4 030 R03	R0.3	3.0	6	10	70	△
HCR4 030 R05	R0.5	3.0	6	10	70	○
HCR4 040 R02	R0.2	4.0	6	12	70	△
HCR4 040 R03	R0.3	4.0	6	12	70	△
HCR4 040 R05	R0.5	4.0	6	12	70	○
HCR4 040 R10	R1.0	4.0	6	12	70	△
HCR4 050 R02	R0.2	5.0	6	15	80	△
HCR4 050 R03	R0.3	5.0	6	15	80	○
HCR4 050 R05	R0.5	5.0	6	15	80	△
HCR4 050 R10	R1.0	5.0	6	15	80	○
HCR4 060 R02	R0.2	6.0	6	15	90	△
HCR4 060 R03	R0.3	6.0	6	15	90	△
HCR4 060 R05	R0.5	6.0	6	15	90	○
HCR4 060 R10	R1.0	6.0	6	15	90	△
HCR4 080 R03	R0.3	8.0	8	20	100	△
HCR4 080 R05	R0.5	8.0	8	20	100	○
HCR4 080 R10	R1.0	8.0	8	20	100	○
HCR4 080 R15	R1.5	8.0	8	20	100	△
HCR4 080 R20	R2.0	8.0	8	20	100	△
HCR4 100 R03	R0.3	10.0	10	25	100	△
HCR4 100 R05	R0.5	10.0	10	25	100	○
HCR4 100 R10	R1.0	10.0	10	25	100	○
HCR4 100 R15	R1.5	10.0	10	25	100	△
HCR4 100 R20	R2.0	10.0	10	25	100	○
HCR4 100 R25	R2.5	10.0	10	25	100	△
HCR4 120 R05	R0.5	12.0	12	30	110	○
HCR4 120 R10	R1.0	12.0	12	30	110	○
HCR4 120 R15	R1.5	12.0	12	30	110	△
HCR4 120 R20	R2.0	12.0	12	30	110	○
HCR4 120 R25	R2.5	12.0	12	30	110	△
HCR4 120 R30	R3.0	12.0	12	30	110	△

❖ 上記产品的参数可根据特别的要求制作加工。

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.020	h6

V-Mill for HRC 65

加工 HRC 65 以下

**for HIGH
HARDENED STEEL**
CARBIDE
END MILLS



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

V-Mill for HARDENED STEEL for HRC 65

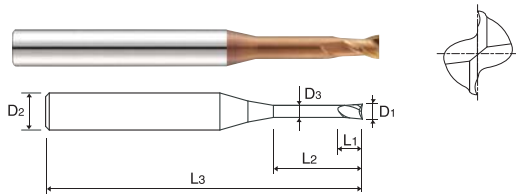
V-Mill 高硬度用 HRC 65

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
VFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	53
VFLN4		CARBIDE, 4 FLUTE, LONG NECK 硬质合金, 4刃, 颈部加长型	60
VBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	62
VCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	67
VCLN4		CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 4刃, 颈部加长型, 圆弧角	71
VFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	73
VFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	75
VBS2		CARBIDE, 2 FLUTE, SHORT LENGTH, BALL 硬质合金, 2刃, 短型, 球头	77
VCS2		CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 2刃, 短型, 圆弧角	79
VCS4		CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 4刃, 短型, 圆弧角	81
VMC4		CARBIDE, 4 FLUTE, STUB LENGTH, MAXX CORNER RADIUS 硬质合金, 4刃, 超短型, MAXX, 圆弧角	83
VFT2		CARBIDE, 2 FLUTE, TAPER 硬质合金, 2刃, 斜度	84
VB2		CARBIDE, 2 FLUTE, TAPER, BALL 硬质合金, 2刃, 斜度, 球头	85

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

V-Mill VFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计。
- 适于干式切削, 高速切削, 最新开发的原材料和涂层。
- 卓越的工件表面粗糙度。
- 由于颈部稍细能够加工深槽。
- 极高的耐磨性。

Unit : mm

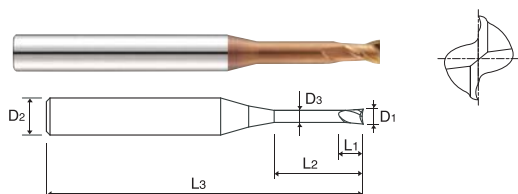
型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VFLN2 002 01	0.2	4	0.3	1	45
VFLN2 002 02		4		2	45
VFLN2 003 01		4		1	45
VFLN2 003 02	0.3	4	0.4	2	45
VFLN2 004 01		4		1	45
VFLN2 004 02		4		2	45
VFLN2 004 03	0.4	4	0.6	3	45
VFLN2 004 04		4		4	45
VFLN2 004 05		4		5	45
VFLN2 005 02	0.5	4	0.8	2	45
VFLN2 005 03		4		3	45
VFLN2 005 04		4		4	45
VFLN2 005 05		4		5	45
VFLN2 005 06		4		6	45
VFLN2 005 08		4		8	45
VFLN2 005 10		4		10	45
VFLN2 006 02	0.6	4	0.9	2	45
VFLN2 006 03		4		3	45
VFLN2 006 04		4		4	45
VFLN2 006 05		4		5	45
VFLN2 006 06		4		6	45
VFLN2 006 08		4		8	45
VFLN2 006 10		4		10	45
VFLN2 008 02	0.8	4	1.2	2	45
VFLN2 008 03		4		3	45
VFLN2 008 04		4		4	45
VFLN2 008 05		4		5	45
VFLN2 008 06		4		6	45
VFLN2 008 08		4		8	45
VFLN2 008 10		4		10	45

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	- 0.008 ~ 0	- 0.004
Ø3.5 以上~	- 0.010 ~ 0	- 0.008

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

V-Mill VFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工作表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.

Unit : mm

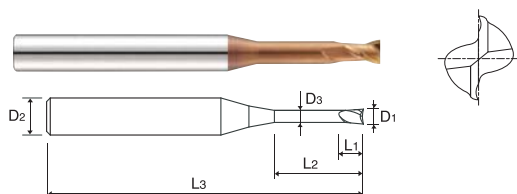
型号 CODE No.	刃径直径 MILL DIAMETER D ₁	柄径直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VFLN2 010 02	1.0	4	1.5	2	45
VFLN2 010 03		4		3	45
VFLN2 010 04		4		4	45
VFLN2 010 05		4		5	45
VFLN2 010 06		4		6	45
VFLN2 010 08		4		8	45
VFLN2 010 10		4		10	45
VFLN2 010 12		4		12	45
VFLN2 010 16		4		16	50
VFLN2 010 20		4		20	50
VFLN2 012 03	1.2	4	1.8	3	45
VFLN2 012 04		4		4	45
VFLN2 012 05		4		5	45
VFLN2 012 06		4		6	45
VFLN2 012 08		4		8	45
VFLN2 012 10		4		10	45
VFLN2 012 12		4		12	45
VFLN2 015 04	1.5	4	2.2	4	45
VFLN2 015 05		4		5	45
VFLN2 015 06		4		6	45
VFLN2 015 08		4		8	45
VFLN2 015 10		4		10	45
VFLN2 015 12		4		12	45
VFLN2 015 14		4		14	45
VFLN2 015 16		4		16	50
VFLN2 015 20		4		20	50
VFLN2 020 04	2.0	4	3	4	45
VFLN2 020 06		4		6	45
VFLN2 020 08		4		8	45
VFLN2 020 10		4		10	45
VFLN2 020 12		4		12	45
VFLN2 020 14		4		14	45
VFLN2 020 16		4		16	50
VFLN2 020 20		4		20	50

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.008 ~ 0	-0.004
Ø3.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

V-Mill VFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VFLN2 025 10	2.5	6	3.5	10	50
VFLN2 025 12		6		12	50
VFLN2 025 16		6		16	50
VFLN2 025 20		6		20	60
VFLN2 030 06	3.0	6	4	6	50
VFLN2 030 08		6		8	50
VFLN2 030 10		6		10	50
VFLN2 030 12		6		12	50
VFLN2 030 14		6		14	50
VFLN2 030 16		6		16	50
VFLN2 030 20		6		20	60
VFLN2 030 25		6		25	60
VFLN2 030 30	4.0	6	6	30	60
VFLN2 040 08		6		8	50
VFLN2 040 10		6		10	50
VFLN2 040 12		6		12	50
VFLN2 040 14		6		14	50
VFLN2 040 16		6		16	50
VFLN2 040 20		6		20	60
VFLN2 040 25		6		25	60
VFLN2 040 30	5.0	6	7	30	60
VFLN2 040 35		6		35	70
VFLN2 040 40		6		40	70
VFLN2 050 20		6		20	60
VFLN2 050 25	6.0	6	8	25	60
VFLN2 050 30		6		30	60
VFLN2 050 35		6		35	70
VFLN2 050 40		6		40	70
VFLN2 060 12	6.0	6	8	12	50
VFLN2 060 20		6		20	60
VFLN2 060 30		6		30	60
VFLN2 060 40		6		40	70

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø3 以下	-0.008 ~ 0	-0.004
Ø3.5 以上~	-0.010 ~ 0	-0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

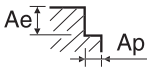
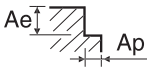
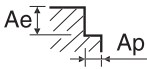
CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

● V-Mill VFLN2

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e
0.2	1	34,000	300	0.016	30,000	180	0.010	21,000	90	0.005
	2	34,000	260	0.010	30,000	160	0.008	21,000	80	0.004
0.3	1	34,000	340	0.027	30,000	210	0.015	21,000	110	0.007
	2	34,000	300	0.019	30,000	200	0.011	21,000	100	0.005
0.4	3	34,000	280	0.014	28,000	180	0.008	19,000	90	0.004
	1	34,000	340	0.040	30,000	240	0.022	21,000	130	0.011
0.4	2	34,000	300	0.032	30,000	230	0.018	21,000	120	0.009
	3	34,000	280	0.024	30,000	220	0.013	21,000	110	0.007
0.5	4	34,000	260	0.019	27,000	190	0.011	19,000	100	0.005
	5	34,000	240	0.014	27,000	180	0.008	19,000	90	0.004
0.5	2	34,000	680	0.045	30,000	450	0.025	21,000	220	0.012
	3	34,000	660	0.037	30,000	430	0.020	21,000	210	0.010
0.5	4	34,000	640	0.024	30,000	420	0.013	21,000	200	0.007
	5	34,000	620	0.024	27,000	380	0.013	19,000	180	0.007
0.6	6	34,000	600	0.019	27,000	380	0.011	19,000	170	0.005
	8	30,000	520	0.013	24,000	340	0.007	17,000	150	0.004
0.6	10	30,000	500	0.008	24,000	340	0.004	17,000	140	0.002
	2	32,000	980	0.054	26,000	600	0.030	19,000	290	0.015
0.6	4	32,000	960	0.040	26,000	560	0.022	19,000	280	0.011
	6	32,000	940	0.029	26,000	540	0.016	19,000	270	0.008
0.8	8	30,000	880	0.019	24,000	500	0.011	17,000	240	0.005
	10	30,000	860	0.014	24,000	480	0.008	17,000	230	0.004
0.8	2	32,000	1,600	0.064	26,000	910	0.035	19,000	500	0.018
	4	32,000	1,560	0.052	26,000	900	0.029	19,000	480	0.014
0.8	6	32,000	1,520	0.038	26,000	880	0.021	19,000	470	0.011
	8	25,000	1,150	0.031	20,000	670	0.017	14,000	340	0.008
1.0	10	25,000	1,100	0.023	20,000	650	0.013	14,000	330	0.006
	4	32,000	2,000	0.057	26,000	1,150	0.031	19,000	600	0.016
1.0	6	32,000	1,950	0.046	26,000	1,100	0.025	19,000	590	0.013
	8	30,000	1,800	0.037	24,000	1,000	0.020	17,000	530	0.010
1.0	10	30,000	1,700	0.030	24,000	950	0.016	17,000	520	0.008
	12	25,000	1,500	0.024	20,000	800	0.013	14,000	430	0.007
1.2	16	25,000	1,450	0.016	20,000	780	0.009	14,000	420	0.004
	20	25,000	1,400	0.011	20,000	760	0.006	14,000	400	0.003
1.2	6	30,000	2,000	0.061	24,000	1,200	0.033	17,000	600	0.017
	8	30,000	1,900	0.050	24,000	1,100	0.027	17,000	580	0.014
1.5	10	26,000	1,600	0.045	20,000	900	0.025	14,000	470	0.012
	12	26,000	1,500	0.036	20,000	880	0.020	14,000	460	0.010
1.5	16	19,000	1,000	0.026	16,000	700	0.014	12,000	380	0.007
	6	30,000	2,400	0.084	24,000	1,400	0.051	17,000	700	0.025
1.5	8	30,000	2,350	0.077	24,000	1,350	0.046	17,000	680	0.023
	10	30,000	2,300	0.062	24,000	1,300	0.037	17,000	670	0.018
1.5	12	27,000	2,000	0.056	22,000	1,100	0.033	16,000	620	0.017
	16	15,000	1,100	0.041	12,000	600	0.024	9,000	350	0.012
1.5	20	15,000	1,050	0.033	12,000	580	0.020	9,000	340	0.010
Depth of Cut		$\frac{A_p}{0.03D}$ 			$\frac{A_p}{0.02D}$ 			$\frac{A_p}{0.01D}$ 		

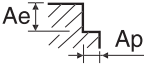
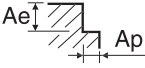
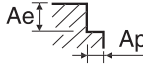
CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

● V-Mill VFLN2

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
2.0	6	28,000	2,600	0.115	22,000	1,500	0.097	16,000	770	0.055
	8	28,000	2,500	0.103	22,000	1,470	0.087	16,000	750	0.049
	10	28,000	2,400	0.093	22,000	1,400	0.079	16,000	740	0.044
	12	28,000	2,300	0.084	22,000	1,350	0.071	16,000	720	0.040
	16	25,000	2,000	0.067	20,000	1,200	0.057	14,000	630	0.032
	20	16,000	1,500	0.055	13,000	780	0.046	10,000	450	0.026
	25	14,000	1,300	0.040	11,000	660	0.034	8,000	350	0.019
3.0	30	14,000	1,200	0.033	11,000	640	0.028	8,000	340	0.016
	8	26,000	3,500	0.172	20,000	1,950	0.146	14,000	860	0.082
	10	26,000	3,400	0.172	20,000	1,900	0.146	14,000	840	0.082
	12	23,000	3,000	0.155	18,000	1,700	0.131	13,000	780	0.074
	16	23,000	2,900	0.139	18,000	1,650	0.118	13,000	770	0.066
	20	20,000	2,500	0.113	16,000	1,450	0.096	11,000	650	0.054
	25	18,000	2,200	0.102	14,000	1,250	0.087	10,000	590	0.049
4.0	30	13,000	1,600	0.082	10,000	860	0.070	8,000	470	0.039
	35	12,000	1,450	0.066	9,500	800	0.056	7,000	410	0.032
	10	20,000	3,200	0.229	16,000	1,800	0.149	11,000	880	0.080
	12	20,000	3,200	0.229	16,000	1,800	0.149	11,000	880	0.080
	16	20,000	3,000	0.207	16,000	1,700	0.134	11,000	870	0.073
	20	20,000	3,000	0.186	16,000	1,700	0.121	11,000	870	0.065
	25	20,000	2,800	0.167	16,000	1,600	0.109	11,000	820	0.059
5.0	30	17,000	2,300	0.136	14,000	1,400	0.088	10,000	740	0.048
	35	11,000	1,500	0.122	9,500	900	0.079	7,000	510	0.043
	40	11,000	1,500	0.109	9,500	900	0.071	7,000	510	0.038
	45	10,000	1,300	0.098	8,000	730	0.064	6,000	430	0.034
	50	10,000	1,300	0.080	8,000	730	0.052	6,000	430	0.028
	20	16,000	3,200	0.258	13,000	1,900	0.186	9,000	900	0.093
	25	16,000	3,200	0.232	13,000	1,900	0.167	9,000	900	0.084
6.0	30	16,000	3,100	0.209	13,000	1,800	0.151	9,000	800	0.075
	35	14,000	2,700	0.188	11,000	1,500	0.136	8,000	700	0.068
	40	14,000	2,700	0.169	11,000	1,500	0.122	8,000	700	0.061
	30	14,000	3,200	0.278	11,000	1,800	0.200	8,000	920	0.100
6.0	40	14,000	2,800	0.226	11,000	1,600	0.162	8,000	880	0.081
	50	14,000	2,600	0.203	11,000	1,500	0.146	8,000	800	0.073
Depth of Cut		$\frac{A_p}{0.03D}$ 			$\frac{A_p}{0.02D}$ 			$\frac{A_p}{0.01D}$ 		

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

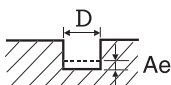
● V-Mill VFLN2

HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e
0.1	1	35,000	175	0.009	28,000	100	0.006	23,000	80	0.003
	2	34,000	135	0.005	27,000	80	0.004	22,000	60	0.002
0.2	1	32,000	220	0.018	26,000	130	0.011	21,000	100	0.006
	2	30,000	180	0.011	24,000	100	0.009	19,000	80	0.004
0.3	1	32,000	330	0.030	26,000	190	0.016	21,000	150	0.008
	2	32,000	255	0.021	26,000	160	0.012	21,000	130	0.006
0.4	3	30,000	250	0.016	24,000	140	0.009	19,000	110	0.004
	1	32,000	480	0.044	26,000	270	0.024	21,000	220	0.012
0.5	2	32,000	330	0.035	26,000	190	0.019	21,000	150	0.010
	3	30,000	240	0.026	24,000	140	0.015	19,000	110	0.007
0.6	4	30,000	225	0.021	24,000	130	0.012	19,000	100	0.006
	5	28,000	165	0.016	22,000	90	0.009	17,000	70	0.004
0.8	2	30,000	310	0.049	24,000	170	0.027	19,000	140	0.014
	3	30,000	255	0.040	24,000	140	0.022	19,000	113	0.011
1.0	4	28,000	230	0.026	23,000	130	0.015	18,000	110	0.007
	5	28,000	220	0.026	23,000	130	0.015	18,000	100	0.007
1.2	6	27,000	205	0.021	22,000	120	0.012	17,000	90	0.006
	8	27,000	180	0.014	22,000	100	0.008	17,000	85	0.004
1.5	10	27,000	170	0.009	22,000	100	0.005	17,000	80	0.002
	2	30,000	330	0.060	24,000	185	0.033	19,000	150	0.016
2.0	4	30,000	240	0.044	24,000	130	0.024	19,000	110	0.012
	6	28,000	210	0.032	23,000	120	0.017	18,000	100	0.009
2.5	8	27,000	200	0.021	22,000	110	0.012	17,000	90	0.006
	10	27,000	200	0.016	22,000	110	0.009	17,000	90	0.004
3.0	2	30,000	540	0.070	24,000	300	0.039	19,000	240	0.019
	4	28,000	450	0.058	23,000	260	0.032	18,000	210	0.016
4.0	6	27,000	380	0.042	22,000	220	0.023	17,000	170	0.012
	8	27,000	300	0.034	22,000	180	0.019	17,000	150	0.009
5.0	10	25,000	280	0.025	20,000	160	0.014	16,000	130	0.007
	4	28,000	890	0.062	23,000	510	0.034	18,000	410	0.017
6.0	6	27,000	810	0.050	22,000	460	0.028	17,000	370	0.014
	8	27,000	600	0.040	22,000	340	0.022	17,000	270	0.011
8.0	10	27,000	540	0.033	22,000	310	0.018	17,000	260	0.009
	12	22,000	420	0.026	20,000	280	0.014	16,000	220	0.007
10.0	16	22,000	400	0.017	20,000	240	0.010	16,000	190	0.005
	20	22,000	380	0.012	20,000	210	0.007	16,000	170	0.003
12.0	6	23,000	800	0.067	18,000	440	0.037	14,000	350	0.018
	8	21,000	600	0.055	17,000	340	0.030	13,000	280	0.015
15.0	10	21,000	600	0.049	17,000	340	0.027	13,000	270	0.014
	12	21,000	580	0.039	17,000	330	0.022	13,000	260	0.011
20.0	16	17,000	400	0.028	16,000	220	0.016	12,000	180	0.008
	6	16,000	680	0.093	13,000	390	0.056	10,000	310	0.028
25.0	8	15,000	500	0.084	12,000	280	0.051	9,500	220	0.025
	10	15,000	500	0.068	12,000	280	0.041	9,500	220	0.020
30.0	12	15,000	500	0.061	12,000	280	0.037	9,500	220	0.018
	16	14,000	420	0.045	11,000	230	0.027	8,500	190	0.013
40.0	20	14,000	420	0.036	11,000	230	0.022	8,500	190	0.011

Depth
of
Cut



CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

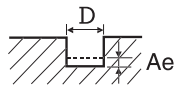
● V-Mill VFLN2

HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
2.0	6	15,000	950	0.126	12,000	530	0.107	9,500	430	0.060
	8	15,000	950	0.113	12,000	530	0.096	9,500	430	0.054
	10	15,000	840	0.102	12,000	470	0.087	9,500	380	0.049
	12	14,000	770	0.092	11,000	420	0.078	8,500	340	0.044
	16	14,000	770	0.074	11,000	420	0.063	8,500	340	0.035
	20	14,000	770	0.060	11,000	420	0.051	8,500	340	0.029
	25	13,000	700	0.044	10,000	380	0.037	8,000	300	0.021
3.0	30	13,000	700	0.036	10,000	380	0.031	8,000	300	0.017
	8	13,000	1,140	0.189	10,000	610	0.161	8,000	490	0.090
	10	13,000	1,140	0.189	10,000	610	0.161	8,000	490	0.090
	12	13,000	1,140	0.170	10,000	610	0.145	8,000	490	0.081
	16	11,000	910	0.153	8,500	490	0.130	6,500	390	0.073
	20	11,000	860	0.124	8,500	470	0.106	6,500	370	0.059
	25	11,000	860	0.112	8,500	470	0.095	6,500	370	0.053
4.0	30	11,000	860	0.090	8,500	470	0.077	6,500	370	0.043
	35	10,000	780	0.073	8,000	440	0.062	6,000	340	0.035
	10	8,000	1,020	0.252	6,500	580	0.164	5,500	460	0.089
	12	7,500	950	0.252	6,000	530	0.164	4,500	420	0.089
	16	7,500	950	0.227	6,000	530	0.148	4,500	420	0.080
	20	7,500	750	0.204	6,000	440	0.133	4,500	340	0.072
	25	7,500	750	0.184	6,000	420	0.120	4,500	340	0.065
5.0	30	7,000	700	0.149	5,500	380	0.097	4,000	310	0.052
	35	7,000	700	0.134	5,500	380	0.087	4,000	310	0.047
	40	6,500	590	0.120	5,000	320	0.078	3,500	250	0.042
	45	6,500	590	0.108	5,000	320	0.070	3,500	250	0.038
	50	6,500	590	0.088	5,000	320	0.057	3,500	250	0.031
	20	7,500	900	0.284	6,000	500	0.205	4,500	400	0.102
	25	7,500	900	0.255	6,000	500	0.184	4,500	400	0.092
6.0	30	7,000	840	0.230	5,500	450	0.166	4,000	360	0.083
	35	7,000	800	0.207	5,500	440	0.149	4,000	350	0.075
	40	7,000	800	0.186	5,500	440	0.134	4,000	350	0.067
	30	6,500	920	0.306	5,000	500	0.221	4,000	400	0.110
6.0	40	6,000	820	0.248	4,500	430	0.179	3,500	340	0.089
	50	6,000	820	0.223	4,500	430	0.161	3,500	340	0.080

Depth
of
Cut



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

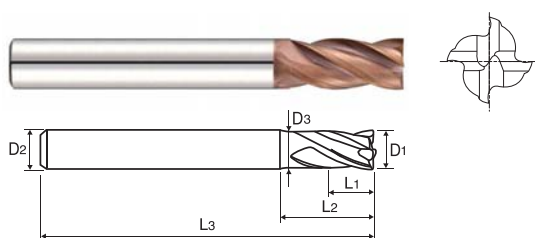
TAP

Special
Tools

CARBIDE, 4 FLUTE, LONG NECK

硬质合金, 4刃, 颈部加长型

V-Mill VFLN4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

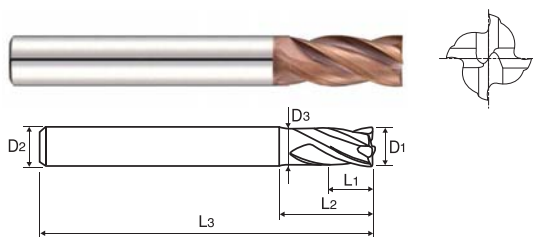
型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VFLN4 010 04	1.0	4	1.2	4	45
VFLN4 010 06		4		6	45
VFLN4 010 08		4		8	45
VFLN4 010 10		4		10	45
VFLN4 012 06	1.2	4	1.4	6	45
VFLN4 012 08		4		8	45
VFLN4 012 10		4		10	45
VFLN4 012 12		4		12	45
VFLN4 015 06	1.5	4	1.8	6	45
VFLN4 015 08		4		8	45
VFLN4 015 10		4		10	45
VFLN4 015 12		4		12	45
VFLN4 020 06	2.0	4	2.4	6	45
VFLN4 020 08		4		8	45
VFLN4 020 10		4		10	45
VFLN4 020 12		4		12	45
VFLN4 020 16	2.5	4	3.0	16	50
VFLN4 020 20		4		20	60
VFLN4 025 10		6		10	50
VFLN4 025 12		6		12	50
VFLN4 025 16	3.0	6	3.6	16	50
VFLN4 025 20		6		20	60
VFLN4 030 10		6		10	50
VFLN4 030 12		6		12	50
VFLN4 030 16	3.0	6	3.6	16	50
VFLN4 030 20		6		20	60
VFLN4 030 25		6		25	60
VFLN4 030 30		6		30	70

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 4 FLUTE, LONG NECK

硬质合金, 4刀, 颈部加长型

V-Mill VFLN4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VFLN4 040 10	4.0	6	4.8	10	50
VFLN4 040 12		6		12	50
VFLN4 040 16		6		16	50
VFLN4 040 20		6		20	60
VFLN4 040 25		6		25	60
VFLN4 040 30		6		30	70
VFLN4 050 16	5.0	6	6.0	16	50
VFLN4 050 20		6		20	60
VFLN4 050 25		6		25	60
VFLN4 050 30		6		30	70
VFLN4 060 20	6.0	6	7.2	20	60
VFLN4 060 25		6		25	60
VFLN4 060 30		6		30	70
VFLN4 060 40		6		40	70
VFLN4 080 30	8.0	8	9.5	30	70
VFLN4 080 35		8		35	70
VFLN4 080 40		8		40	80
VFLN4 080 45		8		45	80
VFLN4 080 50		8		50	90
VFLN4 100 30	10.0	10	12.0	30	70
VFLN4 100 35		10		35	70
VFLN4 100 40		10		40	80
VFLN4 100 45		10		45	80
VFLN4 100 50		10		50	100
VFLN4 120 35	12.0	12	14.5	35	80
VFLN4 120 40		12		40	80
VFLN4 120 45		12		45	80
VFLN4 120 50		12		50	100
VFLN4 120 60		12		60	100

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

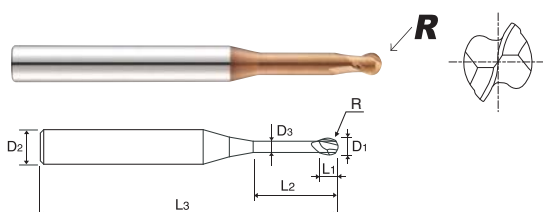
TAP

Special Tools

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

V-Mill VBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.

BALL RADIUS TOLERANCE(mm) 球头半径公差(mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
R3 以下	± 0.005	- 0.004
R3.5 以上~	± 0.008	- 0.008



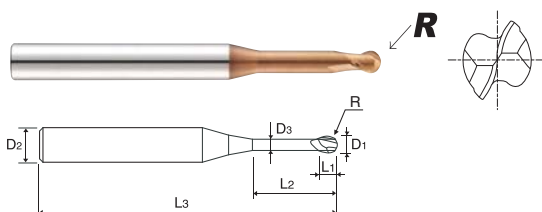
Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VBLN2 002 01	R0.10	0.2	4	0.2	1	45
VBLN2 002 02			4		2	45
VBLN2 003 01	R0.15	0.3	4	0.3	1	45
VBLN2 003 02			4		2	45
VBLN2 004 01	R0.20	0.4	4	0.4	1	45
VBLN2 004 02			4		2	45
VBLN2 004 03			4		3	45
VBLN2 004 04			4		4	45
VBLN2 004 05			4		5	45
VBLN2 005 02	R0.25	0.5	4	0.5	2	45
VBLN2 005 03			4		3	45
VBLN2 005 04			4		4	45
VBLN2 005 05			4		5	45
VBLN2 005 06			4		6	45
VBLN2 005 08			4		8	45
VBLN2 005 10			4		10	45
VBLN2 006 02	R0.30	0.6	4	0.6	2	45
VBLN2 006 03			4		3	45
VBLN2 006 04			4		4	45
VBLN2 006 05			4		5	45
VBLN2 006 06			4		6	45
VBLN2 006 08			4		8	45
VBLN2 006 10			4		10	45
VBLN2 008 02	R0.40	0.8	4	0.8	2	45
VBLN2 008 03			4		3	45
VBLN2 008 04			4		4	45
VBLN2 008 05			4		5	45
VBLN2 008 06			4		6	45
VBLN2 008 08			4		8	45
VBLN2 008 10			4		10	45

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

V-Mill VBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.

BALL RADIUS TOLERANCE(mm) 球头半径公差(mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
R3 以下	± 0.005	- 0.004
R3.5 以上~	± 0.008	- 0.008



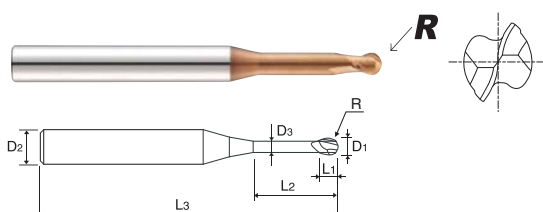
Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 EFFECTIVE LENGTH L2	全长 OVERALL LENGTH L3
VBLN2 010 02	R0.5	1.0	4	1.0	2	45
VBLN2 010 03			4		3	45
VBLN2 010 04			4		4	45
VBLN2 010 05			4		5	45
VBLN2 010 06			4		6	45
VBLN2 010 08			4		8	45
VBLN2 010 10			4		10	45
VBLN2 010 12			4		12	45
VBLN2 010 16			4		16	50
VBLN2 010 20			4		20	50
VBLN2 012 03	R0.6	1.2	4	1.2	3	45
VBLN2 012 04			4		4	45
VBLN2 012 05			4		5	45
VBLN2 012 06			4		6	45
VBLN2 012 08			4		8	45
VBLN2 012 10			4		10	45
VBLN2 012 12			4		12	45
VBLN2 015 04	R0.75	1.5	4	1.5	4	45
VBLN2 015 05			4		5	45
VBLN2 015 06			4		6	45
VBLN2 015 08			4		8	45
VBLN2 015 10			4		10	45
VBLN2 015 12			4		12	45
VBLN2 015 14			4		14	45
VBLN2 015 16			4		16	50
VBLN2 015 20			4		20	50
VBLN2 020 04	R1.0	2.0	4	2.0	4	45
VBLN2 020 06			4		6	45
VBLN2 020 08			4		8	45
VBLN2 020 10			4		10	45
VBLN2 020 12			4		12	45
VBLN2 020 14			4		14	45
VBLN2 020 16			4		16	50
VBLN2 020 20			4		20	50

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

V-Mill VBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
R3 以下	± 0.005	- 0.004
R3.5 以上~	± 0.008	- 0.008



Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
VBLN2 025 10	R1.25	2.5	6	2.5	10	50
VBLN2 025 12			6		12	50
VBLN2 025 16			6		16	50
VBLN2 025 20			6		20	60
VBLN2 030 06	R1.5	3.0	6	3.0	6	50
VBLN2 030 08			6		8	50
VBLN2 030 10			6		10	50
VBLN2 030 12			6		12	50
VBLN2 030 14			6		14	50
VBLN2 030 16			6		16	60
VBLN2 030 20			6		20	60
VBLN2 030 25			6		25	60
VBLN2 030 30	R2.0	4.0	6	4	30	60
VBLN2 040 08			6		8	50
VBLN2 040 10			6		10	50
VBLN2 040 12			6		12	50
VBLN2 040 14			6		14	50
VBLN2 040 16			6		16	60
VBLN2 040 20			6		20	60
VBLN2 040 25			6		25	60
VBLN2 040 30	R2.5	5.0	6	5	30	60
VBLN2 040 35			6		35	70
VBLN2 040 40			6		40	70
VBLN2 050 20			6		20	60
VBLN2 050 25	R3.0	6.0	6	6	25	60
VBLN2 050 30			6		30	60
VBLN2 050 35			6		35	70
VBLN2 050 40			6		40	70
VBLN2 060 12	R3.0	6.0	6	6	12	50
VBLN2 060 20			6		20	60
VBLN2 060 30			6		30	60
VBLN2 060 40			6		40	70

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

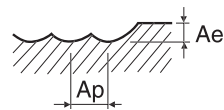
● V-Mill VBLN2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE			硬化钢								
			~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	R	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
0.2	0.1	1	40,000	360	0.003	40,000	300	0.003	40,000	300	0.002
		2	40,000	360	0.002	40,000	300	0.002	40,000	200	0.001
0.3	0.15	1	40,000	600	0.007	40,000	500	0.007	40,000	500	0.005
		2	40,000	600	0.003	40,000	500	0.003	40,000	500	0.002
0.4	0.2	3	40,000	480	0.002	40,000	400	0.002	40,000	400	0.001
		1	40,000	1,700	0.015	40,000	1,400	0.015	40,000	1,400	0.010
		2	40,000	1,200	0.010	40,000	1,000	0.010	40,000	1,000	0.006
		3	40,000	840	0.005	40,000	700	0.005	40,000	700	0.003
		4	40,000	720	0.003	40,000	600	0.003	40,000	600	0.002
		5	40,000	480	0.002	40,000	400	0.002	40,000	400	0.001
0.5	0.25	2	40,000	2,400	0.020	40,000	2,000	0.020	40,000	2,000	0.015
		3	40,000	1,400	0.015	40,000	1,200	0.015	40,000	1,200	0.010
		4	40,000	1,200	0.010	36,000	900	0.010	36,000	900	0.007
		5	40,000	930	0.007	36,000	700	0.007	36,000	700	0.005
		6	40,000	900	0.005	32,000	600	0.005	32,000	600	0.003
		8	40,000	600	0.003	32,000	400	0.003	32,000	400	0.002
0.6	0.3	10	40,000	450	0.002	32,000	300	0.002	32,000	300	0.001
		2	40,000	3,300	0.030	40,000	2,800	0.030	40,000	2,800	0.020
		4	40,000	2,600	0.020	36,000	2,000	0.020	36,000	2,000	0.015
		6	39,000	1,200	0.008	30,000	800	0.008	30,000	800	0.005
		8	39,000	900	0.006	30,000	600	0.006	30,000	600	0.005
0.8	0.4	10	39,000	600	0.004	30,000	400	0.004	30,000	400	0.003
		2	40,000	4,200	0.040	40,000	3,500	0.040	40,000	3,500	0.030
		4	40,000	3,600	0.020	40,000	3,000	0.020	40,000	3,000	0.015
		6	39,000	2,500	0.020	30,000	1,600	0.020	30,000	1,600	0.010
		8	33,000	1,600	0.010	25,000	1,000	0.010	25,000	1,000	0.007
1.0	0.5	10	33,000	1,300	0.008	25,000	800	0.008	25,000	800	0.005
		4	40,000	4,800	0.050	40,000	4,000	0.050	40,000	4,000	0.045
		6	40,000	2,800	0.040	35,000	2,000	0.040	35,000	2,000	0.035
		8	39,000	2,500	0.035	30,000	1,600	0.035	30,000	1,600	0.030
		10	33,000	1,900	0.030	25,000	1,200	0.030	25,000	1,200	0.025
		12	33,000	1,600	0.025	25,000	1,000	0.025	25,000	1,000	0.020
1.2	0.6	16	26,000	1,000	0.025	20,000	700	0.025	20,000	600	0.020
		20	26,000	1,000	0.020	20,000	700	0.020	20,000	600	0.015
		6	40,000	4,800	0.050	40,000	4,000	0.050	40,000	4,000	0.040
		8	40,000	3,600	0.050	40,000	3,000	0.050	27,000	2,000	0.040
		10	35,000	3,000	0.030	27,000	1,900	0.030	24,000	1,700	0.020
1.5	0.75	12	25,000	1,800	0.030	16,000	1,000	0.030	16,000	1,000	0.020
		16	25,000	1,700	0.025	16,000	900	0.025	16,000	900	0.015
		6	40,000	6,000	0.070	40,000	5,000	0.070	32,000	4,000	0.060
		8	40,000	6,000	0.070	40,000	5,000	0.070	28,000	3,500	0.060
		10	40,000	5,400	0.060	40,000	4,500	0.060	21,000	2,400	0.040
		12	36,000	4,500	0.040	32,000	3,400	0.040	19,000	2,000	0.035
1.5	0.75	16	20,000	2,200	0.030	16,000	1,500	0.030	14,000	1,300	0.030
		20	20,000	2,000	0.020	16,000	1,300	0.020	14,000	1,000	0.025

Depth
of
Cut

$$\frac{A_p}{A_e \times 2}$$



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

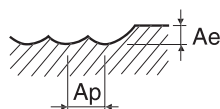
● V-Mill VBLN2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE			硬化钢								
			~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	R	L2	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e	Speed(min ⁻¹)	Feed(mm/min)	A _e
2.0	1.0	6	40,000	7,200	0.100	40,000	6,000	0.100	24,000	3,400	0.100
		8	40,000	6,000	0.100	40,000	5,000	0.100	24,000	3,000	0.100
		10	40,000	6,000	0.080	40,000	5,000	0.080	24,000	3,000	0.070
		12	40,000	6,000	0.080	40,000	5,000	0.080	24,000	2,600	0.050
		16	36,000	4,700	0.050	32,000	3,500	0.050	16,000	1,700	0.040
		20	22,000	2,500	0.040	16,000	1,600	0.040	12,000	1,200	0.030
		25	20,000	2,200	0.035	12,000	1,000	0.035	10,000	900	0.025
3.0	1.5	30	20,000	1,700	0.030	10,000	700	0.030	10,000	700	0.020
		8	40,000	9,000	0.150	32,000	6,400	0.150	16,000	3,000	0.150
		10	35,000	6,000	0.150	32,000	5,100	0.150	16,000	2,200	0.150
		12	35,000	6,000	0.130	32,000	5,100	0.130	16,000	2,200	0.130
		16	35,000	6,000	0.100	32,000	4,500	0.100	14,000	1,600	0.100
		20	30,000	5,000	0.100	27,000	3,800	0.100	14,000	1,600	0.060
		25	28,000	4,300	0.080	21,000	2,700	0.080	11,000	1,200	0.060
4.0	2.0	30	20,000	2,800	0.070	14,000	1,600	0.070	10,000	1,100	0.050
		35	16,000	2,600	0.060	12,000	1,400	0.060	8,000	800	0.040
		10	32,000	7,500	0.200	24,000	4,800	0.200	12,000	2,200	0.200
		12	32,000	7,500	0.200	24,000	4,800	0.200	12,000	2,200	0.200
		16	32,000	6,000	0.150	24,000	3,800	0.150	12,000	1,500	0.150
		20	32,000	6,000	0.150	24,000	3,800	0.150	12,000	1,500	0.150
		25	32,000	6,000	0.150	24,000	3,800	0.150	8,000	900	0.100
5.0	2.5	30	26,000	4,500	0.100	20,000	3,000	0.100	7,000	800	0.100
		35	16,000	2,700	0.100	12,000	1,700	0.100	6,000	700	0.080
		40	16,000	2,700	0.085	12,000	1,700	0.085	6,000	600	0.070
		45	14,000	2,300	0.070	11,000	1,500	0.070	6,000	500	0.055
		50	14,000	1,900	0.050	11,000	1,300	0.050	6,000	400	0.040
		20	25,000	5,300	0.200	19,000	3,400	0.200	10,000	1,400	0.200
		25	25,000	5,300	0.200	19,000	3,400	0.200	10,000	1,400	0.200
6.0	3.0	30	25,000	5,000	0.150	19,000	3,200	0.150	8,000	1,000	0.150
		35	21,000	4,200	0.100	16,000	2,700	0.100	6,000	700	0.100
		40	21,000	3,700	0.080	16,000	2,400	0.080	6,000	600	0.070
		30	21,000	5,500	0.200	16,000	3,500	0.200	8,000	1,000	0.200
6.0	3.0	40	21,000	4,200	0.100	16,000	2,700	0.100	6,000	700	0.100
		50	21,000	3,700	0.100	16,000	2,400	0.100	6,000	600	0.080

Depth
of
Cut

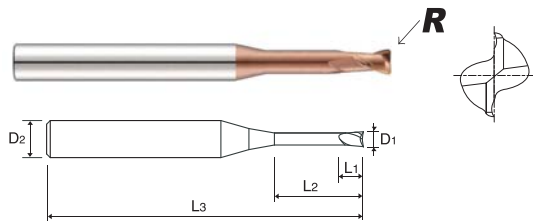
$$\frac{A_p}{A_e \times 2}$$



CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

V-Mill VCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工作表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

Unit : mm

型号	球头半径	刃部直径	柄部直径	刃长	颈长	全长
CODE No.	RADIUS R	MILL DIAMETER D ₁	SHANK DIAMETER D ₂	LENGTH OF CUT L ₁	EFFECTIVE LENGTH L ₂	OVERALL LENGTH L ₃
VCLN2 010 04 R01	R0.1	1.0	4	1.0	4	45
VCLN2 010 06 R01			4		6	45
VCLN2 010 08 R01			4		8	45
VCLN2 010 04 R02	R0.2		4	1.0	4	45
VCLN2 010 06 R02			4		6	45
VCLN2 010 08 R02			4		8	45
VCLN2 010 10 R02			4		10	45
VCLN2 010 12 R02	4		12	45		
VCLN2 010 06 R03	R0.3		4	1.0	6	45
VCLN2 010 10 R03			4		10	45
VCLN2 010 12 R03			4		12	45
VCLN2 015 06 R02	R0.2	1.5	4	1.5	6	45
VCLN2 015 08 R02			4		8	45
VCLN2 015 10 R02			4		10	45
VCLN2 015 12 R02	4		12	45		
VCLN2 015 06 R03	R0.3		4	1.5	6	45
VCLN2 015 08 R03			4		8	45
VCLN2 015 10 R03			4		10	45
VCLN2 020 06 R01	R0.1	2.0	4	2	6	45
VCLN2 020 08 R01			4		8	45
VCLN2 020 10 R01			4		10	45
VCLN2 020 12 R01			4		12	45
VCLN2 020 06 R02	R0.2		4	2	6	45
VCLN2 020 08 R02			4		8	45
VCLN2 020 10 R02			4		10	45
VCLN2 020 12 R02			4		12	45
VCLN2 020 06 R03	R0.3		4	2	6	45
VCLN2 020 08 R03			4		8	45
VCLN2 020 10 R03			4		10	45
VCLN2 020 12 R03			4		12	45
VCLN2 020 06 R05	R0 5		4	2	6	45
VCLN2 020 08 R05			4		8	45
VCLN2 020 10 R05			4		10	45
VCLN2 020 12 R05			4		12	45
VCLN2 020 16 R05			4		16	50

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

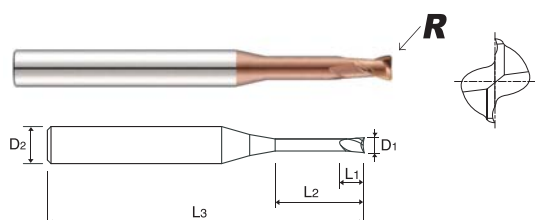
TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

V-Mill VCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

Unit : mm

型号	球头半径	刃部直径	柄部直径	刃长	颈长	全长
CODE No.	RADIUS R	MILL DIAMETER D ₁	SHANK DIAMETER D ₂	LENGTH OF CUT L ₁	EFFECTIVE LENGTH L ₂	OVERALL LENGTH L ₃
VCLN2 030 10 R01	R0.1	3.0	6	3	10	45
VCLN2 030 12 R01			6		12	45
VCLN2 030 16 R01			6		16	50
VCLN2 030 10 R02	R0.2		6	3	10	50
VCLN2 030 12 R02			6		12	50
VCLN2 030 16 R02			6		16	50
VCLN2 030 10 R03	R0.3		6	3	10	50
VCLN2 030 12 R03			6		12	50
VCLN2 030 16 R03			6		16	50
VCLN2 030 10 R05	R0.5		6	3	10	50
VCLN2 030 12 R05			6		12	50
VCLN2 030 16 R05			6		16	50
VCLN2 030 20 R05			6		20	60
VCLN2 040 10 R01	R0.1	4.0	6	4	10	50
VCLN2 040 12 R01			6		12	50
VCLN2 040 16 R01			6		16	50
VCLN2 040 12 R02	R0.2		6	4	12	50
VCLN2 040 16 R02			6		16	50
VCLN2 040 12 R03	R0.3		6	4	12	50
VCLN2 040 16 R03			6		16	50
VCLN2 040 20 R03			6		20	60
VCLN2 040 12 R05	R0.5		6	4	12	50
VCLN2 040 16 R05			6		16	50
VCLN2 040 20 R05			6		20	60
VCLN2 060 16 R01	R0.1	6.0	6	6	16	50
VCLN2 060 20 R01			6		20	60
VCLN2 060 16 R02	R0.2		6	6	16	50
VCLN2 060 20 R02			6		20	60
VCLN2 060 16 R03	R0.3		6	6	16	50
VCLN2 060 20 R03			6		20	60
VCLN2 060 16 R05	R0.5		6	6	16	50
VCLN2 060 20 R05			6		20	60
VCLN2 060 16 R10	R1.0		6	6	16	50
VCLN2 060 20 R10			6		20	60
VCLN2 060 25 R10			6		25	60
VCLN2 060 30 R10			6		30	60

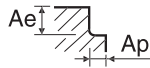
CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

● V-Mill VCLN2

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
1.0	4	38,000	2,380	0.057	30,000	1,320	0.031	24,000	740	0.016
	6	36,000	2,260	0.046	29,000	1,270	0.025	23,000	710	0.013
	8	36,000	2,260	0.037	29,000	1,270	0.020	23,000	710	0.010
	10	36,000	2,260	0.030	29,000	1,270	0.016	23,000	710	0.008
	12	34,000	2,130	0.024	27,000	1,180	0.013	22,000	680	0.007
	16	34,000	2,130	0.016	27,000	1,180	0.009	22,000	680	0.004
1.5	20	34,000	2,130	0.011	27,000	1,180	0.006	22,000	680	0.003
	6	32,000	2,570	0.084	26,000	1,460	0.051	21,000	830	0.025
	8	30,000	2,400	0.077	24,000	1,350	0.046	19,000	750	0.023
	10	30,000	2,400	0.062	24,000	1,350	0.037	19,000	750	0.018
	12	30,000	2,400	0.056	24,000	1,350	0.033	19,000	750	0.017
	16	28,000	2,250	0.041	22,000	1,240	0.024	18,000	710	0.012
2.0	20	28,000	2,250	0.033	22,000	1,240	0.020	18,000	710	0.010
	8	28,000	2,670	0.103	22,000	1,470	0.087	18,000	840	0.049
	10	28,000	2,670	0.093	22,000	1,470	0.079	18,000	840	0.044
	16	26,000	2,480	0.067	21,000	1,400	0.057	17,000	790	0.032
	20	26,000	2,480	0.055	21,000	1,400	0.046	17,000	790	0.026
	30	24,000	2,290	0.033	19,000	1,270	0.028	15,000	700	0.016
3.0	10	25,000	3,050	0.172	20,000	1,700	0.146	16,000	960	0.082
	12	25,000	3,050	0.155	20,000	1,700	0.131	16,000	960	0.074
	16	23,000	2,800	0.139	18,000	1,540	0.118	14,000	840	0.066
	20	23,000	2,800	0.113	18,000	1,540	0.096	14,000	840	0.054
	30	23,000	2,800	0.082	18,000	1,540	0.070	14,000	840	0.039
	35	21,000	2,560	0.066	17,000	1,450	0.056	13,500	810	0.032
4.0	10	19,000	3,050	0.229	15,000	1,680	0.149	12,000	940	0.080
	12	18,000	2,890	0.229	14,000	1,570	0.149	11,000	870	0.080
	16	18,000	2,890	0.207	14,000	1,570	0.134	11,000	870	0.073
	20	18,000	2,890	0.186	14,000	1,570	0.121	11,000	870	0.065
6.0	20	13,000	3,050	0.278	10,500	1,720	0.200	8,500	980	0.100
	30	13,000	3,050	0.278	10,500	1,720	0.200	8,500	980	0.100
Depth of Cut		$\frac{A_p}{0.03D}$ 			$\frac{A_p}{0.02D}$ 			$\frac{A_p}{0.01D}$ 		

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

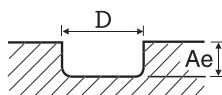
● V-Mill VCLN2

HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
1.0	4	28,000	445	0.068	23,000	255	0.037	18,500	205	0.019
	6	27,000	405	0.055	22,000	230	0.030	17,500	185	0.015
	8	27,000	300	0.044	22,000	170	0.024	17,500	135	0.012
	10	27,000	270	0.036	22,000	155	0.020	17,500	130	0.010
	12	25,000	250	0.029	20,000	140	0.016	16,000	110	0.008
	16	25,000	210	0.019	20,000	120	0.010	16,000	95	0.005
1.5	20	25,000	190	0.013	20,000	105	0.007	16,000	85	0.004
	6	16,000	340	0.101	13,000	195	0.061	10,500	155	0.030
	8	15,000	250	0.092	12,000	140	0.055	9,600	110	0.028
	10	15,000	250	0.074	12,000	140	0.044	9,600	110	0.022
	12	15,000	250	0.067	12,000	140	0.040	9,600	110	0.020
	16	14,000	210	0.049	11,000	115	0.029	8,800	95	0.015
2.0	20	14,000	210	0.039	11,000	115	0.024	8,800	95	0.012
	8	15,000	475	0.123	12,000	265	0.105	9,600	215	0.059
	10	15,000	420	0.111	12,000	235	0.095	9,600	190	0.053
	16	14,000	385	0.081	11,000	210	0.069	8,800	170	0.038
	20	14,000	385	0.066	11,000	210	0.056	8,800	170	0.031
	30	13,000	350	0.039	10,000	190	0.033	8,000	150	0.019
3.0	10	13,000	570	0.206	10,000	305	0.175	8,000	245	0.098
	12	13,000	570	0.186	10,000	305	0.158	8,000	245	0.088
	16	11,000	455	0.167	8,500	245	0.142	6,800	195	0.080
	20	11,000	430	0.135	8,500	235	0.115	6,800	185	0.064
	30	11,000	430	0.098	8,500	235	0.084	6,800	185	0.047
	35	10,000	390	0.080	8,000	220	0.068	6,400	170	0.038
4.0	10	8,000	510	0.275	6,500	290	0.179	5,200	230	0.097
	12	7,500	475	0.275	6,000	265	0.179	4,800	210	0.097
	16	7,500	475	0.248	6,000	265	0.161	4,800	210	0.087
	20	7,500	375	0.223	6,000	220	0.145	4,800	170	0.078
6.0	20	6,500	460	0.334	5,000	250	0.241	4,000	200	0.120
	30	6,500	460	0.334	5,000	250	0.241	4,000	200	0.120

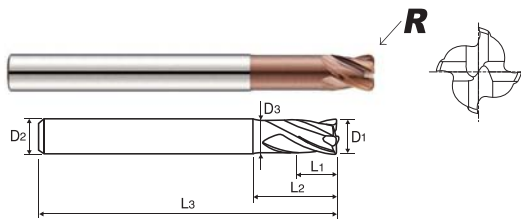
Depth
of
Cut



CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 4刃, 颈部加长型, 圆弧角

V-Mill VCLN4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计。
- 适于干式切削, 高速切削, 最新开发的原材料和涂层。
- 卓越的工件表面粗糙度。
- 由于颈部稍细能够加工深槽。
- 极高的耐磨性。



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 EFFECTIVE LENGTH L2	全长 OVERALL LENGTH L3
VCLN4 020 10 R02	R0.2	2	4	2	6	45
VCLN4 020 16 R02			4		8	45
VCLN4 020 10 R03	R0.3	2	4	2	6	45
VCLN4 020 16 R03			4		8	45
VCLN4 030 10 R03	R0.3	3.0	6	3	10	50
VCLN4 030 16 R03			6		16	50
VCLN4 030 10 R05	R0.5	3.0	6	3	10	50
VCLN4 030 16 R05			6		16	50
VCLN4 030 20 R05	R0.5	3.0	6	3	20	60
VCLN4 040 12 R03			6	12	12	50
VCLN4 040 16 R03	R0.3	4.0	6		16	50
VCLN4 040 12 R05			6	8	12	50
VCLN4 040 16 R05	R0.5	4.0	6		16	50
VCLN4 040 20 R05			6	8	20	60
VCLN4 060 20 R03	R0.3	6.0	6	6	20	60
VCLN4 060 20 R05	R0.5		6		20	60
VCLN4 060 20 R10	R1.0	6.0	6	6	20	60
VCLN4 060 20 R20	R2.0		6		20	60
VCLN4 080 25 R05	R0.5	8.0	8	10	25	60
VCLN4 080 25 R10	R1.0		8		25	60
VCLN4 080 25 R15	R1.5	8.0	8	10	25	60
VCLN4 080 25 R20	R2.0		8		25	60
VCLN4 100 30 R05	R0.5	10.0	10	4	30	70
VCLN4 100 30 R10	R1.0		10		30	70
VCLN4 100 30 R15	R1.5	10.0	10	4	30	70
VCLN4 100 30 R20	R2.0		10		30	70
VCLN4 120 35 R05	R0.5	12.0	12	4	36	80
VCLN4 120 35 R10	R1.0		12		36	80
VCLN4 120 35 R15	R1.5	12.0	12	4	36	80
VCLN4 120 35 R20	R2.0		12		36	80

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS

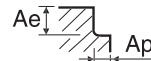
硬质合金, 4刃, 颈部加长型, 圆弧角

● V-Mill VCLN4

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

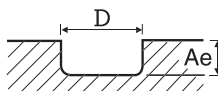
尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
3	20	20,000	3,500	0.30	16,000	2,700	0.15	12,800	2,000	0.08
4.0	20	15,000	3,000	0.40	12,000	2,400	0.20	9,600	1,900	0.10
6	20	10,000	2,100	0.60	7,000	1,450	0.30	4,900	1,000	0.15
8.0	25	8,000	1,500	0.80	5,500	1,050	0.40	3,900	730	0.20
10	30	6,400	1,400	1.00	4,500	950	0.50	3,100	650	0.25
12.0	35	5,400	1,200	1.00	3,800	850.00	0.50	2,700	600	0.25

Depth
of
Cut $\frac{Ap}{0.05D}$  $\frac{Ap}{0.03D}$  $\frac{Ap}{0.02D}$ 

HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	L2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
3	20	12,000	1,750	0.30	9,600	1,350	0.15	7,600	1,000	0.08
4.0	20	9,000	1,500	0.40	7,200	1,200	0.20	5,700	950	0.10
6	20	6,000	1,050	0.60	4,200	720	0.30	2,900	500	0.15
8.0	25	4,800	750	0.80	3,300	520	0.40	2,300	360	0.20
10	30	3,800	700	1.00	2,700	470	0.50	1,800	320	0.25
12.0	35	3,200	600	1.00	2,300	420	0.50	1,600	300	0.25

Depth
of
Cut

CARBIDE, 2 FLUTE, SHORT LENGTH

硬质合金, 2刃, 短型

V-Mill VFS2



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工作表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
VFS2 002 04	0.2	4	0.4	45	△
VFS2 003 04	0.3	4	0.5	45	△
VFS2 004 04	0.4	4	0.8	45	△
VFS2 005 04	0.5	4	1.0	45	△
VFS2 006 04	0.6	4	1.2	45	△
VFS2 008 04	0.8	4	1.5	45	△
VFS2 010 04	1.0	4	2.5	45	○
VFS2 010 06	1.0	6	2.5	50	△
VFS2 012 04	1.2	4	4	45	△
VFS2 015 04	1.5	4	4	45	△
VFS2 015 06	1.5	6	4	50	△
VFS2 020 04	2.0	4	6	45	○
VFS2 020 06	2.0	6	6	50	△
VFS2 025 04	2.5	4	8	45	△
VFS2 025 06	2.5	6	8	50	△
VFS2 030 04	3.0	4	8	45	○
VFS2 030 06	3.0	6	8	50	△
VFS2 040 04	4.0	4	10	45	△
VFS2 040 06	4.0	6	10	50	△
VFS2 050 06	5.0	6	12	50	△
VFS2 060 06	6.0	6	14	60	○
VFS2 080 08/60	8.0	8	19	60	○
VFS2 080 08/100	8.0	8	19	100	△
VFS2 100 10/70	10.0	10	22	70	○
VFS2 100 10/100	10.0	10	22	100	△
VFS2 120 12/80	12.0	12	26	80	△
VFS2 120 12/100	12.0	12	26	100	△

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008~ 0	- 0.004
Ø6.5 以上~	- 0.010~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

TAP

Special Tools

CARBIDE, 2 FLUTE, SHORT LENGTH

硬质合金, 2刃, 短型

● V-Mill VFS2, VCS2

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

尺寸 SIZE	硬化钢								
	~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
0.2	40,000	160	0.020	40,000	160	0.030	30,000	120	0.020
0.3	40,000	200	0.005	40,000	200	0.040	30,000	150	0.030
0.4	40,000	400	0.075	40,000	400	0.053	30,000	300	0.037
0.5	40,000	950	0.015	40,000	950	0.011	30,000	700	0.007
0.6	40,000	1,200	0.030	40,000	1,200	0.021	28,000	840	0.015
0.8	40,000	1,600	0.040	40,000	1,600	0.028	28,000	1,100	0.020
1.0	40,000	2,000	0.060	32,000	1,600	0.042	22,000	1,100	0.029
1.2	38,000	2,300	0.100	28,000	1,700	0.070	20,000	1,200	0.049
1.5	38,000	2,700	0.140	28,000	2,000	0.098	20,000	1,400	0.069
2.0	32,000	2,500	0.180	24,000	1,900	0.126	17,000	1,350	0.088
3.0	22,000	1,900	0.300	16,000	1,400	0.210	11,000	960	0.147
4.0	16,000	1,600	0.400	12,000	1,200	0.280	8,500	850	0.196
5.0	12,000	1,200	0.500	9,000	900	0.350	6,500	650	0.245
6.0	10,000	1,000	0.600	7,000	700	0.420	5,000	500	0.294
8.0	8,000	800	0.800	5,600	560	0.560	4,000	400	0.392
10.0	6,000	800	1.000	4,500	500	0.700	3,200	350	0.490
12.0	5,200	700	1.000	3,800	450	0.700	2,600	300	0.490

Depth of Cut	$\frac{A_p}{0.05D}$ (Max:1D)	$\frac{A_p}{0.03D}$ (Max:1D)	$\frac{A_p}{0.02D}$ (Max:1D)
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HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸 SIZE	硬化钢								
	~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
0.2	28,000	96	0.004	28,000	96	0.003	21,000	72	0.002
0.3	28,000	120	0.005	28,000	120	0.004	21,000	90	0.003
0.4	28,000	240	0.008	28,000	240	0.006	21,000	180	0.005
0.5	28,000	570	0.015	28,000	570	0.011	21,000	420	0.007
0.6	28,000	720	0.030	28,000	720	0.021	19,600	504	0.015
0.8	28,000	960	0.040	28,000	960	0.028	19,600	660	0.020
1.0	28,000	1,200	0.060	22,400	960	0.042	15,400	660	0.029
1.2	26,600	1,380	0.100	19,600	1,020	0.070	14,000	720	0.049
1.5	26,600	1,620	0.140	19,600	1,200	0.10	14,000	840	0.07
2.0	22,400	1,500	0.18	16,800	1,140	0.13	11,900	810	0.09
3.0	13,200	950	0.30	9,600	700	0.21	6,600	480	0.15
4.0	9,600	800	0.40	7,200	600	0.28	5,100	425	0.20
5.0	7,200	600	0.50	5,400	450	0.35	3,900	325	0.25
6.0	6,000	500	0.60	4,200	350	0.42	3,000	250	0.29
8.0	4,800	400	0.80	3,360	280	0.56	2,400	200	0.39
10.0	3,600	400	1.00	2,700	250	0.70	1,920	175	0.49
12.0	3,120	350	1.00	2,280	225	0.70	1,560	150	0.49

Depth of Cut	
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CARBIDE, 4 FLUTE, SHORT LENGTH

硬质合金, 4刃, 短型

V-Mill VFS4



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工作表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
VFS4 010 04	1.0	4	2.5	45	○
VFS4 010 06	1.0	6	2.5	50	△
VFS4 015 04	1.5	4	4	45	△
VFS4 015 06	1.5	6	4	50	△
VFS4 020 04	2.0	4	6	45	○
VFS4 020 06	2.0	6	6	50	△
VFS4 025 04	2.5	4	8	45	△
VFS4 025 06	2.5	6	8	50	△
VFS4 030 06	3.0	6	8	50	○
VFS4 040 06	4.0	6	10	50	△
VFS4 050 06	5.0	6	12	50	△
VFS4 060 06	6.0	6	14	60	○
VFS4 080 08	8.0	8	19	60	△
VFS4 100 10	10.0	10	22	70	○
VFS4 120 12	12.0	12	26	80	△

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

TAP

Special Tools

CARBIDE, 4 FLUTE, SHORT LENGTH

硬质合金, 4刃, 短型

● V-Mill VFS4, VCS4

HIGH SPEED MILLING / 高速加工

SIDE CUTTING / 侧铣

尺寸	硬化钢								
SIZE	~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
1.0	40,000	3,000	0.060	32,000	2,400	0.042	22,000	1,650	0.029
1.2	38,000	3,450	0.100	28,000	2,550	0.070	20,000	1,800	0.049
1.5	38,000	4,050	0.140	28,000	3,000	0.098	20,000	2,100	0.069
2.0	32,000	3,750	0.180	24,000	2,850	0.126	17,000	2,025	0.088
3.0	22,000	2,850	0.300	16,000	2,100	0.210	11,000	1,440	0.147
4.0	16,000	2,400	0.400	12,000	1,800	0.280	8,500	1,275	0.196
5.0	12,000	1,800	0.500	9,000	1,350	0.350	6,500	975	0.245
6.0	10,000	1,500	0.600	7,000	1,050	0.420	5,000	750	0.294
8.0	8,000	1,200	0.800	5,600	840	0.560	4,000	600	0.392
10.0	6,000	1,200	1.000	4,500	750	0.700	3,200	525	0.490
12.0	5,200	1,050	1.000	3,800	675	0.700	2,600	450	0.490

Depth of Cut	$\frac{A_p}{0.05D}$ (Max:1D)	$\frac{A_p}{0.03D}$ (Max:1D)	$\frac{A_p}{0.02D}$ (Max:1D)
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HIGH SPEED MILLING / 高速加工

SLOTTING / 槽铣

尺寸	硬化钢								
SIZE	~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
1.0	28,000	1,800	0.060	22,400	1,440	0.042	15,400	990	0.029
1.2	26,600	2,070	0.100	19,600	1,530	0.070	14,000	1,080	0.049
1.5	26,600	2,430	0.140	19,600	1,800	0.098	14,000	1,260	0.069
2.0	22,400	2,250	0.180	16,800	1,710	0.126	11,900	1,215	0.088
3.0	13,200	1,425	0.300	9,600	1,050	0.210	6,600	720	0.147
4.0	9,600	1,200	0.400	7,200	900	0.280	5,100	638	0.196
5.0	7,200	900	0.500	5,400	675	0.350	3,900	488	0.245
6.0	6,000	750	0.600	4,200	525	0.420	3,000	375	0.294
8.0	4,800	600	0.800	3,360	420	0.560	2,400	300	0.392
10.0	3,600	600	1.000	2,700	375	0.700	1,920	263	0.490
12.0	3,120	525	1.000	2,280	338	0.700	1,560	225	0.490

Depth of Cut	
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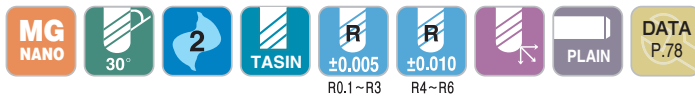
CARBIDE, 2 FLUTE, SHORT LENGTH, BALL

硬质合金, 2刃, 短型, 球头

V-Mill VBS2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VBS2 002 04	R0.10	0.2	4	0.25	45
VBS2 003 04	R0.15	0.3	4	0.4	45
VBS2 004 04	R0.20	0.4	4	0.5	45
VBS2 005 04	R0.25	0.5	4	0.6	45
VBS2 006 04	R0.30	0.6	4	0.7	45
VBS2 008 04	R0.40	0.8	4	0.9	45
VBS2 010 04			4		45
VBS2 010 06	R0.5	1.0	6	2	50
VBS2 012 04	R0.6	1.2	4	3	45
VBS2 015 04			4		45
VBS2 015 06	R0.75	1.5	6	3	50
VBS2 020 04			4		45
VBS2 020 06	R1.0	2.0	6	5	50
VBS2 025 04			4		45
VBS2 025 06	R1.25	2.5	6	6	50
VBS2 030 04			4		50
VBS2 030 06	R1.5	3.0	6	8	60
VBS2 040 04			4		70
VBS2 040 06	R2.0	4.0	6	8	70
VBS2 050 06/60			6		60
VBS2 050 06/80	R2.5	5.0	6	10	80
VBS2 060 06/60			6		60
VBS2 060 06/80	R3.0	6.0	6	12	80
VBS2 080 08/60			8		60
VBS2 080 08/100	R4.0	8.0	8	16	100
VBS2 100 10/70			10		70
VBS2 100 10/100	R5.0	10.0	10	20	100
VBS2 120 12/80			12		80
VBS2 120 12/100	R6.0	12.0	12	22	100

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
R3 以下	± 0.005	- 0.004
R3.5 以上~	± 0.010	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

TAP

Special Tools

CARBIDE, 2 FLUTE, SHORT LENGTH, BALL

硬质合金, 2刃, 短型, 球头

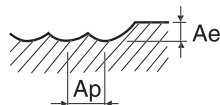
● V-Mill VBS2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE		硬化钢								
		~ 45HRC (SCM, SKD61, NAK)			~ 55HRC (STAVAX, SKD11)			~ 65HRC (SKD11, SKH)		
D	R	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
0.2	R0.10	40,000	370	0.003	35,000	300	0.003	28,000	210	0.002
0.3	R0.15	40,000	600	0.011	35,000	490	0.009	28,000	340	0.006
0.4	R0.20	40,000	1,700	0.022	35,000	1,350	0.018	28,000	1,000	0.012
0.5	R0.25	40,000	2,400	0.028	35,000	1,900	0.023	28,000	1,350	0.015
0.6	R0.30	40,000	3,300	0.033	35,000	2,600	0.027	28,000	1,800	0.018
0.8	R0.40	40,000	4,200	0.055	35,000	3,400	0.045	28,000	2,400	0.029
1.0	R0.50	40,000	4,400	0.066	35,000	3,600	0.054	28,000	2,500	0.035
1.2	R0.60	40,000	4,800	0.083	35,000	3,900	0.068	28,000	2,700	0.044
1.5	R0.75	40,000	6,000	0.099	35,000	4,900	0.081	28,000	3,400	0.053
2.0	R1.0	40,000	7,100	0.121	35,000	5,800	0.099	28,000	4,000	0.064
3.0	R1.5	40,000	8,800	0.143	35,000	7,200	0.117	28,000	5,000	0.076
4.0	R2.0	32,000	7,500	0.165	27,000	5,900	0.135	21,000	4,000	0.088
5.0	R2.5	25,000	6,000	0.220	21,000	4,700	0.180	16,000	3,300	0.117
6.0	R3.0	21,000	5,500	0.275	17,000	4,100	0.225	13,000	2,900	0.146
8.0	R4.0	16,000	4,500	0.330	13,000	3,400	0.270	11,000	2,400	0.176
10.0	R5.0	13,000	3,800	0.550	11,000	3,000	0.450	8,500	2,100	0.293
12	R6.0	9,000	3,200	0.550	8,000	2,600	0.450	6,500	1,800	0.293

Depth
of
Cut

$$\frac{A_p}{A_e \times 2}$$



CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 2刃, 短型, 圆弧角

V-Mill VCS2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VCS2 010 R01	RO.1	1.0	4	2	45
VCS2 010 R02	RO.2		4	2	45
VCS2 010 R03	RO.3		4	2	45
VCS2 015 R01	RO.1	1.5	4	3	45
VCS2 015 R02	RO.2		4	3	45
VCS2 015 R03	RO.3		4	3	45
VCS2 015 R05	RO.5	2.0	4	3	45
VCS2 020 R01	RO.1		4	4	45
VCS2 020 R02	RO.2		4	4	45
VCS2 020 R03	RO.3	2.5	4	4	45
VCS2 020 R05	RO.5		4	4	45
VCS2 025 R02	RO.2		6	5	50
VCS2 025 R03	RO.3	3.0	6	5	50
VCS2 025 R05	RO.5		6	5	50
VCS2 030 R01	RO.1		6	8	50
VCS2 030 R02	RO.2	4.0	6	8	50
VCS2 030 R03	RO.3		6	8	50
VCS2 030 R05	RO.5		6	8	50
VCS2 030 R10	R1.0	5.0	6	8	50
VCS2 040 R01	RO.1		6	12	50
VCS2 040 R02	RO.2		6	12	50
VCS2 040 R03	RO.3	5.0	6	12	50
VCS2 040 R05	RO.5		6	12	50
VCS2 040 R10	R1.0		6	12	50
VCS2 050 R01	RO.1	5.0	6	15	50
VCS2 050 R02	RO.2		6	15	50
VCS2 050 R03	RO.3		6	15	50
VCS2 050 R05	RO.5	5.0	6	15	50
VCS2 050 R10	R1.0		6	15	50

MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 2刃, 短型, 圆弧角

V-Mill VCS2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VCS2 060 R01	R0.1	6.0	6	15	60
VCS2 060 R02	R0.2		6	15	60
VCS2 060 R03	R0.3		6	15	60
VCS2 060 R05	R0.5		6	15	60
VCS2 060 R10	R1.0		6	15	60
VCS2 060 R15	R1.5		6	15	60
VCS2 060 R20	R2.0	8.0	6	15	60
VCS2 080 R02	R0.2		8	20	60
VCS2 080 R03	R0.3		8	20	60
VCS2 080 R05	R0.5		8	20	60
VCS2 080 R10	R1.0		8	20	60
VCS2 080 R15	R1.5		8	20	60
VCS2 080 R20	R2.0		8	20	60
VCS2 100 R02	R0.2	10.0	10	25	70
VCS2 100 R03	R0.3		10	25	70
VCS2 100 R05	R0.5		10	25	70
VCS2 100 R10	R1.0		10	25	70
VCS2 100 R15	R1.5		10	25	70
VCS2 100 R20	R2.0		10	25	70
VCS2 120 R02	R0.2	12.0	12	25	80
VCS2 120 R03	R0.3		12	25	80
VCS2 120 R05	R0.5		12	25	80
VCS2 120 R10	R1.0		12	25	80
VCS2 120 R15	R1.5		12	25	80
VCS2 120 R20	R2.0		12	25	80

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 4刃, 短型, 圆弧角

V-Mill VCS4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VCS4 010 R01	R0.1	1.0	4	2.5	45
VCS4 010 R02	R0.2		4	2.5	45
VCS4 010 R03	R0.3		4	2.5	45
VCS4 015 R01	R0.1	1.5	4	3	45
VCS4 015 R02	R0.2		4	3	45
VCS4 015 R03	R0.3		4	3	45
VCS4 015 R05	R0.5	2.0	4	3	45
VCS4 020 R01	R0.1		4	5	45
VCS4 020 R02	R0.2		4	5	45
VCS4 020 R03	R0.3	2.5	4	5	45
VCS4 020 R05	R0.5		4	5	45
VCS4 025 R02	R0.2		6	6	50
VCS4 025 R03	R0.3	3.0	6	6	50
VCS4 025 R05	R0.5		6	6	50
VCS4 030 R01	R0.1		6	8	50
VCS4 030 R02	R0.2	4.0	6	8	50
VCS4 030 R03	R0.3		6	8	50
VCS4 030 R05	R0.5		6	8	50
VCS4 030 R10	R1.0	5.0	6	8	50
VCS4 040 R01	R0.1		6	8	50
VCS4 040 R02	R0.2		6	8	50
VCS4 040 R03	R0.3	6.0	6	8	50
VCS4 040 R05	R0.5		6	8	50
VCS4 040 R10	R1.0		6	8	50
VCS4 050 R01	R0.1	7.0	6	10	60
VCS4 050 R02	R0.2		6	10	60
VCS4 050 R03	R0.3		6	10	60
VCS4 050 R05	R0.5	8.0	6	10	60
VCS4 050 R10	R1.0		6	10	60

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 4刃, 短型, 圆弧角

V-Mill VCS4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- 4 flute allows for better work piece finishes.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 4刃可得到较好的表面粗糙度
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VCS4 060 R01	R0.1	6.0	6	12	60
VCS4 060 R02	R0.2		6	12	60
VCS4 060 R03	R0.3		6	12	60
VCS4 060 R05	R0.5		6	12	60
VCS4 060 R10	R1.0		6	12	60
VCS4 060 R15	R1.5		6	12	60
VCS4 060 R20	R2.0	8.0	6	12	60
VCS4 080 R02	R0.2		8	16	60
VCS4 080 R03	R0.3		8	16	60
VCS4 080 R05	R0.5		8	16	60
VCS4 080 R10	R1.0		8	16	60
VCS4 080 R15	R1.5		8	16	60
VCS4 080 R20	R2.0		8	16	60
VCS4 100 R02	R0.2	10.0	10	20	70
VCS4 100 R03	R0.3		10	20	70
VCS4 100 R05	R0.5		10	20	70
VCS4 100 R10	R1.0		10	20	70
VCS4 100 R15	R1.5		10	20	70
VCS4 100 R20	R2.0		10	20	70
VCS4 120 R02	R0.2	12.0	12	22	80
VCS4 120 R03	R0.3		12	22	80
VCS4 120 R05	R0.5		12	22	80
VCS4 120 R10	R1.0		12	22	80
VCS4 120 R15	R1.5		12	22	80
VCS4 120 R20	R2.0		12	22	80

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 4 FLUTE, STUB LENGTH, MAXX CORNER RADIUS

硬质合金, 4刃, 超短型, MAXX, 圆弧角

V-Mill VMC4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工作表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	颈长 EFFECTIVE LENGTH	全长 OVERALL LENGTH
VMC4 015 R05	R0.5	1.5	6	0.8	4	50
VMC4 020 R05	R0.5	2.0	6	1.2	6	50
VMC4 030 R05	R0.5	3.0	6	1.8	8	50
VMC4 040 R05	R0.5	4.0	6	2.5	10	50
VMC4 060 R05	R0.5	6.0	6	3.5	12	50
VMC4 060 R10	R1.0	6.0	6			50
VMC4 080 R03	R0.3		8			65
VMC4 080 R05	R0.5	8.0	8	4.5	16	65
VMC4 080 R10	R1.0	8.0	8			65
VMC4 080 R20	R2.0	8.0	8			65
VMC4 100 R03	R0.3		10			70
VMC4 100 R05	R0.5	10.0	10	6	20	70
VMC4 100 R10	R1.0	10.0	10			70
VMC4 100 R20	R2.0	10.0	10			70
VMC4 120 R03	R0.3		12			80
VMC4 120 R05	R0.5	12.0	12	7.5	25	80
VMC4 120 R10	R1.0	12.0	12			80
VMC4 120 R20	R2.0	12.0	12			80

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

CARBIDE, 2 FLUTE, TAPER

硬质合金, 2刃, 斜度

V-Mill VFT2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 DIAMETER	斜度 TAPER ANGLE θ	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VFT2 010 T030	1.0	30°	4	4	45
VFT2 010 T100		1°	4	4	45
VFT2 010 T130		1°~30°	4	4	45
VFT2 010 T200		2°	4	4	45
VFT2 010 T300		3°	4	4	45
VFT2 010 T500		5°	4	4	45
VFT2 010 T700		7°	4	4	45
VFT2 015 T030	1.5	30°	4	6	45
VFT2 015 T100		1°	4	6	45
VFT2 015 T130		1°~30°	4	6	45
VFT2 015 T200		2°	4	6	45
VFT2 015 T300		3°	4	6	45
VFT2 015 T500		5°	4	6	45
VFT2 015 T700		7°	4	6	45
VFT2 020 T030	2.0	30°	6	9	50
VFT2 020 T100		1°	6	9	50
VFT2 020 T130		1°~30°	6	9	50
VFT2 020 T200		2°	6	9	50
VFT2 020 T300		3°	6	9	50
VFT2 020 T500		5°	6	9	50
VFT2 020 T700		7°	6	9	50
VFT2 025 T030	2.5	30°	6	12	50
VFT2 025 T100		1°	6	12	50
VFT2 025 T130		1°~30°	6	12	50
VFT2 025 T200		2°	6	12	50
VFT2 025 T300		3°	6	12	50
VFT2 025 T500		5°	6	12	50
VFT2 025 T700		7°	6	12	50
VFT2 030 T700	3.0	7°	6	12	50

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.015 ~ 0	-0.004
Ø6.5 以上~	-0.020 ~ 0	-0.008

CARBIDE, 2 FLUTE, TAPER, BALL

硬质合金, 2刃, 斜度, 球头

V-Mill VBT2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	斜度 TAPER ANGLE θ	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
VBT2 010 T030	R0.5	30°	4	4	45
VBT2 010 T100		1°	4	4	45
VBT2 010 T130		1° ~ 30°	4	4	45
VBT2 010 T200		2°	4	4	45
VBT2 010 T300		3°	4	4	45
VBT2 010 T500		5°	4	4	45
VBT2 010 T700		7°	4	4	45
VBT2 015 T030	R0.75	30°	4	6	45
VBT2 015 T100		1°	4	6	45
VBT2 015 T130		1° ~ 30°	4	6	45
VBT2 015 T200		2°	4	6	45
VBT2 015 T300		3°	4	6	45
VBT2 015 T500		5°	4	6	45
VBT2 015 T700		7°	4	6	45
VBT2 020 T030	R1.0	30°	6	9	50
VBT2 020 T100		1°	6	9	50
VBT2 020 T130		1° ~ 30°	6	9	50
VBT2 020 T200		2°	6	9	50
VBT2 020 T300		3°	6	9	50
VBT2 020 T500		5°	6	9	50
VBT2 020 T700		7°	6	9	50
VBT2 025 T030	R1.25	30°	6	12	50
VBT2 025 T100		1°	6	12	50
VBT2 025 T130		1° ~ 30°	6	12	50
VBT2 025 T200		2°	6	12	50
VBT2 025 T300		3°	6	12	50
VBT2 025 T500		5°	6	12	50
VBT2 025 T700		7°	6	12	50
VBT2 030 T700	R1.5	7°	6	12	50

BALL RADIUS TOLERANCE(mm) 球头半径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
R3 以下	± 0.005	— 0.004
R3.5 以上~	± 0.010	— 0.008

T-Mill for HRC 72

加工 HRC 72 以下

**for HIGH
HARDENED STEEL
CARBIDE
END MILLS**



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

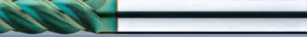
Drill

TAP

Special
Tools

T-Mill for HARDENED STEEL for HRC 72

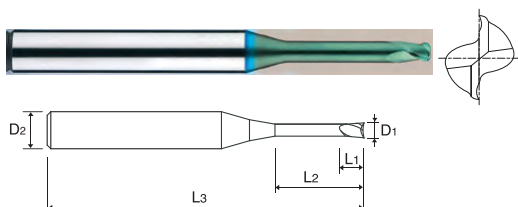
T-Mill 高硬度用 HRC 72

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
TFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	89
TBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	92
TCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	95
TCLN4		CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 4刃, 颈部加长型, 圆弧角	97
TFS2		CARBIDE, 2 FLUTE, SHORT LENGTH 硬质合金, 2刃, 短型	98
TFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	99
TBS2		CARBIDE, 2 FLUTE, SHORT LENGTH, BALL 硬质合金, 2刃, 短型, 球头	100
TCS2		CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 2刃, 短型, 圆弧角	101
TCS4		CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS 硬质合金, 4刃, 短型, 圆弧角	102

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

T-Mill TFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

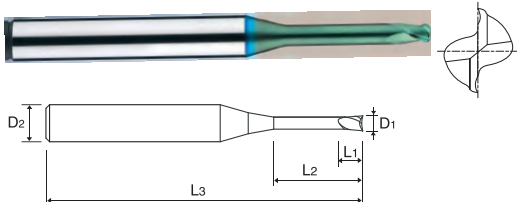
Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
TFLN2 002 01	0.2	4	0.3	1	45
TFLN2 002 02		4		2	45
TFLN2 003 01	0.3	4	0.4	1	45
TFLN2 003 02		4		2	45
TFLN2 004 01	0.4	4	0.6	1	45
TFLN2 004 02		4		2	45
TFLN2 004 03		4		3	45
TFLN2 004 04		4		4	45
TFLN2 004 05		4		5	45
TFLN2 005 02	0.5	4	0.7	2	45
TFLN2 005 03		4		3	45
TFLN2 005 04		4		4	45
TFLN2 005 05		4		5	45
TFLN2 005 06		4		6	45
TFLN2 005 08		4		8	45
TFLN2 005 10		4		10	45
TFLN2 006 02	0.6	4	0.9	2	45
TFLN2 006 03		4		3	45
TFLN2 006 04		4		4	45
TFLN2 006 05		4		5	45
TFLN2 006 06		4		6	45
TFLN2 006 08		4		8	45
TFLN2 006 10		4		10	45
TFLN2 008 02	0.8	4	1.2	2	45
TFLN2 008 03		4		3	45
TFLN2 008 04		4		4	45
TFLN2 008 05		4		5	45
TFLN2 008 06		4		6	45
TFLN2 008 08		4		8	45
TFLN2 008 10		4		10	45

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

T-Mill TFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

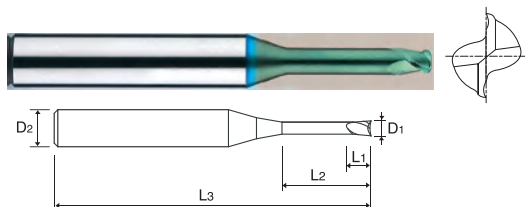
Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
TFLN2 010 02	1.0	4	1.5	2	45
TFLN2 010 03		4		3	45
TFLN2 010 04		4		4	45
TFLN2 010 05		4		5	45
TFLN2 010 06		4		6	45
TFLN2 010 08		4		8	45
TFLN2 010 10		4		10	45
TFLN2 010 12		4		12	45
TFLN2 010 16		4		16	50
TFLN2 010 20		4		20	50
TFLN2 012 03	1.2	4	1.8	3	45
TFLN2 012 04		4		4	45
TFLN2 012 05		4		5	45
TFLN2 012 06		4		6	45
TFLN2 012 08		4		8	45
TFLN2 012 10		4		10	45
TFLN2 012 12		4		12	45
TFLN2 015 04		4	2.3	4	45
TFLN2 015 05		4		5	45
TFLN2 015 06		4		6	45
TFLN2 015 08		4		8	45
TFLN2 015 10	1.5	4		10	45
TFLN2 015 12		4		12	45
TFLN2 015 14		4		14	45
TFLN2 015 16		4		16	50
TFLN2 015 20		4		20	50
TFLN2 020 04	2.0	4	3	4	45
TFLN2 020 06		4		6	45
TFLN2 020 08		4		8	45
TFLN2 020 10		4		10	45
TFLN2 020 12		4		12	45
TFLN2 020 14		4		14	45
TFLN2 020 16		4		16	50
TFLN2 020 20		4		20	50

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

T-Mill TFLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008



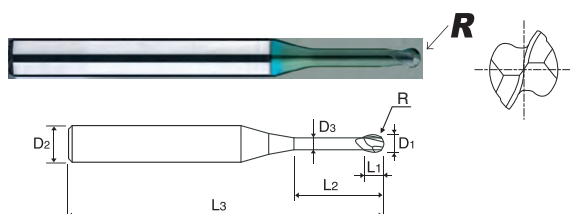
Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
TFLN2 025 10	2.5	6	3.5	10	50
TFLN2 025 12		6		12	50
TFLN2 025 16		6		16	50
TFLN2 025 20		6		20	60
TFLN2 030 06		6		6	50
TFLN2 030 08	3.0	6	4	8	50
TFLN2 030 10		6		10	50
TFLN2 030 12		6		12	50
TFLN2 030 14		6		14	50
TFLN2 030 16		6		16	50
TFLN2 030 20		6		20	60
TFLN2 030 25		6		25	60
TFLN2 030 30		6		30	60
TFLN2 040 08	4.0	6	6	8	50
TFLN2 040 10		6		10	50
TFLN2 040 12		6		12	50
TFLN2 040 14		6		14	50
TFLN2 040 16		6		16	50
TFLN2 040 20		6		20	60
TFLN2 040 25		6		25	60
TFLN2 040 30		6		30	60
TFLN2 040 35		6		35	70
TFLN2 040 40		6		40	70
TFLN2 050 20	5.0	6	7	20	60
TFLN2 050 25		6		25	60
TFLN2 050 30		6		30	60
TFLN2 050 35		6		35	70
TFLN2 050 40	6.0	6	8	40	70
TFLN2 060 12		6		12	50
TFLN2 060 20		6		20	60
TFLN2 060 30		6		30	60
TFLN2 060 40		6		40	70

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

T-Mill TBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008



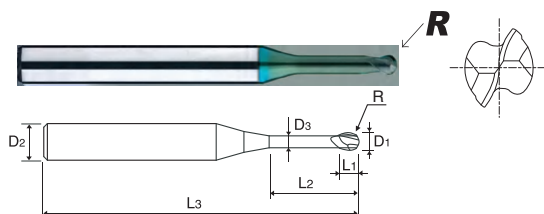
Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
TBLN2 002 01	R0.10	0.2	4	0.2	1	45
TBLN2 002 02			4		2	45
TBLN2 003 01	R0.15	0.3	4	0.3	1	45
TBLN2 003 02			4		2	45
TBLN2 004 01	R0.20	0.4	4	0.4	1	45
TBLN2 004 02			4		2	45
TBLN2 004 03			4		3	45
TBLN2 004 04			4		4	45
TBLN2 004 05			4		5	45
TBLN2 005 02	R0.25	0.5	4	0.5	2	45
TBLN2 005 03			4		3	45
TBLN2 005 04			4		4	45
TBLN2 005 05			4		5	45
TBLN2 005 06			4		6	45
TBLN2 005 08			4		8	45
TBLN2 005 10			4		10	45
TBLN2 006 02	R0.30	0.6	4	0.6	2	45
TBLN2 006 03			4		3	45
TBLN2 006 04			4		4	45
TBLN2 006 05			4		5	45
TBLN2 006 06			4		6	45
TBLN2 006 08	R0.40	0.8	4	0.8	8	45
TBLN2 006 10			4		10	45
TBLN2 008 02			4		2	45
TBLN2 008 03			4		3	45
TBLN2 008 04			4		4	45
TBLN2 008 05	R0.40	0.8	4	0.8	5	45
TBLN2 008 06			4		6	45
TBLN2 008 08			4		8	45
TBLN2 008 10			4		10	45

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

T-Mill TBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

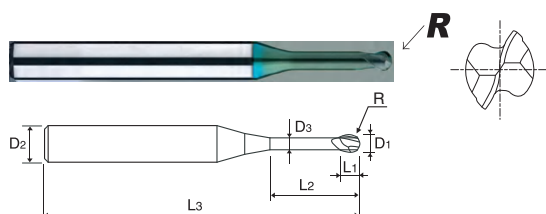
Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 EFFECTIVE LENGTH L2	全长 OVERALL LENGTH L3
TBLN2 010 02	R0.5	1.0	4	1.0	2	45
TBLN2 010 03			4		3	45
TBLN2 010 04			4		4	45
TBLN2 010 05			4		5	45
TBLN2 010 06			4		6	45
TBLN2 010 08			4		8	45
TBLN2 010 10			4		10	45
TBLN2 010 12			4		12	45
TBLN2 010 16			4		16	50
TBLN2 010 20			4		20	50
TBLN2 012 03	R0.6	1.2	4	1.2	3	45
TBLN2 012 04			4		4	45
TBLN2 012 05			4		5	45
TBLN2 012 06			4		6	45
TBLN2 012 08			4		8	45
TBLN2 012 10			4		10	45
TBLN2 012 12			4		12	45
TBLN2 015 04	R0.75	1.5	4	1.5	4	45
TBLN2 015 05			4		5	45
TBLN2 015 06			4		6	45
TBLN2 015 08			4		8	45
TBLN2 015 10			4		10	45
TBLN2 015 12			4		12	45
TBLN2 015 14			4		14	45
TBLN2 015 16			4		16	50
TBLN2 015 20			4		20	50
TBLN2 020 04	R1.0	2.0	4	2.0	4	45
TBLN2 020 06			4		6	45
TBLN2 020 08			4		8	45
TBLN2 020 10			4		10	45
TBLN2 020 12			4		12	45
TBLN2 020 14			4		14	45
TBLN2 020 16			4		16	50
TBLN2 020 20			4		20	50

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

T-Mill TBLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

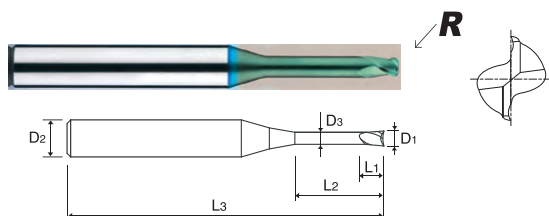
Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 EFFECTIVE LENGTH L2	全长 OVERALL LENGTH L3
TBLN2 025 10	R1.25	2.5	6	2.5	10	50
TBLN2 025 12			6		12	50
TBLN2 025 16			6		16	50
TBLN2 025 20			6		20	50
TBLN2 030 06			6		6	50
TBLN2 030 08	R1.5	3.0	6	3.0	8	50
TBLN2 030 10			6		10	50
TBLN2 030 12			6		12	50
TBLN2 030 14			6		14	50
TBLN2 030 16			6		16	50
TBLN2 030 20			6		20	50
TBLN2 030 25			6		25	60
TBLN2 030 30			6		30	60
TBLN2 040 08	R2.0	4.0	6	4	8	50
TBLN2 040 10			6		10	50
TBLN2 040 12			6		12	50
TBLN2 040 14			6		14	50
TBLN2 040 16			6		16	50
TBLN2 040 20			6		20	60
TBLN2 040 25			6		25	60
TBLN2 040 30			6		30	60
TBLN2 040 35	R2.5	5.0	6	5	35	70
TBLN2 040 40			6		40	70
TBLN2 050 20			6		20	50
TBLN2 050 25			6		25	60
TBLN2 050 30			6		30	60
TBLN2 050 35			6		35	70
TBLN2 050 40			6		40	70
TBLN2 060 12	R3.0	6.0	6	6	12	50
TBLN2 060 20			6		20	50
TBLN2 060 30			6		30	60
TBLN2 060 40			6		40	70

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

T-Mill TCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工作表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

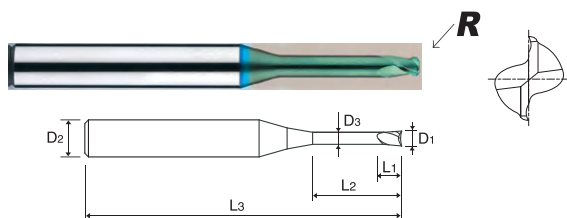
Unit : mm

型号	圆弧半径	刃部直径	柄部直径	刃长	颈长	全长
CODE No.	CORNER RADIUS R	MILL DIAMETER D ₁	SHANK DIAMETER D ₂	LENGTH OF CUT L ₁	EFFECTIVE LENGTH L ₂	OVERALL LENGTH L ₃
TCLN2 010 04 R01	R0.1	1.0	4	1.0	4	45
TCLN2 010 06 R01			4		6	45
TCLN2 010 08 R01			4		8	45
TCLN2 010 04 R02	R0.2		4	1.0	4	45
TCLN2 010 06 R02			4		6	45
TCLN2 010 08 R02			4		8	45
TCLN2 010 10 R02			4		10	45
TCLN2 010 12 R02			4		12	45
TCLN2 010 06 R03			R0.3		4	1.0
TCLN2 010 10 R03	4			10	45	
TCLN2 010 12 R03	4			12	45	
TCLN2 015 06 R02	R0.2		1.5	4	1.5	6
TCLN2 015 08 R02		4		8		45
TCLN2 015 10 R02		4		10		45
TCLN2 015 12 R02		4		12		45
TCLN2 015 06 R03	R0.3	4		1.5	6	45
TCLN2 015 08 R03		4			8	45
TCLN2 015 10 R03		4	10		45	
TCLN2 020 06 R01	R0.1	2.0	4	2	6	45
TCLN2 020 08 R01			4		8	45
TCLN2 020 10 R01			4		10	45
TCLN2 020 12 R01			4		12	45
TCLN2 020 06 R02	R0.2		4	2	6	45
TCLN2 020 08 R02			4		8	45
TCLN2 020 10 R02			4		10	45
TCLN2 020 12 R02			4		12	45
TCLN2 020 06 R03	R0.3		4	2	6	45
TCLN2 020 08 R03			4		8	45
TCLN2 020 10 R03			4		10	45
TCLN2 020 12 R03			4		12	45
TCLN2 020 06 R05	R0 5		4	2	6	45
TCLN2 020 08 R05			4		8	45
TCLN2 020 10 R05			4		10	45
TCLN2 020 12 R05			4		12	45
TCLN2 020 16 R05			4		16	50

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

T-Mill TCLN2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø7 以上~	- 0.010 ~ 0	- 0.008

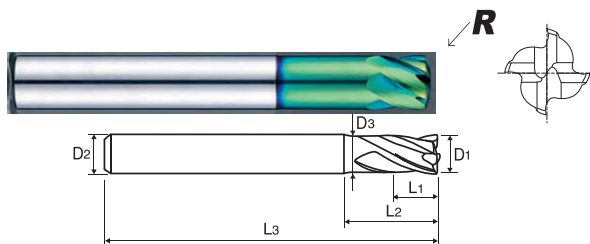
Unit : mm

型号	圆弧半径	刃部直径	柄部直径	刃长	颈长	全长
CODE No.	CORNER RADIUS R	MILL DIAMETER D ₁	SHANK DIAMETER D ₂	LENGTH OF CUT L ₁	EFFECTIVE LENGTH L ₂	OVERALL LENGTH L ₃
TCLN2 030 10 R01	R0.1	3.0	6	3	10	45
TCLN2 030 12 R01			6		12	45
TCLN2 030 16 R01			6		16	50
TCLN2 030 10 R02	R0.2		6	3	10	50
TCLN2 030 12 R02			6		12	50
TCLN2 030 16 R02			6		16	50
TCLN2 030 10 R03	R0.3		6	3	10	50
TCLN2 030 12 R03			6		12	50
TCLN2 030 16 R03			6		16	50
TCLN2 030 10 R05	R0.5		6	3	10	50
TCLN2 030 12 R05			6		12	50
TCLN2 030 16 R05			6		16	50
TCLN2 030 20 R05			6		20	60
TCLN2 040 10 R01	R0.1	4.0	6	4	10	50
TCLN2 040 12 R01			6		12	50
TCLN2 040 16 R01			6		16	50
TCLN2 040 12 R02	R0.2		6	4	12	50
TCLN2 040 16 R02			6		16	50
TCLN2 040 12 R03	R0.3		6	4	12	50
TCLN2 040 16 R03			6		16	50
TCLN2 040 20 R03			6		20	60
TCLN2 040 12 R05	R0.5		6	4	12	50
TCLN2 040 16 R05			6		16	50
TCLN2 040 20 R05			6		20	60
TCLN2 060 16 R01	R0.1	6.0	6	6	16	50
TCLN2 060 20 R01			6		20	60
TCLN2 060 16 R02	R0.2		6	6	16	50
TCLN2 060 20 R02			6		20	60
TCLN2 060 16 R03	R0.3		6	6	16	50
TCLN2 060 20 R03			6		20	60
TCLN2 060 16 R05	R0.5		6	6	16	50
TCLN2 060 20 R05			6		20	60
TCLN2 060 16 R10	R1.0		6	6	16	50
TCLN2 060 20 R10			6		20	60
TCLN2 060 25 R10			6		25	60
TCLN2 060 30 R10			6		30	60

CARBIDE, 4 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 4刃, 颈部加长型, 圆弧角

T-Mill TCLN4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Deep slotting is possible by reduced neck.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 由于颈部稍细能够加工深槽.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 EFFECTIVE LENGTH L2	全长 OVERALL LENGTH L3
TCLN4 4020 06 R02	R0.2	2	4	2	6	45
TCLN4 4020 08 R02	R0.2		4		8	45
TCLN4 4020 06 R03	R0.3		4		6	45
TCLN4 4020 08 R03	R0.3		4		8	45
TCLN4 4030 10 R03	R0.3	3.0	6	3	10	50
TCLN4 4030 16 R03	R0.3		6		16	50
TCLN4 4030 10 R05	R0.5		6		10	50
TCLN4 4030 16 R05	R0.5		6		16	50
TCLN4 4030 20 R05	R0.5	4.0	6	4	20	60
TCLN4 4040 12 R03	R0.3		6		12	50
TCLN4 4040 16 R03	R0.3		6		16	50
TCLN4 4040 12 R05	R0.5		6		12	50
TCLN4 4040 16 R05	R0.5		6		16	50
TCLN4 4040 20 R05	R0.5	6.0	6	6	20	60
TCLN4 4060 20 R03	R0.3		6		20	60
TCLN4 4060 20 R05	R0.5		6		20	60
TCLN4 4060 20 R10	R1.0		6		20	60
TCLN4 4060 20 R20	R2.0		6		20	60

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D2
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø7 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

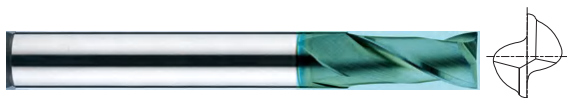
TAP

Special
Tools

CARBIDE, 2 FLUTE, SHORT LENGTH

硬质合金, 2刃, 短型

T-Mill TFS2



- ▶ Designed to machine high hardened materials.
- ▶ Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- ▶ Excellent workpiece finishes.
- ▶ Designed for high precision milling operation.
- ▶ Superior wear-resistance.
- ▶ 为加工高硬度材料设计.
- ▶ 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- ▶ 卓越的工件表面粗糙度.
- ▶ 为高精度铣削设计.
- ▶ 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
TFS2 002 04	0.2	4	0.4	50
TFS2 003 04	0.3	4	0.5	50
TFS2 004 04	0.4	4	0.8	50
TFS2 005 04	0.5	4	1.0	50
TFS2 006 04	0.6	4	1.2	50
TFS2 008 04	0.8	4	1.5	50
TFS2 010 04	1.0	4	2.5	45
TFS2 010 06	1.0	6	2.5	50
TFS2 012 04	1.2	4	4	45
TFS2 015 04	1.5	4	4	45
TFS2 015 06	1.5	6	4	50
TFS2 020 04	2.0	4	6	45
TFS2 020 06	2.0	6	6	50
TFS2 025 04	2.5	4	8	45
TFS2 025 06	2.5	6	8	50
TFS2 030 04	3.0	4	8	45
TFS2 030 06	3.0	6	8	50
TFS2 040 04	4.0	4	10	45
TFS2 040 06	4.0	6	10	50
TFS2 050 06	5.0	6	12	50
TFS2 060 06	6.0	6	14	60

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 4 FLUTE, SHORT LENGTH

硬质合金, 4刃, 短型

T-Mill TFS4



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Designed for high precision milling operation.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 为高精度铣削设计.
- 极高的耐磨性.



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
TFS4 010 04	1.0	4	2.5	45
TFS4 010 06	1.0	6	2.5	50
TFS4 015 04	1.5	4	4	45
TFS4 015 06	1.5	6	4	50
TFS4 020 04	2.0	4	6	45
TFS4 020 06	2.0	6	6	50
TFS4 025 04	2.5	4	8	45
TFS4 025 06	2.5	6	8	50
TFS4 030 06	3.0	6	8	50
TFS4 040 06	4.0	6	10	50
TFS4 050 06	5.0	6	12	50
TFS4 060 06	6.0	6	14	60

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

CARBIDE, 2 FLUTE, SHORT LENGTH, BALL

硬质合金, 2刃, 短型, 球头

T-Mill TBS2



- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finishes.
- Superior wear-resistance.
- 为加工高硬度材料设计.
- 适于干式切削, 高速切削, 最新开发的原材料和涂层.
- 卓越的工件表面粗糙度.
- 极高的耐磨性.



Unit : mm

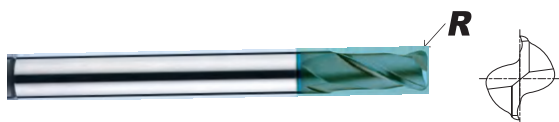
型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
TBS2 002 04	RO.10	0.2	4	0.25	45
TBS2 003 04	RO.15	0.3	4	0.4	45
TBS2 004 04	RO.20	0.4	4	0.5	45
TBS2 005 04	RO.25	0.5	4	0.6	45
TBS2 006 04	RO.30	0.6	4	0.7	45
TBS2 008 04	RO.40	0.8	4	0.9	45
TBS2 010 04	RO.5	1.0	4	2	45
TBS2 010 06			6		50
TBS2 012 04	RO.6	1.2	4	3	45
TBS2 015 04	RO.75	1.5	4	3	45
TBS2 015 06			6		50
TBS2 020 04	R1.0	2.0	4	5	45
TBS2 020 06			6		50
TBS2 025 04	R1.25	2.5	4	6	45
TBS2 025 06			6		50
TBS2 030 04	R1.5	3.0	4	8	50
TBS2 030 06			6		60
TBS2 040 04	R2.0	4.0	4	8	70
TBS2 040 06			6		70
TBS2 050 06 /60	R2.5	5.0	6	10	60
TBS2 050 06 /80			6		80
TBS2 060 06 /60	R3.0	6.0	6	12	60
TBS2 060 06 /80			6		80

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 2 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 2刃, 短型, 圆弧角

T-Mill TCS2



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.
- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.008	- 0.004 - 0.008



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
TCS2 010 R01	RO.1	1.0	4	2	45
TCS2 010 R02	RO.2		4	2	45
TCS2 010 R03	RO.3		4	2	45
TCS2 015 R01	RO.1	1.5	4	3	45
TCS2 015 R02	RO.2		4	3	45
TCS2 015 R03	RO.3		4	3	45
TCS2 015 R05	RO.5	2.0	4	3	45
TCS2 020 R01	RO.1		4	4	45
TCS2 020 R02	RO.2		4	4	45
TCS2 020 R03	RO.3	2.5	4	4	45
TCS2 020 R05	RO.5		4	4	45
TCS2 025 R02	RO.2		6	5	50
TCS2 025 R03	RO.3	3.0	6	5	50
TCS2 025 R05	RO.5		6	5	50
TCS2 030 R01	RO.1		6	8	50
TCS2 030 R02	RO.2	4.0	6	8	50
TCS2 030 R03	RO.3		6	8	50
TCS2 030 R05	RO.5		6	8	50
TCS2 030 R10	R1.0	5.0	6	8	50
TCS2 040 R01	RO.1		6	12	50
TCS2 040 R02	RO.2		6	12	50
TCS2 040 R03	RO.3	6.0	6	12	50
TCS2 040 R05	RO.5		6	12	50
TCS2 040 R10	R1.0		6	12	50
TCS2 050 R01	RO.1	6.0	6	15	50
TCS2 050 R02	RO.2		6	15	50
TCS2 050 R03	RO.3		6	15	50
TCS2 050 R05	RO.5	6.0	6	15	50
TCS2 050 R10	R1.0		6	15	50
TCS2 060 R01	RO.1		6	15	60
TCS2 060 R02	RO.2	6.0	6	15	60
TCS2 060 R03	RO.3		6	15	60
TCS2 060 R05	RO.5		6	15	60
TCS2 060 R10	R1.0	6.0	6	15	60
TCS2 060 R15	R1.5		6	15	60
TCS2 060 R20	R2.0		6	15	60

CARBIDE, 4 FLUTE, SHORT LENGTH, CORNER RADIUS

硬质合金, 4刃, 短型, 圆弧角

T-Mill TCS4



- Designed for a general performance to carbon steel, tool steel, alloy steel, and stainless steel.
- Excellent wear resistance.
- Corner radius against chipping in high speed machining.
- Application in high speed machining, wet and dry cutting condition.

- 设计用于加工碳钢, 工具钢, 合金钢, 不锈钢
- 高耐磨性
- 弧形角可防止高速切削时崩刃
- 适合于高速加工, 冷却液及干式切削条件

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.008	- 0.004 - 0.008



Unit : mm

型号 CODE No.	圆弧半径 CORNER RADIUS R	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
TCS4 4010 R01	R0.1	1.0	4	2	45
TCS4 4010 R02	R0.2		4	2	45
TCS4 4010 R03	R0.3		4	2	45
TCS4 4015 R01	R0.1	1.5	4	3	45
TCS4 4015 R02	R0.2		4	3	45
TCS4 4015 R03	R0.3		4	3	45
TCS4 4015 R05	R0.5		4	3	45
TCS4 4020 R01	R0.1	2.0	4	4	45
TCS4 4020 R02	R0.2		4	4	45
TCS4 4020 R03	R0.3		4	4	45
TCS4 4020 R05	R0.5		4	4	45
TCS4 4025 R02	R0.2	2.5	6	5	50
TCS4 4025 R03	R0.3		6	5	50
TCS4 4025 R05	R0.5		6	5	50
TCS4 4030 R02	R0.2	3.0	6	8	50
TCS4 4030 R03	R0.3		6	8	50
TCS4 4030 R05	R0.5		6	8	50
TCS4 4030 R10	R1.0		6	8	50
TCS4 4040 R02	R0.2	4.0	6	12	60
TCS4 4040 R03	R0.3		6	12	60
TCS4 4040 R05	R0.5		6	12	60
TCS4 4050 R02	R0.2	5.0	6	15	60
TCS4 4050 R03	R0.3		6	15	60
TCS4 4050 R05	R0.5		6	15	60
TCS4 4050 R10	R1.0		6	15	60
TCS4 4060 R02	R0.2	6.0	6	15	60
TCS4 4060 R03	R0.3		6	15	60
TCS4 4060 R05	R0.5		6	15	60
TCS4 4060 R10	R1.0		6	15	60
TCS4 4060 R15	R1.5		6	15	60
TCS4 4060 R20	R2.0		6	15	60

CU-Mill for COPPER

加工 铜



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Date

Drill

TAP

Special
Tools

CU-Mill for HARDENED STEEL for COPPER

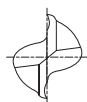
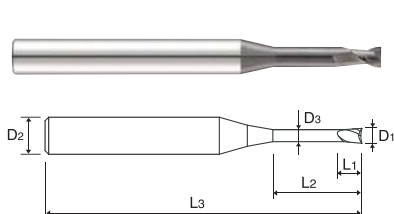
CU-Mill 铜用

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
CFLN2		CARBIDE, 2 FLUTE, LONG NECK 硬质合金, 2刃, 颈部加长型	105
CBLN2		CARBIDE, 2 FLUTE, LONG NECK, BALL 硬质合金, 2刃, 颈部加长型, 球头	108
CCLN2		CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS 硬质合金, 2刃, 颈部加长型, 圆弧角	111

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

CU-Mill CFLN2



- Special geometry with DLC coating offer longer tool life.
- Designed for milling copper.
- Excellent work piece finishes.
- 特殊的结构设计和DLC涂层, 使刀具寿命得到延长
- 为加工铜材料而设计
- 卓越的工作表面粗糙度



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
CFLN2 002 01	0.2	4	0.24	1	45
CFLN2 002 02		4		2	45
CFLN2 003 01	0.3	4	0.36	1	45
CFLN2 003 02		4		2	45
CFLN2 003 03	0.4	4	0.48	3	50
CFLN2 004 01		4		1	45
CFLN2 004 02	0.4	4	0.48	2	45
CFLN2 004 03		4		3	45
CFLN2 004 04	0.5	4	0.6	4	45
CFLN2 004 05		4		5	45
CFLN2 005 02	0.5	4	0.6	2	45
CFLN2 005 04		4		4	45
CFLN2 005 06	0.6	4	0.72	6	45
CFLN2 005 08		4		8	45
CFLN2 005 10	0.6	4	0.72	10	45
CFLN2 006 02		4		2	45
CFLN2 006 04	0.6	4	0.72	4	45
CFLN2 006 06		4		6	45
CFLN2 006 08	0.8	4	0.96	8	45
CFLN2 006 10		4		10	45
CFLN2 008 02	0.8	4	0.96	2	45
CFLN2 008 04		4		4	45
CFLN2 008 06	1.0	4	1.5	6	45
CFLN2 010 04		4		4	45
CFLN2 010 06	1.0	4	1.5	6	45
CFLN2 010 08		4		8	45
CFLN2 010 10	1.0	4	1.5	10	45
CFLN2 010 12		4		12	45
CFLN2 010 16	1.0	4	1.5	16	50

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø7 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

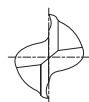
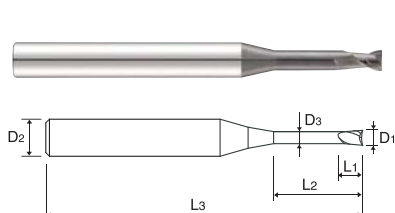
TAP

Special Tools

CARBIDE, 2 FLUTE, LONG NECK

硬质合金, 2刃, 颈部加长型

CU-Mill CFLN2



- Special geometry with DLC coating offer longer tool life.
- Designed for milling copper.
- Excellent work piece finishes.

- 特殊的结构设计和DLC涂层, 使刀具寿命得到延长
- 为加工铜材料而设计
- 卓越的工作表面粗糙度



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
CFLN2 015 04	1.5	4	1.8	4	45
CFLN2 015 06		4		6	45
CFLN2 015 08		4		8	45
CFLN2 015 10		4		10	45
CFLN2 015 12		4		12	45
CFLN2 015 16		4		16	45
CFLN2 020 04	2.0	4	2.4	4	45
CFLN2 020 06		4		6	45
CFLN2 020 08		4		8	45
CFLN2 020 10		4		10	45
CFLN2 020 12		4		12	45
CFLN2 020 16		4		16	50
CFLN2 020 20		4		20	50
CFLN2 030 06	3.0	6	3.6	6	50
CFLN2 030 08		6		8	50
CFLN2 030 10		6		10	50
CFLN2 030 12		6		12	50
CFLN2 030 16		6		16	50
CFLN2 030 20		6		20	60
CFLN2 030 30		6		30	60
CFLN2 040 08	4.0	6	4.8	8	50
CFLN2 040 10		6		10	50
CFLN2 040 12		6		12	50
CFLN2 040 16		6		16	50
CFLN2 040 20	6.0	6	7.2	20	60
CFLN2 060 20		6		20	60
CFLN2 060 30		6		30	60

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø7 以上~	-0.010 ~ 0	-0.008

CARBIDE, 2 FLUTE, LONG NECK

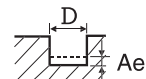
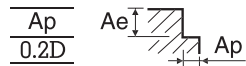
硬质合金, 2刃, 颈部加长型

● CU-Mill CFLN2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE		铜 COPPER(SIDE) / 侧铣			铜 COPPER(SLOTING) / 槽铣		
D	ℓ ₂	Speed(min ⁻¹)	Feed(mm/min)	Ae	Speed(min ⁻¹)	Feed(mm/min)	Ae
0.3	1	38,000	600	0.022	38,000	230	0.024
	2	38,000	550	0.015	38,000	220	0.017
	3	38,000	500	0.011	36,000	200	0.013
0.4	2	38,000	800	0.025	38,000	300	0.028
	3	38,000	800	0.019	36,000	290	0.021
	4	38,000	700	0.015	36,000	290	0.017
	5	38,000	700	0.011	34,000	270	0.013
0.5	2	38,000	1,000	0.036	38,000	380	0.039
	4	38,000	1,000	0.019	36,000	360	0.021
	6	38,000	900	0.015	34,000	340	0.017
	8	38,000	900	0.010	34,000	340	0.011
0.6	4	38,000	1,400	0.032	38,000	460	0.035
	6	38,000	1,300	0.023	36,000	430	0.025
	8	38,000	1,300	0.015	34,000	410	0.017
	10	38,000	1,300	0.010	34,000	410	0.010
0.8	4	38,000	2,000	0.042	38,000	610	0.046
	6	38,000	2,000	0.031	36,000	580	0.034
	8	38,000	1,800	0.024	36,000	580	0.027
	10	38,000	1,800	0.018	34,000	540	0.020
1.0	4	38,000	2,000	0.073	38,000	760	0.080
	6	38,000	2,000	0.059	36,000	720	0.064
	8	38,000	2,000	0.047	36,000	720	0.052
	10	38,000	1,800	0.038	36,000	700	0.042
	12	38,000	1,800	0.031	34,000	680	0.034
	16	38,000	1,800	0.020	34,000	680	0.022
1.5	4	38,000	2,500	0.136	32,000	960	0.150
	6	38,000	2,500	0.121	32,000	960	0.133
	10	38,000	2,500	0.098	30,000	900	0.108
	12	38,000	2,500	0.079	30,000	900	0.087
	16	38,000	2,200	0.071	28,000	840	0.078
	20	35,000	3,000	0.130	28,000	1,100	0.143
2.0	12	35,000	3,000	0.117	26,000	1,050	0.129
	16	35,000	3,000	0.094	26,000	1,050	0.104
	20	35,000	2,800	0.076	26,000	1,050	0.084
	24	32,000	3,200	0.241	25,000	1,500	0.265
3.0	12	32,000	3,200	0.216	25,000	1,500	0.238
	16	32,000	3,200	0.195	23,000	1,400	0.214
	20	32,000	3,200	0.158	23,000	1,400	0.174
	24	28,000	3,200	0.321	19,000	1,500	0.353
4.0	12	28,000	3,200	0.321	18,000	1,500	0.353
	16	28,000	3,200	0.289	18,000	1,450	0.318
	20	28,000	3,200	0.260	18,000	1,450	0.286
	30	28,000	3,200	0.190	17,000	1,350	0.209
6.0	20	24,000	3,600	0.481	13,000	1,550	0.529
	30	24,000	3,600	0.389	13,000	1,550	0.428

Depth
of
Cut



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

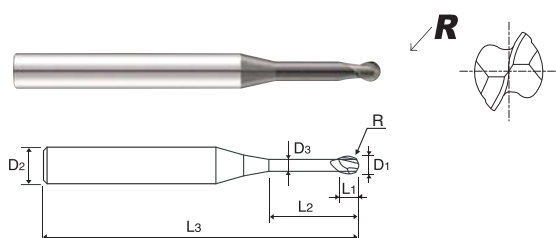
TAP

Special
Tools

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

CU-Mill CBLN2



- Special geometry with DLC coating offer longer tool life.
- Designed for milling copper.
- Excellent work piece finishes.

- 特殊的结构设计和DLC涂层, 使刀具寿命得到延长
- 为加工铜材料而设计
- 卓越的工作表面粗糙度



Unit : mm

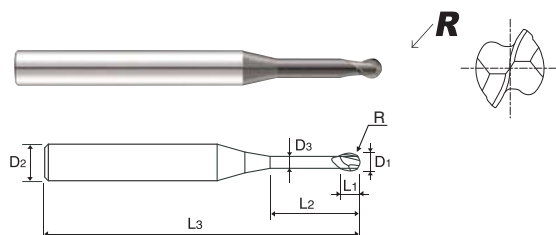
型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
CBLN2 002 01	R0.1	0.2	4	0.2	1	45
CBLN2 002 02			4		2	45
CBLN2 003 01	R0.15	0.3	4	0.3	1	45
CBLN2 003 02			4		2	45
CBLN2 003 03			4		3	45
CBLN2 004 01	R0.20	0.4	4	0.4	1	45
CBLN2 004 02			4		2	45
CBLN2 004 03			4		3	45
CBLN2 004 04			4		4	45
CBLN2 004 05			4		5	45
CBLN2 005 02	R0.25	0.5	4	0.5	2	45
CBLN2 005 04			4		4	45
CBLN2 005 06			4		6	45
CBLN2 005 08			4		8	45
CBLN2 005 10			4		10	45
CBLN2 006 02	R0.30	0.6	4	0.6	2	45
CBLN2 006 04			4		4	45
CBLN2 006 06			4		6	45
CBLN2 006 08			4		8	45
CBLN2 006 10			4		10	45
CBLN2 008 02	R0.40	0.8	4	0.9	2	45
CBLN2 008 04			4		4	45
CBLN2 008 06			4		6	45
CBLN2 010 04	R0.5	1.0	4	1.0	4	45
CBLN2 010 06			4		6	45
CBLN2 010 08			4		8	45
CBLN2 010 10			4		10	45
CBLN2 010 12			4		12	45
CBLN2 010 16			4		16	50

BALL RADIUS TOLERANCE(mm) 球头半径公差 (mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	-0.008 ~ 0	-0.004
Ø6.5 以上~	-0.010 ~ 0	-0.008

CARBIDE, 2 FLUTE, LONG NECK, BALL

硬质合金, 2刃, 颈部加长型, 球头

CU-Mill CBLN2



- Special geometry with DLC coating offer longer tool life.
- Designed for milling copper.
- Excellent work piece finishes.

- 特殊的结构设计和DLC涂层, 使刀具寿命得到延长
- 为加工铜材料而设计
- 卓越的工作表面粗糙度



Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
CBLN2 015 04	R0.75	1.5	4	1.5	4	45
CBLN2 015 06			4		6	45
CBLN2 015 08			4		8	45
CBLN2 015 10			4		10	45
CBLN2 015 12			4		12	45
CBLN2 015 16			4		16	50
CBLN2 020 04	R1.0	2.0	4	2.0	4	45
CBLN2 020 06			4		6	45
CBLN2 020 08			4		8	45
CBLN2 020 10			4		10	45
CBLN2 020 12			4		12	45
CBLN2 020 16			4		16	50
CBLN2 020 20			4		20	50
CBLN2 030 06	R1.5	3.0	6	3.0	6	50
CBLN2 030 08			6		8	50
CBLN2 030 10			6		10	50
CBLN2 030 12			6		12	50
CBLN2 030 16			6		16	50
CBLN2 030 20			6		20	60
CBLN2 030 30			6		30	60
CBLN2 040 08	R2.0	4	6	4.0	8	50
CBLN2 040 10			6		10	50
CBLN2 040 12			6		12	50
CBLN2 040 16			6		16	50
CBLN2 040 20			6		20	60
CBLN2 060 20	R3.0	6.0	6	6.0	20	60
CBLN2 060 30			6		30	60

BALL RADIUS TOLERANCE(mm) 球头半径公差(mm)		SHANK DIA. TOLERANCE 柄径公差 D ₂
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø6.5 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

TAP

Special Tools

CARBIDE, 2 FLUTE, LONG NECK, BALL

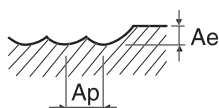
硬质合金, 2刃, 颈部加长型, 球头

CU-Mill CBLN2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE		铜 COPPER					尺寸 SIZE		铜 COPPER				
D	R	ℓ_2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Ap	D	R	ℓ_2	Speed(min ⁻¹)	Feed(mm/min)	Ae	Ap
0.3	0.15	1	38,000	600	0.015	0.015	1.0	0.5	16	38,000	1,800	0.050	0.050
		2	38,000	550	0.015	0.015			4	38,000	2,500	0.050	0.050
		3	38,000	500	0.015	0.015			6	38,000	2,500	0.050	0.050
0.4	0.2	1	38,000	800	0.020	0.020	1.5	0.75	10	38,000	2,500	0.050	0.050
		2	38,000	800	0.020	0.020			12	38,000	2,500	0.050	0.050
		3	38,000	800	0.020	0.020			16	38,000	2,200	0.050	0.050
		4	38,000	700	0.020	0.020			6	35,000	3,000	0.060	0.060
		5	38,000	700	0.020	0.020			10	35,000	3,000	0.060	0.060
0.5	0.25	2	38,000	1,000	0.025	0.025	2.0	1.0	12	35,000	3,000	0.060	0.060
		4	38,000	1,000	0.025	0.025			16	35,000	3,000	0.060	0.060
		6	38,000	900	0.025	0.025			20	35,000	2,800	0.060	0.060
		8	38,000	900	0.025	0.025			6	32,000	3,200	0.070	0.070
0.6	0.3	2	38,000	1,400	0.030	0.030	3.0	1.5	10	32,000	3,200	0.070	0.070
		4	38,000	1,400	0.030	0.030			12	32,000	3,200	0.070	0.070
		6	38,000	1,300	0.030	0.030			16	32,000	3,200	0.070	0.070
0.8	0.4	8	38,000	1,300	0.030	0.030			20	32,000	3,200	0.070	0.070
		4	38,000	2,000	0.050	0.050			30	32,000	3,000	0.070	0.070
		6	38,000	2,000	0.050	0.050	4.0	2.0	8	28,000	3,200	0.080	0.080
		8	38,000	1,800	0.050	0.050			10	28,000	3,200	0.080	0.080
1.0	0.5	10	38,000	1,800	0.050	0.050			12	28,000	3,200	0.080	0.080
		4	38,000	2,000	0.050	0.050			16	28,000	3,200	0.080	0.080
		6	38,000	2,000	0.050	0.050			20	28,000	3,200	0.080	0.080
		8	38,000	2,000	0.050	0.050			30	28,000	3,200	0.080	0.080
		10	38,000	1,800	0.050	0.050	6.0	3.0	20	24,000	3,600	0.100	0.100
		12	38,000	1,800	0.050	0.050			30	24,000	3,600	0.100	0.100

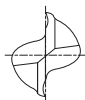
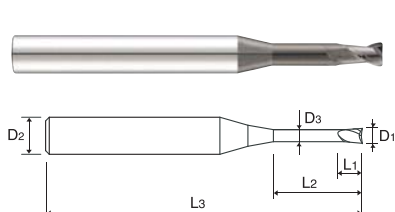
Depth
of
Cut



CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

CU-Mill CCLN2



- Special geometry with DLC coating offer longer tool life.
- Designed for milling copper.
- Excellent work piece finishes.
- 特殊的结构设计和DLC涂层, 使刀具寿命得到延长
- 为加工铜材料而设计
- 卓越的工作表面粗糙度



Unit : mm

型号 CODE No.	球头半径 RADIUS R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 EFFECTIVE LENGTH L ₂	全长 OVERALL LENGTH L ₃
CCLN2 010 06 R02	R0.2	1.0	4	1	6	45
CCLN2 010 08 R02			4		8	45
CCLN2 015 04 R03	R0.3	1.5	4	1.5	4	45
CCLN2 015 06 R03			4		6	45
CCLN2 015 08 R03			4		8	45
CCLN2 015 10 R03			4		10	45
CCLN2 020 06 R03	R0.3	2.0	4	2	6	45
CCLN2 020 08 R03			4		8	45
CCLN2 020 10 R03			4		10	45
CCLN2 020 12 R03			4		12	45
CCLN2 020 06 R05	R0.5	2.0	4	2	6	45
CCLN2 020 08 R05			4		8	45
CCLN2 020 10 R05			4		10	45
CCLN2 030 10 R03	R0.3	3.0	6	3	10	50
CCLN2 030 12 R03			6		12	50
CCLN2 030 16 R03			6		16	50
CCLN2 030 10 R05			6	3	10	50
CCLN2 030 12 R05	R0.5	3.0	6		12	50
CCLN2 030 16 R05			6		16	50
CCLN2 040 12 R03	R0.3	4.0	6	4	12	50
CCLN2 040 16 R03			6		16	50
CCLN2 040 20 R03	R0.5	4.0	6	4	20	60
CCLN2 040 12 R05			6		12	50
CCLN2 040 16 R05			6		16	50
CCLN2 040 20 R05			6		20	60
CCLN2 060 16 R03	R0.3	6.0	6	6	16	50
CCLN2 060 20 R03			6		20	60
CCLN2 060 16 R05	R0.5	6.0	6	6	16	50
CCLN2 060 20 R05			6		20	60

MILL DIA. TOLERANCE(mm) 刃径公差(mm)		SHANK DIA. TOLERANCE 柄径公差
DIAMETER 直径	TOLERANCE 公差	
~Ø6 以下	- 0.008 ~ 0	- 0.004
Ø7 以上~	- 0.010 ~ 0	- 0.008

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8 Mill

Technical Data

Drill

TAP

Special Tools

CARBIDE, 2 FLUTE, LONG NECK, CORNER RADIUS

硬质合金, 2刃, 颈部加长型, 圆弧角

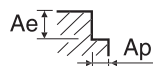
● CU-Mill CCLN2

HIGH SPEED MILLING / 高速加工

尺寸 SIZE		铜 COPPER			尺寸 SIZE		铜 COPPER		
D	ℓ_2	Speed(min ⁻¹)	Feed(mm/min)	Ae	D	ℓ_2	Speed(min ⁻¹)	Feed(mm/min)	Ae
1.0	4	22,800	2,200	0.073	3.0	6	19,200	3,520	0.267
	6	22,800	2,200	0.047		10	19,200	3,520	0.241
	8	22,800	1,980	0.031		12	19,200	3,520	0.216
	10	22,800	2,200	0.059		16	19,200	3,520	0.195
	12	22,800	1,980	0.038		20	16,800	3,520	0.158
1.5	4	22,800	2,750	0.136	4.0	10	19,200	3,520	0.321
	6	22,800	2,750	0.121		12	16,800	3,520	0.321
	10	22,800	2,750	0.079		16	16,800	3,520	0.260
	12	22,800	2,750	0.098		20	16,800	3,520	0.190
2.0	6	21,000	3,300	0.130		30	16,800	3,520	0.289
	10	21,000	3,300	0.117	6.0	20	14,400	3,960	0.481
	12	21,000	3,300	0.160		30	14,400	3,960	0.389

Depth
of
Cut

$$\frac{A_p}{0.3D}$$



S-Mill for STAINLESS STEEL

for STAINLESS
STEEL & TITANIUM
CARBIDE
END MILLS



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Date

Drill

TAP

Special
Tools

S-Mill for STAINLESS STEEL & TITANIUM

S-Mill 不锈钢用

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
SQS4 SQL4		CARBIDE, 4 FLUTE, CORNER RADIUS, UNEQUAL FLUTE 硬质合金, 4刃, 圆弧, 不等刃	115
SFS4		CARBIDE, 4 FLUTE, SHORT LENGTH 硬质合金, 4刃, 短型	116
SFL4		CARBIDE, 4 FLUTE, LONG LENGTH 硬质合金, 4刃, 加长型	116
SRRM		CARBIDE, MULTI FLUTE, 45° HELIX, ROUGHING 硬质合金, 多种刃, 45°螺旋角, 螺纹	118

CARBIDE, 4 FLUTE, CORNER RADIUS, UNEQUAL FLUTE 硬质合金, 4刃, 圆弧, 不等刃

S-Mill SQS4



- Unique design eliminates vibration
- Designed to stainless steel, titanium alloy and low hardness material under HRc 40
- Higher speeds, deeper cuts and metal removal rates
- Unique flute
- 特殊的设计减少震动
- 适于加工不锈钢, 钛合金和硬度低于HRc40的低硬度材料
- 高速, 深切削和大切削量
- 不等刃



Unit : mm

型号 CODE No.	圆弧 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
SQS4 030 06	RO.3	3.0	6	5	50	△
SQS4 040 06	RO.3	4.0	6	8	54	△
SQS4 050 06	RO.3	5.0	6	9	54	△
SQS4 060 06	RO.4	6.0	6	10	54	○
SQS4 080 08	RO.4	8.0	8	12	58	○
SQS4 100 10	RO.4	10.0	10	14	66	○
SQS4 120 12	RO.6	12.0	12	16	73	○
SQS4 140 14	RO.6	14.0	14	18	75	△
SQS4 160 16	RO.8	16.0	16	22	82	△
SQS4 180 18	RO.8	18.0	18	24	84	△
SQS4 200 20	RO.8	20.0	20	26	92	△

S-Mill SQL4

Unit : mm

型号 CODE No.	圆弧 CORNER RADIUS	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
SQL4 030 06	RO.3	3.0	6	8	57	△
SQL4 040 06	RO.3	4.0	6	11	57	△
SQL4 050 06	RO.3	5.0	6	13	57	△
SQL4 060 06	RO.4	6.0	6	13	57	△
SQL4 080 08	RO.4	8.0	8	19	63	△
SQL4 100 10	RO.4	10.0	10	22	72	△
SQL4 120 12	RO.6	12.0	12	26	83	△
SQL4 140 16	RO.6	14.0	14	26	83	△
SQL4 160 16	RO.8	16.0	16	32	92	△
SQL4 180 18	RO.8	18.0	18	32	92	△
SQL4 200 20	RO.8	20.0	20	38	104	△
SQL4 250 25	RO.8	25.0	25	38	104	△

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.020	h6

CARBIDE, 4 FLUTE, SHORT LENGTH

硬质合金, 4刃, 短型

S-Mill SFS4



- Unique design eliminates vibration
- Designed to stainless steel, titanium alloy and low hardness material under HRc 40
- Higher speeds, deeper cuts and metal removal rates
- 特殊的设计减少震动
- 适于加工不锈钢, 钛合金和硬度低于HRc40的低硬度材料
- 高速, 深切削和大切削量



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
SFS4 060 06	6.0	6	10	54	○
SFS4 080 08	8.0	8	12	58	○
SFS4 100 10	10.0	10	14	66	○
SFS4 120 12	12.0	12	16	73	○
SFS4 140 14	14.0	14	18	75	△
SFS4 160 16	16.0	16	22	82	○
SFS4 180 18	18.0	18	24	84	△
SFS4 200 20	20.0	20	26	92	△

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产产品

CARBIDE, 4 FLUTE, LONG LENGTH

硬质合金, 4刃, 加长型

S-Mill SFL4

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
SFL4 060 06	6.0	6	13	57	○
SFL4 080 08	8.0	8	19	63	○
SFL4 100 10	10.0	10	22	72	○
SFL4 120 12	12.0	12	26	83	○
SFL4 140 14	14.0	14	26	83	△
SFL4 160 16	16.0	16	32	92	△
SFL4 180 18	18.0	18	32	92	△
SFL4 200 20	20.0	20	38	104	△

❖ 上記产品的参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

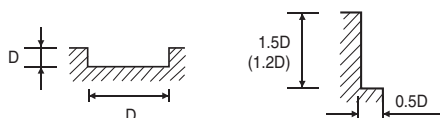
4 FLUTE

4刃

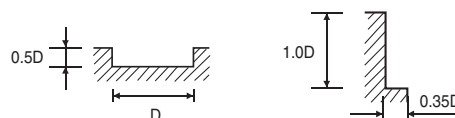
S-Mill SQS4 / SQL4 / SFS4 / SFL4

材质	合金钢, 铸铁		合金钢, 铸铁		不锈钢, 300SERIES		不锈钢, 400SERIES		钛		铬镍铁合金	
MATERIAL	ALLOY STEEL CAST IRON		ALLOY STEEL CAST IRON		STAINLESS STEEL 300SERIES		STAINLESS STEEL 400SERIES		TITANIUM		INCONEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45									
STRENGTH	~ 1000N/mm ²		1000N/mm ² ~ 1300N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	6060	390	4240	350	4590	320	6420	320	4590	320	1220	90
8	4545	500	3180	350	3440	390	4810	420	2950	420	910	110
10	4010	620	2800	430	2750	530	3850	530	2750	530	730	140
12	3340	630	2340	440	2290	510	3210	510	2290	410	610	135
14	2860	560	2000	390	1960	470	2750	470	1960	470	520	130
16	2510	530	1755	370	1720	430	2400	430	1720	430	455	120
18	2230	530	1560	370	1530	430	2140	430	1530	430	405	110
20	2000	520	1400	365	1370	420	1930	420	1370	420	365	110
25	1600	405	1120	280	1090	340	1540	340	1090	340	290	100

ALLOY STEEL / CAST IRON / STAINLESS STEEL 300, 400SERIES / TITANIUM
合金钢铸铁/300, 400系列不锈钢/钛



INCONEL
铬镍铁合金



1.2 x D Axial cutting depth should be applied for Short length series DIA over 8mm
1.2 x D轴向切削深度应用于短系列刀径超过8mm的产品

RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刀部直径)

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

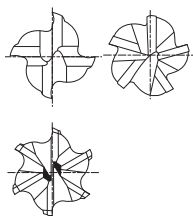
TAP

Special
Tools

CARBIDE, MULTI FLUTE, 45° HELIX, ROUGHING

硬质合金, 多种刃, 45°螺旋角, 螺旋

S-Mill SRM



► Suitable for rough machining of stainless steel, Ti/Ni, Inconel and etc.

► Fine pitch wave profile for high speed machining

► 适用于不锈钢系列, Ti/Ni, INCONEL (铬镍铁合金) 等的粗加工

► 采用细螺旋, 适合高速加工



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 No. OF FLUTE
SRRM06006	6.0	6	13	60	4
SRRM08008	8.0	8	19	65	4
SRRM09010	9.0	10	20	70	4
SRRM10010	10.0	10	22	70	4
SRRM12012	12.0	12	26	80	4
SRRM16016	16.0	16	42	110	5
SRRM20020	20.0	20	48	110	6

❖ 上記产品的参数可根据特别的要求制作加工.

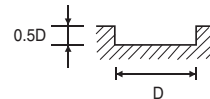
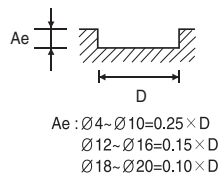
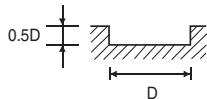
MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
h10	h6

MULTI FLUTE, 45° HELIX, ROUGHING - SLOTTING

多种刃, 45°螺旋角, 螺纹 - 开槽

S-Mill SRRM

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		不锈钢		铬镍铁合金	
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		STAINLESS STEEL		INCONEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45					
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	14740	2410	11720	870	7940	600	2700	260
8	10960	2410	8690	870	5950	600	2025	240
10	8690	2410	7180	870	4820	590	1460	260
12	7560	2490	5670	830	3970	590	1350	260
16	5670	2490	4540	790	3120	530	900	150
20	4540	2250	3400	585	2270	370	740	135



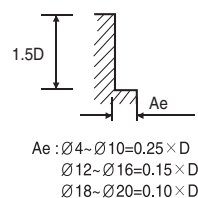
RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

MULTI FLUTE, 45° HELIX, ROUGHING - SIDE CUTTING

多种刃, 45°螺旋角, 螺纹 - 侧铣

S-Mill SRRM

材质	非合金钢, 合金钢, 铸铁		合金钢, 耐热钢		不锈钢		铬镍铁合金	
MATERIAL	NON-ALLOYED STEEL ALLOY STEEL CAST IRON		ALLOY STEEL HEAT RESISTANT STEEL		STAINLESS STEEL		INCONEL	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45					
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	14740	2410	11720	870	7940	600	2700	260
8	10960	2410	8690	870	5950	600	2025	240
10	8690	2410	7180	870	4820	590	1460	260
12	7560	2490	5670	830	3970	590	1350	260
16	5670	2490	4540	790	3120	530	900	150
20	4540	2250	3400	590	2270	370	740	135



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

A-Mill for ALUMINUM

for ALUMINUM
CARBIDE
END MILLS



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Date

Drill

TAP

Special
Tools

A-Mill for ALUMINUM

A-Mill 铝用

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
AHS2 AHL2		CARBIDE, 2 FLUTE, 45° HELIX 硬质合金, 2刃, 45° 螺旋角	123
AHS3 AHL3		CARBIDE, 3 FLUTE, 45° HELIX 硬质合金, 3刃, 45° 螺旋角	125
AHX3		CARBIDE, 3 FLUTE, 45° HELIX, EX-LONG LENGTH 硬质合金, 3刃, 45° 螺旋角, 超长型	126
			

CARBIDE, 2 FLUTE, 45° HELIX

硬质合金, 2刃, 45°螺旋角

A-Mill AHS2



- ▶ Applied for aluminum and aluminum alloy.
- ▶ Designed to minimize vibration.
- ▶ Fine surface roughness caused by "Mirror Face" of cutting edge.
- ▶ Precision of cutting diameter tolerance.
- ▶ 适用铝及铝合金材质加工
- ▶ 其设计使震动最小化
- ▶ 体现刃部"Mirror Face", 使被削面照度优秀
- ▶ 刃部直径公差高精密化

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHS2 010 04	1.0	4	3	40	○
AHS2 015 04	1.5	4	5	40	△
AHS2 020 04	2.0	4	6	40	○
AHS2 025 04	2.5	4	8	40	△
AHS2 030 04	3.0	4	11	50	○
AHS2 040 04	4.0	4	13	50	○
AHS2 050 06	5.0	6	17	55	△
AHS2 060 06	6.0	6	17	55	○
AHS2 070 08	7.0	8	22	65	△
AHS2 080 08	8.0	8	22	65	○
AHS2 090 10	9.0	10	27	70	△
AHS2 100 10	10.0	10	27	70	○
AHS2 120 12	12.0	12	32	80	○
AHS2 140 14	14.0	14	37	85	△
AHS2 160 16	16.0	16	42	100	△
AHS2 180 16	18.0	16	48	110	△
AHS2 200 20	20.0	20	48	110	△

A-Mill AHL2

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHL2 040 04	4.0	4	16	70	△
AHL2 050 06	5.0	6	22	70	△
AHL2 060 06	6.0	6	22	70	○
AHL2 080 08	8.0	8	28	80	○
AHL2 100 10	10.0	10	32	90	○
AHL2 120 12	12.0	12	38	95	△
AHL2 160 16	16.0	16	52	110	△
AHL2 200 20	20.0	20	55	110	△

❖ 上記产品の参数可根据特别的要求制作加工。

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm)
刃径公差 (mm)

- 0.020 ~ 0

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

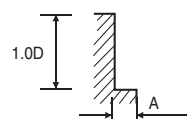
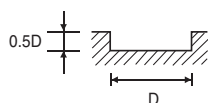
Special
Tools

2 FLUTE, 45° HELIX

2刃, 45°螺旋角

● A-Mill AHS2 / AHL2

材质	合金钢, 铸铁		铝合金	
MATERIAL	ALLOY STEEL CAST IRON		ALUMINUM	
HARDNESS	~HB 230			
DIAMETER	RPM	FEED	RPM	FEED
1	15180	455	15180	760
1.5	11840	475	11835	710
2	10170	510	10170	710
2.5	9510	570	9510	760
3	9000	630	9000	810
4	9000	810	9000	990
5	9000	900	9000	1170
6	9000	1080	9000	1350
7	7965	1120	7965	1355
8	7200	1260	7200	1620
9	7200	1395	7200	1510
10	7200	1530	7200	1890
12	7200	1890	7200	2340
14	5400	1620	5400	1980
16	5400	1710	5400	2160
18	3600	1260	3600	1620
20	3600	1440	3600	1710



A : $\varnothing 3 \sim \varnothing 10 = 0.25 \times D$
 $\varnothing 12 \sim \varnothing 20 = 0.5 \times D$

RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

CARBIDE, 3 FLUTE, 45° HELIX

硬质合金, 3刃, 45°螺旋角

A-Mill AHS3



- ▶ Applied for aluminum and aluminum alloy.
- ▶ Designed to minimize vibration.
- ▶ Fine surface roughness caused by "Mirror Face" of cutting edge.
- ▶ Precision of cutting diameter tolerance.
- ▶ 适用铝及铝合金材质加工
- ▶ 其设计使震动最小化
- ▶ 体现刃部"Mirror Face", 使被削质面照度优秀
- ▶ 刃部直径公差高精密化

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHS3 010 04	1.0	4	3	50	○
AHS3 015 04	1.5	4	5	50	△
AHS3 020 04	2.0	4	6	50	○
AHS3 025 04	2.5	4	8	50	△
AHS3 030 04	3.0	4	11	50	○
AHS3 040 04	4.0	4	13	50	○
AHS3 050 06	5.0	6	17	55	△
AHS3 060 06	6.0	6	17	55	○
AHS3 070 08	7.0	8	22	65	△
AHS3 080 08	8.0	8	22	65	○
AHS3 090 10	9.0	10	27	70	△
AHS3 100 10	10.0	10	27	70	○
AHS3 120 12	12.0	12	32	80	○
AHS3 140 14	14.0	14	37	85	△
AHS3 160 16	16.0	16	42	100	△
AHS3 180 16	18.0	16	48	110	△
AHS3 200 20	20.0	20	48	110	△

A-Mill AHL3

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHL3 040 04	4.0	4	16	70	△
AHL3 050 06	5.0	6	22	70	△
AHL3 060 06	6.0	6	22	70	△
AHL3 080 08	8.0	8	28	80	△
AHL3 100 10	10.0	10	32	90	△
AHL3 120 12	12.0	12	38	95	△
AHL3 160 16	16.0	16	52	110	△
AHL3 200 20	20.0	20	55	110	△

❖ 上記产品的参数可根据特别的要求制作加工.

○:标准在庫
△:预订生产品

MILL DIA. TOLERANCE(mm)
刃径公差 (mm)

- 0.020 ~ 0

CARBIDE, 3 FLUTE, 45° HELIX, EX-LONG LENGTH

硬质合金, 3刃, 45°螺旋角, 超长型

A-Mill AHX3



- ▶ Applied for aluminum and aluminum alloy.
- ▶ Designed to minimize vibration.
- ▶ Fine surface roughness caused by "Mirror Face" of cutting edge.
- ▶ Precision of cutting diameter tolerance.
- ▶ 适用铝及铝合金材质加工
- ▶ 其设计使震动最小化
- ▶ 体现刃部 "Mirror Face", 使被削质面照度优秀
- ▶ 刃部直径公差高精密化

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHX3 030 015	3.0	6	15	65	△
AHX3 030 020	3.0	6	20	70	△
AHX3 030 025	3.0	6	25	75	△
AHX3 040 020	4.0	6	20	70	△
AHX3 040 025	4.0	6	25	75	△
AHX3 040 030	4.0	6	30	80	△
AHX3 050 025	5.0	6	25	70	△
AHX3 050 030	5.0	6	30	75	△
AHX3 050 035	5.0	6	35	80	△
AHX3 050 040	5.0	6	40	85	△
AHX3 060 025	6.0	6	25	70	△
AHX3 060 030	6.0	6	30	75	△
AHX3 060 035	6.0	6	35	80	△
AHX3 060 042	6.0	6	42	90	△
AHX3 080 030	8.0	8	30	80	△
AHX3 080 035	8.0	8	35	85	△
AHX3 080 040	8.0	8	40	90	△
AHX3 080 045	8.0	8	45	95	△
AHX3 080 050	8.0	8	50	100	△
AHX3 080 055	8.0	8	55	105	△
AHX3 100 035	10.0	10	35	90	△
AHX3 100 045	10.0	10	45	100	△
AHX3 100 055	10.0	10	55	110	△
AHX3 100 065	10.0	10	65	120	△
AHX3 120 040	12.0	12	40	95	△
AHX3 120 045	12.0	12	45	100	△
AHX3 120 055	12.0	12	55	110	△
AHX3 120 060	12.0	12	60	110	△
AHX3 120 065	12.0	12	65	120	△
AHX3 120 075	12.0	12	75	135	△

※ 上記产品の参数可根据特别的要求制作加工.

○: 标准在庫
△: 预订生产品

CARBIDE, 3 FLUTE, 45° HELIX, EX-LONG LENGTH

硬质合金, 3刃, 45°螺旋角, 超长型

A-Mill AHX3



- ▶ Applied for aluminum and aluminum alloy.
- ▶ Designed to minimize vibration.
- ▶ Fine surface roughness caused by "Mirror Face" of cutting edge.
- ▶ Precision of cutting diameter tolerance.
- ▶ 适用铝及铝合金材质加工
- ▶ 其设计使震动最小化
- ▶ 体现刃部"Mirror Face", 使被削质面照度优秀
- ▶ 刃部直径公差高精密化

Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	库存 STOCK
AHX3 160 055	16.0	16	55	120	△
AHX3 160 065	16.0	16	65	135	△
AHX3 160 075	16.0	16	75	150	△
AHX3 160 085	16.0	16	85	160	△
AHX3 160 095	16.0	16	95	180	△
AHX3 160 105	16.0	16	105	190	△
AHX3 160 115	16.0	16	115	200	△
AHX3 200 055	20.0	20	55	125	△
AHX3 200 065	20.0	20	65	140	△
AHX3 200 075	20.0	20	75	150	△
AHX3 200 085	20.0	20	85	160	△
AHX3 200 095	20.0	20	95	180	△
AHX3 200 105	20.0	20	105	190	△
AHX3 200 115	20.0	20	115	200	△
AHX3 200 125	20.0	20	125	220	△

※ 上記产品的参数可根据特别的要求制作加工。

○: 标准在庫
△: 预订生产品

型号	刃径	刃长	柄径	全长	
AHXE3060020	6.0	20	6	80	
AHXE3080025	8.0	25	8	100	
AHXE3010030	10.0	30	10	100	
AHXE3120030	12.0	30	12	100	
AHXE3140035	14.0	35	14	100	
AHXE3160035	16.0	35	16	100	
AHXE3180035	18.0	35	18	100	
AHXE3200045	20.0	45	20	110	

MILL DIA. TOLERANCE(mm)
刃径公差 (mm)

- 0.020 ~ 0

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

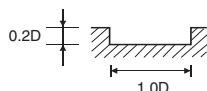
3 FLUTE, 45° HELIX

3刃, 45°螺旋角

● A-Mill AHS3 / AHL3

SLOTTING / 槽铣

材质	铝合金, 非铁制金属	
MATERIAL	ALUMINUM NONFERROUS METAL	
DIAMETER	RPM	FEED
3	9000	450
4	9000	570
5	9000	650
6	9000	780
8	7200	900
10	7200	1100
12	7200	1350
14	5400	1160
16	5400	1215
18	3600	900
20	3600	1035



SIDE CUTTING / 侧铣

材质	铝合金, 非铁制金属	
MATERIAL	ALUMINUM NONFERROUS METAL	
DIAMETER	RPM	FEED
3	9000	585
4	9000	700
5	9000	840
6	9000	970
8	7200	1110
10	7200	1350
12	7200	1130
14	5400	1420
16	5400	1560
18	3600	1170
20	3600	1230



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

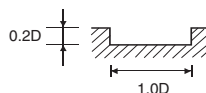
3 FLUTE, 45° HELIX, EX-LONG LENGTH

3刃, 45°螺旋角, 超长型

● A-Mill AHX3

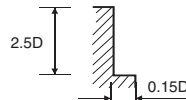
SLOTTING / 槽铣

材质	铝合金, 非铁制金属	
MATERIAL	ALUMINUM NONFERROUS METAL	
DIAMETER	RPM	FEED
3	6300	315
4	6300	400
5	6300	450
6	6300	545
8	5040	630
10	5040	680
12	5040	945
14	3780	810
16	3780	850
18	2520	630
20	2520	725



SIDE CUTTING / 侧铣

材质	铝合金, 非铁制金属	
MATERIAL	ALUMINUM NONFERROUS METAL	
DIAMETER	RPM	FEED
3	6300	410
4	6300	490
5	6300	590
6	6300	680
8	5040	775
10	5040	945
12	5040	790
14	3780	995
16	3780	1090
18	2520	820
20	2520	860



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

D-Mill for GRAPHITE

**for GRAPHITE &
NON-FERROUS
CARBIDE
END MILLS**



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Date

Drill

TAP

Special
Tools

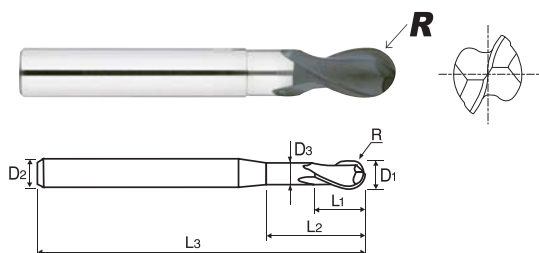
D-Mill for GRAPHITE & NON-FERROUS

D-Mill 石墨用 和非铁制材料

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
DBS2		CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型	131
DBL2		CARBIDE, 2 FLUTE, BALL NOSE, LONG LENGTH 硬质合金, 2刃, 球头, 加长型	132

CARBIDE, 2 FLUTE, BALL NOSE, SHORT LENGTH 硬质合金, 2刃, 球头, 短型

D-Mill DBS2



- Higher hardness of film and excellent wear-resistance increase the tool life surprisingly.
- Ultra fine film of diamond coated carbide end mills ensure the smooth and excellent surface on work materials.
- High performance on graphite, wrought aluminum, bakelite, plastic, wood, brass etc. diamond coated carbide end mills may have good result for the machining of non-ferrous metals and non-metallic materials.
- 较高硬度的涂层和优秀的耐磨性, 极大的提高了工具寿命.
- 极优秀的金钢石涂层硬质合金球头铣刀确保了工件表面平滑优良.
- 加工石墨, 精炼铝, 胶木, 塑料, 木头, 黄铜等有较高的性能. 金刚石涂层硬质合金球头铣刀在加工非铁制金属和非铁制材料时有卓越的表面粗糙度.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D ₁	柄部直径 SHANK DIAMETER D ₂	刃长 LENGTH OF CUT L ₁	颈长 LENGTH BELOW SHANK L ₂	全长 OVERALL LENGTH L ₃	颈径 NECK DIAMETER D ₃	库存 STOCK
DBS2 020 06	R1.0	2.0	6	3	5	60	1.9	△
DBS2 025 06	R1.25	2.5	6	4	6	60	2.4	△
DBS2 030 06	R1.5	3.0	6	4.5	6.5	60	2.8	△
DBS2 035 06	R1.75	3.5	6	5	7	65	3.2	△
DBS2 040 06	R2.0	4.0	6	6	8	65	3.7	△
DBS2 050 06	R2.5	5.0	6	7.5	10	65	4.6	△
DBS2 060 06	R3.0	6.0	6	9	12	75	5.6	△
DBS2 080 08	R4.0	8.0	8	12	25	75	7.4	△
DBS2 100 10	R5.0	10.0	10	15	30	80	9.4	△
DBS2 120 12	R6.0	12.0	12	18	36	90	11.4	△

❖ 上記产品的参数可根据特别的要求制作加工.

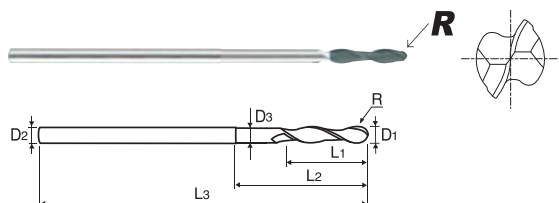
△: 预订生产品

MILL DIA. TOLERANCE(mm) 刃径公差 (mm)	SHANK DIA. TOLERANCE 柄径公差
0 - 0.030	h6

CARBIDE, 2 FLUTE, BALL NOSE, LONG LENGTH

硬质合金, 2刃, 球头, 加长型

D-Mill DBL2



- Higher hardness of film and excellent wear-resistance increase the tool life surprisingly.
- Ultra fine film of diamond coated carbide end mills ensure the smooth and excellent surface on work materials.
- High performance on graphite, wrought aluminum, bakelite, plastic, wood, brass etc. diamond coated carbide end mills may have good result for the machining of non-ferrous metals and non-metallic materials.
- 较高硬度的涂层和优秀的耐磨性, 极大的提高了工具寿命.
- 极优秀的金刚石涂层硬质合金球头铣刀确保了工件表面平滑优良.
- 加工石墨, 精炼铝, 胶木, 塑料, 木头, 黄铜等有较高的性能. 金刚石涂层硬质合金球头铣刀在加工非铁制金属和非铁制材料时有卓越的表面粗糙度.



Unit : mm

型号 CODE No.	球头半径 RADIUS OF BALL NOSE R	刃部直径 MILL DIAMETER D1	柄部直径 SHANK DIAMETER D2	刃长 LENGTH OF CUT L1	颈长 LENGTH BELOW SHANK L2	全长 OVERALL LENGTH L3	颈径 NECK DIAMETER D3	库存 STOCK
DBL2 020 04	R1.0	2.0	4	10	20	80	1.95	△
DBL2 030 04	R1.5	3.0	4	15	25	80	2.9	△
DBL2 040 04	R2.0	4.0	4	20	30	80	3.9	△
DBL2 050 06	R2.5	5.0	6	30	50	100	4.9	△
DBL2 060 06	R3.0	6.0	6	30	50	100	5.5	△
DBL2 080 08	R4.0	8.0	8	40	60	110	7.5	△
DBL2 100 10	R5.0	10.0	10	50	70	120	9.5	△
DBL2 120 12	R6.0	12.0	12	55	75	130	11.5	△

※ 上記产品の参数可根据特别的要求制作加工.

△: 预订生产品

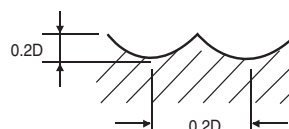
2 FLUTE, BALL NOSE

2刃, 球头

D-Mill DBS2 / DBL2

材质 MATERIAL	石墨 GRAPHITE	
DIAMETER	RPM	FEED
2	16000	800
2.5	16000	1120
3	16000	1450
3.5	16000	1750
4	16000	2100
5	15500	2550
6	15000	2950
8	13000	3000
10	11500	3050
12	10500	3150

- ※ The FEED, in long & extra long types, should be reduced by around 50%.
- ※ 进给量, LONG&EX-LONG的时候, 应该大约减少50%.



RPM = rev./min.(转速/分钟)
FEED = mm/min.(进给量)
D = DIAMETER(刃部直径)

HSS Co8

GENERAL PURPOSE
MACHINING
END MILLS



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

HSS Co8 END MILL

含钴8% 高速钢铣刀

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
EFR2		HSS CO8, 2 FLUTE, REGULAR LENGTH HSS Co8, 2刀, 普通长度	135
EFR4		HSS CO8, 4FLUTE, CENTER CUTTING, REGULAR LENGTH HSS Co8, 4刀, 标准中心切削, 普通长度	137
ERSM		HSS CO8, COARSE PITCH, CENTER CUTTING, ROUGHING HSS Co8, 大螺距, 标准中心切削, 螺纹铣刀	139

HSS CO8, 2 FLUTE, REGULAR LENGTH

HSS Co8, 2刃, 普通长度

EFR2 SERIES



► These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. These are designed for slotting, drilling, pocketing and general-purpose operation.

► 这类铣刀按右螺旋右切削标准制作的。所有的柄部都有键槽



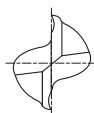
Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
EFR2 010 06	1.0	6	2.5	55
EFR2 015 06	1.5	6	4	55
EFR2 020 06	2.0	6	6	55
EFR2 025 06	2.5	6	7	55
EFR2 030 06	3.0	6	10	55
EFR2 035 08	3.5	8	12	60
EFR2 040 06	4.0	6	12	55
EFR2 040 08	4.0	8	12	60
EFR2 045 08	4.5	8	15	65
EFR2 050 06	5.0	6	15	60
EFR2 050 08	5.0	8	15	65
EFR2 055 08	5.5	8	15	65
EFR2 060 06	6.0	6	15	60
EFR2 060 08	6.0	8	15	65
EFR2 065 10	6.5	10	20	75
EFR2 070 08	7.0	8	20	70
EFR2 070 10	7.0	10	20	75
EFR2 075 10	7.5	10	20	75
EFR2 080 08	8.0	8	20	70
EFR2 080 10	8.0	10	21	75
EFR2 085 10	8.5	10	25	80
EFR2 090 10	9.0	10	25	80
EFR2 095 10	9.5	10	25	80
EFR2 100 10	10.0	10	26	80
EFR2 105 12	10.5	12	30	90
EFR2 110 12	11.0	12	30	90
EFR2 115 12	11.5	12	30	90
EFR2 120 12	12.0	12	31	90
EFR2 125 12	12.5	12	35	95
EFR2 130 12	13.0	12	35	95
EFR2 135 12	13.5	12	35	95
EFR2 140 12	14.0	12	35	95
EFR2 140 16	14.0	16	35	100
EFR2 150 16	15.0	16	40	105
EFR2 160 16	16.0	16	40	105
EFR2 170 16	17.0	16	40	105
EFR2 180 16	18.0	16	40	105
EFR2 190 20	19.0	20	45	115
EFR2 200 20	20.0	20	45	115
EFR2 210 20	21.0	20	45	115
EFR2 220 20	22.0	20	45	115
EFR2 230 25	23.0	25	50	125
EFR2 240 25	24.0	25	50	125

HSS CO8, 2 FLUTE, REGULAR LENGTH

HSS Co8, 2刃, 普通长度

EFR2 SERIES



► These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. These are designed for slotting, drilling, pocketing and general-purpose operation.

► 这类铣刀按右螺旋右切削标准制作的。所有的柄部都有键槽



Unit : mm

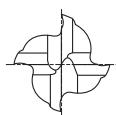
型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
EFR2 250 25	25.0	25	50	125
EFR2 260 25	26.0	25	50	125
EFR2 270 25	27.0	25	55	125
EFR2 280 25	28.0	25	55	125
EFR2 290 25	29.0	25	55	125
EFR2 300 25	30.0	25	55	125
EFR2 310 32	31.0	32	60	145
EFR2 320 32	32.0	32	60	145
EFR2 330 32	33.0	32	60	145
EFR2 340 32	34.0	32	60	145
EFR2 350 32	35.0	32	60	145
EFR2 360 32	36.0	32	65	150
EFR2 370 32	37.0	32	65	150
EFR2 380 32	38.0	32	65	150
EFR2 390 32	39.0	32	65	150
EFR2 400 32	40.0	32	65	150
EFR2 410 32	41.0	32	70	160
EFR2 410 42	41.0	42	70	160
EFR2 420 32	42.0	32	70	160
EFR2 420 42	42.0	42	70	160
EFR2 430 32	43.0	32	70	160
EFR2 430 42	43.0	42	70	160
EFR2 440 32	44.0	32	70	160
EFR2 440 42	44.0	42	70	160
EFR2 450 32	45.0	32	70	160
EFR2 450 42	45.0	42	70	160
EFR2 460 32	46.0	32	75	160
EFR2 460 42	46.0	42	75	160
EFR2 470 32	47.0	32	75	165
EFR2 470 42	47.0	42	75	160
EFR2 480 32	48.0	32	75	165
EFR2 480 42	48.0	42	75	165
EFR2 490 32	49.0	32	75	165
EFR2 490 42	49.0	42	75	165
EFR2 500 32	50.0	32	75	165
EFR2 500 42	50.0	42	75	165

	MILL DIAMETER				
	• 6	• 8	• 10	• 12	OTHER SIZE
TOLERANCE	$\begin{matrix} 0 \\ -0.035 \end{matrix}$	$\begin{matrix} 0 \\ -0.040 \end{matrix}$	$\begin{matrix} 0 \\ -0.040 \end{matrix}$	$\begin{matrix} 0 \\ -0.045 \end{matrix}$	$\begin{matrix} 0 \\ -0.030 \end{matrix}$

HSS CO8, 4FLUTE, CENTER CUTTING, REGULAR LENGTH

HSS Co8, 4刃, 标准中心切削, 普通长度

EFR4 SERIES



► These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. These are designed for slotting, drilling, pocketing and general-purpose operation.

► 这类铣刀按右螺旋右切削标准制作的。所有的柄部都有键槽



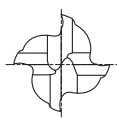
Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
EFR4 010 06	1.0	6	2.5	55
EFR4 015 06	1.5	6	4	55
EFR4 020 06	2.0	6	6	55
EFR4 025 06	2.5	6	7	55
EFR4 030 06	3.0	6	10	55
EFR4 035 08	3.5	8	12	60
EFR4 040 06	4.0	6	12	55
EFR4 040 08	4.0	8	12	60
EFR4 045 08	4.5	8	15	65
EFR4 050 06	5.0	6	15	60
EFR4 050 08	5.0	8	15	65
EFR4 055 08	5.5	8	15	65
EFR4 060 06	6.0	6	15	60
EFR4 060 08	6.0	8	15	65
EFR4 065 10	6.5	10	20	75
EFR4 070 10	7.0	10	20	75
EFR4 075 10	7.5	10	20	75
EFR4 080 08	8.0	8	20	70
EFR4 080 10	8.0	10	21	75
EFR4 085 10	8.5	10	25	80
EFR4 090 10	9.0	10	25	80
EFR4 095 10	9.5	10	25	80
EFR4 100 10	10.0	10	26	80
EFR4 105 12	10.5	12	30	90
EFR4 110 12	11.0	12	30	90
EFR4 115 12	11.5	12	30	90
EFR4 120 12	12.0	12	31	90
EFR4 125 12	12.5	12	35	95
EFR4 130 12	13.0	12	35	95
EFR4 140 12	14.0	12	35	95
EFR4 140 16	14.0	16	35	100
EFR4 150 16	15.0	16	40	105
EFR4 160 16	16.0	16	40	105
EFR4 170 16	17.0	16	40	105
EFR4 180 16	18.0	16	40	105
EFR4 190 20	19.0	20	45	115
EFR4 200 20	20.0	20	45	115
EFR4 210 20	21.0	20	45	115
EFR4 220 20	22.0	20	45	115
EFR4 230 25	23.0	25	50	125
EFR4 240 25	24.0	25	50	125
EFR4 250 25	25.0	25	50	125
EFR4 260 25	26.0	25	50	125

HSS CO8, 4FLUTE, CENTER CUTTING, REGULAR LENGTH

HSS Co8, 4刃, 标准中心切削, 普通长度

EFR4 SERIES



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► 这类铣刀按右螺旋右切削标准制作的。所有的柄部都有键槽



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH
EFR4 270 25	27.0	25	55	125
EFR4 280 25	28.0	25	55	125
EFR4 290 25	29.0	25	55	125
EFR4 300 25	30.0	25	55	125
EFR4 310 32	31.0	32	60	145
EFR4 320 32	32.0	32	60	145
EFR4 330 32	33.0	32	60	145
EFR4 340 32	34.0	32	60	145
EFR4 350 32	35.0	32	60	145
EFR4 360 32	36.0	32	65	150
EFR4 370 32	37.0	32	65	150
EFR4 380 32	38.0	32	65	150
EFR4 390 32	39.0	32	65	150
EFR4 400 32	40.0	32	65	150
EFR4 410 32	41.0	32	70	160
EFR4 410 42	41.0	42	70	160
EFR4 420 32	42.0	32	70	160
EFR4 420 42	42.0	42	70	160
EFR4 430 32	43.0	32	70	160
EFR4 430 42	43.0	42	70	160
EFR4 440 32	44.0	32	70	160
EFR4 440 42	44.0	42	70	160
EFR4 450 32	45.0	32	70	160
EFR4 450 42	45.0	42	70	160
EFR4 460 32	46.0	32	70	160
EFR4 460 42	46.0	42	75	160
EFR4 470 32	47.0	32	75	165
EFR4 470 42	47.0	42	75	160
EFR4 480 32	48.0	32	75	165
EFR4 480 42	48.0	42	75	165
EFR4 490 32	49.0	32	75	165
EFR4 490 42	49.0	42	75	165
EFR4 500 32	50.0	32	75	165
EFR4 500 42	50.0	42	75	165

Tolerances according to DIN 7160 & 7161

μm : 1/1000mm

Tolerance range in μm / Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	+30 0					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

HSS CO8, COARSE PITCH, CENTER CUTTING, ROUGHING

HSS Co8, 大螺距, 标准中心切削, 螺纹铣刀

ERSM SERIES



► This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous material.

► 这些普通用途的粗加工刀具, 具有高的金属切除率, 用于各种材料工件的加工。
推荐用于铣削钢和许多非金属材料。
底刃为中心孔型式, 用于许多精密加工



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 No. OF FLUTE
ERSM 060 08	6.0	8	15	60	4
ERSM 070 10	7.0	10	20	65	4
ERSM 080 10	8.0	10	20	65	4
ERSM 090 12	9.0	12	25	75	4
ERSM 100 12	10.0	12	25	75	4
ERSM 110 12	11.0	12	30	80	4
ERSM 120 12	12.0	12	30	80	4
ERSM 130 16	13.0	16	35	90	4
ERSM 140 16	14.0	16	35	90	4
ERSM 150 16	15.0	16	40	95	4
ERSM 160 16	16.0	16	40	95	4
ERSM 170 20	17.0	20	40	105	4
ERSM 180 20	18.0	20	40	105	4
ERSM 190 20	19.0	20	45	110	4
ERSM 200 20	20.0	20	45	110	4
ERSM 210 20	21.0	20	45	110	5
ERSM 220 20	22.0	20	45	110	5
ERSM 230 25	23.0	25	50	120	5
ERSM 240 25	24.0	25	50	120	5
ERSM 250 25	25.0	25	50	120	5
ERSM 260 25	26.0	25	50	120	6
ERSM 270 25	27.0	25	55	125	6

Tolerances according to DIN 7160 & 7161

μm : 1/1000mm

Tolerance range in μm / Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	±120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

HSS CO8, COARSE PITCH, CENTER CUTTING, ROUGHING

HSS Co8, 大螺距, 标准中心切削, 螺纹铣刀

ERSM SERIES



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底刃为中心孔型式, 用于许多精密加工



Unit : mm

型号 CODE No.	刃部直径 MILL DIAMETER	柄部直径 SHANK DIAMETER	刃长 LENGTH OF CUT	全长 OVERALL LENGTH	刃数 No. OF FLUTE
ERSM 280 25	28.0	25	55	125	6
ERSM 290 25	29.0	25	55	125	6
ERSM 300 25	30.0	25	55	125	6
ERSM 310 32	31.0	32	60	145	6
ERSM 320 32	32.0	32	60	145	6
ERSM 330 32	33.0	32	60	145	6
ERSM 340 32	34.0	32	60	145	6
ERSM 350 32	35.0	32	60	145	6
ERSM 360 32	36.0	32	60	145	6
ERSM 370 32	37.0	32	65	150	6
ERSM 380 32	38.0	32	65	150	6
ERSM 390 32	39.0	32	65	150	6
ERSM 400 32	40.0	32	65	150	6
ERSM 420 32	42.0	32	65	155	6
ERSM 420 42	42.0	42	65	155	6
ERSM 450 32	45.0	32	70	160	6
ERSM 450 42	45.0	42	70	160	6
ERSM 480 32	48.0	32	70	160	6
ERSM 480 42	48.0	42	70	160	6
ERSM 500 32	50.0	32	70	160	6
ERSM 500 42	50.0	42	70	160	6

Tolerances according to DIN 7160 & 7161

μm : 1/1000mm

Tolerance range in μm / Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	±120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

TECHNICAL DATA

END MILLS



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

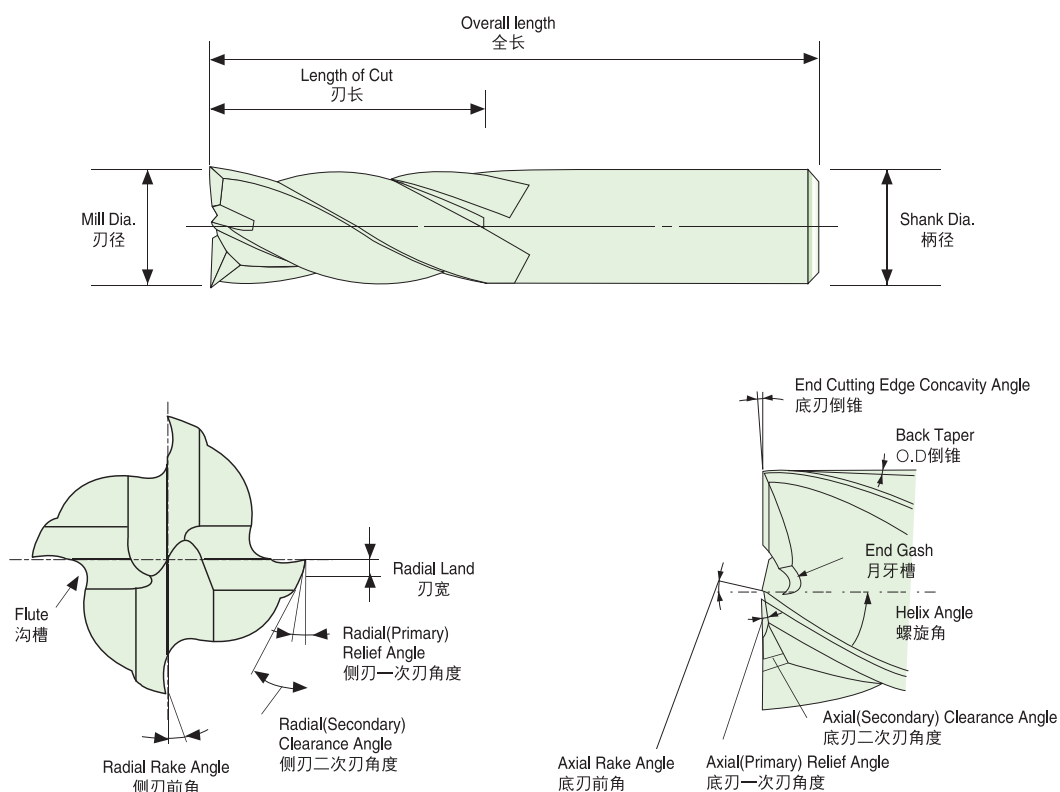
Drill

TAP

Special
Tools

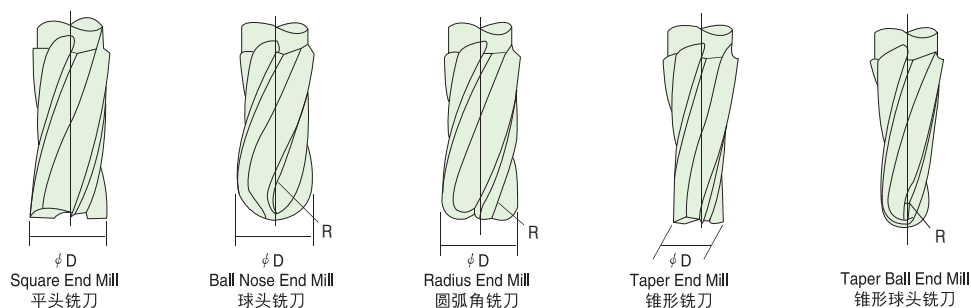
1. NAMES OF END MILL PARTS

铣刀各部分的名称



2. TYPE OF END MILL

铣刀种类

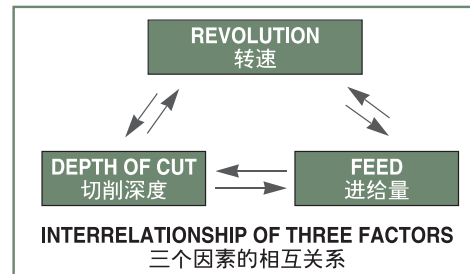


3. SPEED & FEED CALCULATION

考虑速度&进给量

Speed, feed and depth of cut are the most important factors to consider for best results in milling. Improper feeds and speeds often cause low production, poor work quality and damage to the cutter.

速度，进给量和切削深度是决定切削效果最重要的因素。不合适的进给量和速度常常导致生产量降低，工作质量差和刀具的损坏。



Use Lower Speed Ranges For 使用低速度范围用于

Hard materials	高硬度材料
Tough materials	韧性大的材料
Abrasive materials	难切削材料
Heavy cuts	重切削
Minimum tool wear	最小的刀具磨损
Maximum cutter life	最长的刀具寿命

Use Higher Speed Ranges For 使用高速度范围用于

Softer materials	软质材料
Better finishes	较好的表面质量
Smaller diameter cutters	较小的刀具外径
Light cuts	轻切削
Frail work pieces or set-ups	脆性大的工件
Hand feed operations	手动操作
Maximum production rates	最大的加工效率
Non-metallics	非金属材料

Use Higher Feeds For 使用高进给量用于

Heavy, roughing cuts	重，粗切削
Rigid set-ups	刚性结构
Easy-to-machine work materials	易加工材料
Rugged cutters	粗加工刀具
Slab milling cuts	平面切削
Low tensile strength materials	低抗拉强度材料
Coarse tooth cutters	粗齿铣刀

Use Lower Feeds For 使用低进给量用于

Light, and finishing cuts	轻加工，精切削
Frail set-ups	脆性结构
Hard to machine work materials	难加工材料
Frail and small cutters	细小刀具
Deep slots	深立槽加工
High tensile strength materials	高抗拉强度材料
Fine tooth cutters	精加工刀具

SPEED & FEED CALCULATIONS FOR MILLING CUTTERS AND OTHER ROTATING TOOLS

TO FIND	HAVING	FORMULA
Surface(or Periphery) Speed in meter Per Minute=S.F.M.	Diameter of Tool in millimeters =D Revolutions per Minute =R.P.M.	$V = \frac{D \times 3.1416 \times R.P.M.}{1000}$
Revolution Per Minute=R.P.M.	Surface Speed in meter per Minute =S.F.M. Diameter of Tool in millimeters =D	$R.P.M. = \frac{V \times 1,000}{D \times 3.1416}$
Feed per Revolution in millimeters=F.R.	Feed in millimeters per Minute =F.M. Revolution per Minute =R.P.M.	$F.R. = \frac{F.M.}{R.P.M.}$
Feed in millimeters Per Minute=F.M.	Feed per Revolution in millimeters =F.R. Revolution per Minute =R.P.M.	$F.M. = F.R. \times R.P.M.$
Number of Cutting Teeth per Minute=T.M.	Number of Teeth in Tool =T Revolution per Minute =R.P.M.	$T.M. = T \times R.P.M.$
Feed per tooth=F.T.	Number of Teeth in Tool =T Feed per Revolution in millimeters =R.P.M.	$F.T. = \frac{F.R.}{T}$
Feed per Tooth=F.T.	Number of Teeth in Tool =T Feed in millimeters per Minute =F.M. Speed in Revolution per Minute =R.P.M.	$F.T. = \frac{F.M.}{T \times R.P.M.}$

4. ISO TOLERANCES

公差

($\mu\text{m} = 1/1000 \text{ mm}$)

	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
d8	- 20 - 34	- 30 - 48	- 40 - 62	- 50 - 77	- 65 - 98	- 80 - 119	- 100 - 146	- 120 - 174
d9	- 20 - 45	- 30 - 60	- 40 - 76	- 50 - 93	- 65 - 117	- 80 - 142	- 100 - 174	- 120 - 207
d11	- 20 - 80	- 30 - 105	- 40 - 130	- 50 - 160	- 65 - 195	- 80 - 240	- 100 - 290	- 120 - 340
e8	- 14 - 28	- 20 - 38	- 25 - 47	- 32 - 59	- 40 - 73	- 50 - 89	- 60 - 106	- 72 - 126
f10	- 6 - 46	- 10 - 58	- 13 - 71	- 16 - 86	- 20 - 104	- 25 - 125	- 30 - 150	- 36 - 176
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13	0 - 16	0 - 19	0 - 22
h7	0 - 10	0 - 12	0 - 15	0 - 18	0 - 21	0 - 25	0 - 30	0 - 35
h8	0 - 14	0 - 18	0 - 22	0 - 27	0 - 33	0 - 39	0 - 46	0 - 54
h10	0 - 40	0 - 48	0 - 58	0 - 70	0 - 84	0 - 100	0 - 120	0 - 140
h11	0 - 60	0 - 75	0 - 90	0 - 110	0 - 130	0 - 160	0 - 190	0 - 220
h12	0 - 100	0 - 120	0 - 150	0 - 180	0 - 210	0 - 250	0 - 300	0 - 350
h13	0 - 140	0 - 180	0 - 220	0 - 270	0 - 330	0 - 390	0 - 460	0 - 540
h14	0 - 250	0 - 300	0 - 360	0 - 430	0 - 520	0 - 620	0 - 740	0 - 870
js11	± 30	± 37.5	± 45	± 55	± 65	± 80	± 95	± 110
js12	± 50	± 60	± 75	± 90	± 105	± 125	± 150	± 175
js14	± 125	± 150	± 180	± 215	± 260	± 310	± 370	± 435
k8	+ 14 0	+ 18 0	+ 22 0	+ 27 0	+ 33 0	+ 39 0	+ 46 0	+ 54 0
k9	+ 25 0	+ 30 0	+ 36 0	+ 43 0	+ 52 0	+ 62 0	+ 74 0	+ 87 0
k10	+ 40 0	+ 48 0	+ 58 0	+ 70 0	+ 84 0	+ 100 0	+ 120 0	+ 140 0
k11	+ 60 0	+ 75 0	+ 90 0	+ 110 0	+ 130 0	+ 160 0	+ 190 0	+ 220 0
k12	+ 100 0	+ 120 0	+ 150 0	+ 180 0	+ 210 0	+ 250 0	+ 300 0	+ 350 0
k14	+ 250 0	+ 300 0	+ 360 0	+ 430 0	+ 520 0	+ 620 0	+ 740 0	+ 870 0

5. TROUBLE SHOOTING

问题解决指南

具体问题 SPECIFIC PROBLEM	原因 CAUSE	解决方法 SOLUTION
崩刃 Chipping	进给太快 Feed too fast	减慢到合适的进给速度 Slow down to proper feed
	切削开始时进给太快 Feed too fast on first cut	切削开始时减慢进给速度 Slow down on first bite
	机床和刀柄刚性不足 Not enough rigidity of machine tool & holder	用刚性好的机床和刀柄 Change rigid machine tool or holder
	夹紧松(刀具) Loose hole (tool)	夹紧 Correct to tight holding
	夹紧松(工件) Loose hole (work piece)	夹紧 Correct to tight holding
	刚性不足(刀具) Lack of rigidity (tool)	用允许的最短的刀,柄部夹的深一点 Use shortest end mill available hold shank deeper 试一下顺铣 Try down cut
	切削刃太尖 Teeth too sharp	改变脆弱的切削刃角,一次刃 Change weaker cutting angle, primary relief
磨损 Wear	速度太快 Speed too fast	减慢,加足够的冷却液 Slow down, use enough coolant
	硬化材料 Hard material	用高级刀具,工具材料,增加表面处理方式 Use higher grade, tool material, add surfacetreatment
	切屑粘附 Biting chips	改变进给速度以改变切屑大小或用冷却油或鼓风清理切屑 Change feed speed to change chip size or clear chips with coolant or air blow
	进给速度不当(太低) Improper feed speed (too slow)	增加进给速度 Increase feed speed 试一下顺铣 Try down cut
	切削角度不合适 Improper cutting angle	改变为适当的切削角度 Change to correct cutting angle
	一次后角太小 Too small primary relief angle	改变成较大的后角 Change to larger relief angle
破损 Breakage	进给太快 Feed too fast	减慢进给速度 Slow down feed
	切削量太大 Too larger cutting amount	用较小的每刃切削量 Make smaller cutting amount per teeth
	刃长和全长太长 Too long flute length or long overall length	柄部夹的深一点,用短的刀,试一下顺铣 Hold shank deeper, use shorter endmill
	磨损太大 Too much wear	在初期再研磨 Regind at earlier stage
震纹 Chattering	进给和切削速度太快 Feed and speed too fast	修正进给和切削速度 Correct feed and speed
	刚性不足(机床和刀柄) Not enough rigidity (machine & holder)	用较好的机床刀柄或改变切削条件 Use better machine tool or holder or change condition
	后角太大 Too much relief angle	改变成较小的后角 Change to smaller relief angle 加工刃带(用油石磨一次刃) Putmargin (touch primary with oil stone)
	夹紧松(工件) Loose hold (work piece)	夹紧工件 Hold work piece tight

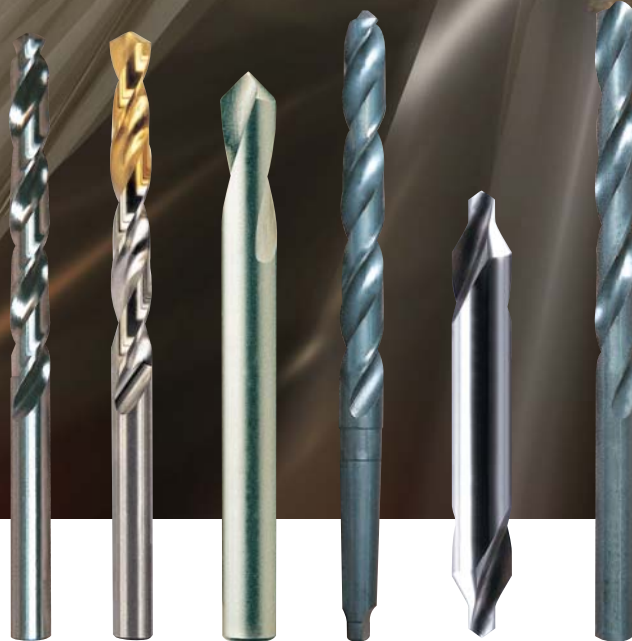
TROUBLE SHOOTING

问题解决指南

具体问题 SPECIFIC PROBLEM	原因 CAUSE	解决方法 SOLUTION
震纹 Chattering	切削太深 Cutting too deep	修正为较小切削深度 Correct to smaller cutting
	刃长和全长太长 Too long flute length or long overall length	柄部夹的深一点,用短的刀或改变切削条件 Hold shank deeper, use shorter endmill or try down cut
工具寿命短(切削刃钝) Short tool life (dull teeth)	切削阻力大 Too much cutting friction	在初期再研磨 Reground at earlier stage
	切削材料硬 Tough work material	用高级刀具 Apply premium tool
	切削角度不合适 Improper cutting angle	改变切削角度和一次刃 Change cutting angle & primary
切屑堵塞 Chip packing	切削量太大 Too much cutting amount	调整进给和切削速度 Adjust feed or speed
	排屑槽小 Not enough chip room	用较少刃数的铣刀 Use less number of flute end mill
	冷却液不足 Not enough coolant	加足够的冷却液 Apply more coolant
		鼓风 Use air blow
表面粗糙度粗糙 Rough surface	进给太快 Feed too fast	减慢到合适的进给速度 Slow down to correct feed
	速度低 Slow speeds	用较高切削速度 Apply higher speed
	磨损太大 Too much wear	在初期再研磨 Reground earlier stage
	切屑粘附 Chip biting	切的少一点 Cut less amount
	无底刃凹度 No end teeth concavity	底刃加工出凹度 Put concave on bottom teeth
毛刺 Burr	一次后角磨损太大 Too much wear on primary relife	在初期再研磨 Reground at earlier stage
	切削条件不正确 Incorrect condition	修正铣削条件 Correct milling condition
	切削角度不合适 Improper cutting angle	改变为适当的切削角度 Change to correct cutting angle
加工尺寸不正确 No dimensional accuracy	切削条件太苛刻 Too tough condition	改变为较容易的切削条件 Change to earlier condition
	精度低(机床和刀柄) Lack of accuracy (machine and holder)	修机床,刀柄 Repair machine or holder
	刚性不足(机床和刀柄) Not enough rigidity (machine and holder)	改变机床,刀柄或切削条件 Change machine or holder or condition
	刃数少 Less number of flute	用较多刃数的铣刀 Use large number of flute end mill
面不垂直 No-perpendicular side	进给太快 Feed too fast	减慢到合适的进给速度 Slow down to correct feed
	切削量太大 Too much cutting amount	减小切削量 Make less cutting amount
	刃长和全长太长 Too long flute length or long overall length	用适当长度的刀 Use proper length tool
		柄部夹的深一点 Hold shank deeper
	刃数少 Less number of flute	用较多刃数的铣刀 Use large number of flute end mill

DRILL

CARBIDE DRILL
HSS DRILL



GUIDE LINES TO ICONS

标记的说明



Tolerance of tool diameter is h8
直径公差是h8



Tolerance of tool diameter is m7
直径公差是m7



Tolerance of tool diameter is k12
直径公差是k12

POINT ANGLE 尖端角



Point angle of drills
表示钻头的尖端角



STANDARD 标准



DIN Standard products
DIN 标准产品



CUTTING CONDITIONS 切削条件



Indicates the pages of cutting conditions
所表示的页数是切削条件

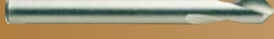
THE TYPE OF SHANK 柄形



Taper shank
锥柄

DRILL

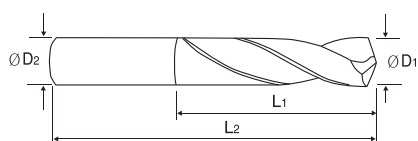
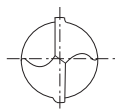
钻头

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
DTR		CARBIDE TITAN DRILL, REGULAR LENGTH 硬制合金TITAN 钻头普长	150
DHR		HSS STRAIGHT SHANK DRILL, REGULAR LENGTH HSS 直柄钻头普长	153
DHC		HSS Co8 STRAIGHT SHANK DRILL, REGULAR LENGTH HSS Co8 直柄钻头普长	155
DHN		HSS STRAIGHT SHANK DRILL with TiN COATED HSS TiN 涂层直柄钻头	157
NC090		HSS Co8 NC SPOT DRILL 90° HSS Co8 定心钻头 90°	159
NC120		HSS Co8 NC SPOT DRILL 120° HSS Co8 定心钻头 120°	159
DCT		HSS-E CENTER DRILL 60° HSS-E 中心钻 60°	160

CARBIDE TITAN DRILL, REGULAR LENGTH

硬制合金TITAN 钻头普长

DTR SERIES



► **Application** : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, nonferrous heavy metal, non-ferrous light metal, abrasive plastic.

► **应用** : 用于加工一般刚件, 铸钢, 冷硬铸钢, 可锻铸铁, 非铁重金属, 耐磨塑料等材料



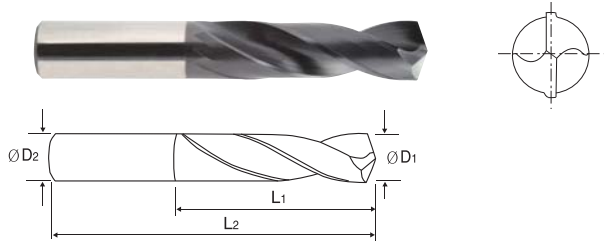
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2	型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2
DTR 0100	1.0	8	38	3	DTR 0370	3.7	25	55	4
DTR 0110	1.1	9	42	3	DTR 0380	3.8	25	55	4
DTR 0120	1.2	10	42	3	DTR 0390	3.9	25	55	4
DTR 0130	1.3	10	42	3	DTR 0400	4.0	25	55	4
DTR 0140	1.4	10	42	3	DTR 0410	4.1	25	55	4
DTR 0150	1.5	11	42	3	DTR 0420	4.2	32	62	5
DTR 0160	1.6	11	42	3	DTR 0430	4.3	32	62	5
DTR 0170	1.7	12	42	3	DTR 0440	4.4	32	62	5
DTR 0180	1.8	12	42	3	DTR 0450	4.5	32	62	5
DTR 0190	1.9	13	42	3	DTR 0460	4.6	32	62	5
DTR 0200	2.0	13	42	3	DTR 0470	4.7	32	62	5
DTR 0210	2.1	17	50	3	DTR 0480	4.8	32	62	5
DTR 0220	2.2	17	50	3	DTR 0490	4.9	32	62	5
DTR 0230	2.3	17	50	3	DTR 0500	5.0	32	62	5
DTR 0240	2.4	17	50	3	DTR 0510	5.1	32	62	5
DTR 0250	2.5	17	50	3	DTR 0520	5.2	32	62	6
DTR 0260	2.6	17	50	3	DTR 0530	5.3	32	62	6
DTR 0270	2.7	17	50	3	DTR 0540	5.4	36	66	6
DTR 0280	2.8	17	50	3	DTR 0550	5.5	36	66	6
DTR 0290	2.9	17	50	3	DTR 0560	5.6	36	66	6
DTR 0300	3.0	20	55	4	DTR 0570	5.7	36	66	6
DTR 0310	3.1	20	55	4	DTR 0580	5.8	36	66	6
DTR 0320	3.2	20	55	4	DTR 0590	5.9	36	66	6
DTR 0330	3.3	20	55	4	DTR 0600	6.0	36	66	6
DTR 0340	3.4	20	55	4	DTR 0610	6.1	36	66	6
DTR 0350	3.5	20	55	4	DTR 0620	6.2	42	74	7
DTR 0360	3.6	25	55	4	DTR 0630	6.3	42	74	7

CARBIDE TITAN DRILL, REGULAR LENGTH

硬制合金TITAN 钻头普长

DTR SERIES



► **Application** : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, nonferrous heavy metal, non-ferrous light metal, abrasive plastic.

► **应用** : 用于加工一般刚件, 铸钢, 冷硬铸钢, 可锻铸铁, 非铁重金属, 耐磨塑料等材料



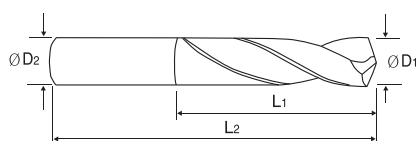
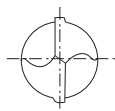
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2	型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2
DTR 0640	6.4	42	74	7	DTR 0910	9.1	50	84	9
DTR 0650	6.5	42	74	7	DTR 0920	9.2	53	89	10
DTR 0660	6.6	42	74	7	DTR 0930	9.3	53	89	10
DTR 0670	6.7	42	74	7	DTR 0940	9.4	53	89	10
DTR 0680	6.8	42	74	7	DTR 0950	9.5	53	89	10
DTR 0690	6.9	42	74	7	DTR 0960	9.6	53	89	10
DTR 0700	7.0	42	74	7	DTR 0970	9.7	53	89	10
DTR 0710	7.1	42	74	7	DTR 0980	9.8	53	89	10
DTR 0720	7.2	46	79	8	DTR 0990	9.9	53	89	10
DTR 0730	7.3	46	79	8	DTR 1000	10.0	53	89	10
DTR 0740	7.4	46	79	8	DTR 1010	10.1	53	89	10
DTR 0750	7.5	46	79	8	DTR 1020	10.2	55	95	11
DTR 0760	7.6	46	79	8	DTR 1030	10.3	55	95	11
DTR 0770	7.7	46	79	8	DTR 1040	10.4	55	95	11
DTR 0780	7.8	46	79	8	DTR 1050	10.5	55	95	11
DTR 0790	7.9	46	79	8	DTR 1060	10.6	55	95	11
DTR 0800	8.0	46	79	8	DTR 1070	10.7	55	95	11
DTR 0810	8.1	46	79	8	DTR 1080	10.8	55	95	11
DTR 0820	8.2	50	84	9	DTR 1090	10.9	55	95	11
DTR 0830	8.3	50	84	9	DTR 1100	11.0	55	95	11
DTR 0840	8.4	50	84	9	DTR 1110	11.1	55	95	11
DTR 0850	8.5	50	84	9	DTR 1120	11.2	62	102	12
DTR 0860	8.6	50	84	9	DTR 1130	11.3	62	102	12
DTR 0870	8.7	50	84	9	DTR 1140	11.4	62	102	12
DTR 0880	8.8	50	84	9	DTR 1150	11.5	62	102	12
DTR 0890	8.9	50	84	9	DTR 1160	11.6	62	102	12
DTR 0900	9.0	50	84	9	DTR 1170	11.7	62	102	12

CARBIDE TITAN DRILL, REGULAR LENGTH

硬制合金TITAN 钻头普长

DTR SERIES



► **Application** : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, nonferrous heavy metal, non-ferrous light metal, abrasive plastic.

► **应用** : 用于加工一般刚件, 铸钢, 冷硬铸钢, 可锻铸铁, 非铁重金属, 耐磨塑料等材料



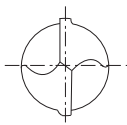
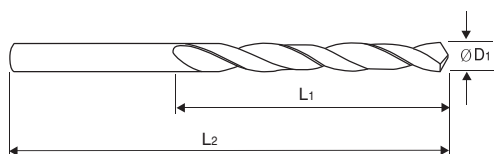
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2	型号 CODE No.	刃径 DRILL DIAMETER D1	刃长 FLUTE LENGTH L1	总长 OVERALL LENGTH L2	柄径 SHANK DIAMETER D2
DTR 1180	11.8	62	102	12	DTR 1440	14.4	67	111	15
DTR 1190	11.9	62	102	12	DTR 1450	14.5	67	111	15
DTR 1200	12.0	62	102	12	DTR 1460	14.6	67	111	15
DTR 1210	12.1	62	102	12	DTR 1470	14.7	67	111	15
DTR 1220	12.2	62	102	13	DTR 1480	14.8	67	111	15
DTR 1230	12.3	62	102	13	DTR 1490	14.9	67	111	15
DTR 1240	12.4	62	102	13	DTR 1500	15.0	67	111	15
DTR 1250	12.5	62	102	13	DTR 1510	15.1	67	111	15
DTR 1260	12.6	62	102	13	DTR 1520	15.2	69	115	16
DTR 1270	12.7	62	102	13	DTR 1530	15.3	69	115	16
DTR 1280	12.8	62	102	13	DTR 1540	15.4	69	115	16
DTR 1290	12.9	62	102	13	DTR 1550	15.5	69	115	16
DTR 1300	13.0	62	102	13	DTR 1560	15.6	69	115	16
DTR 1310	13.1	62	102	13	DTR 1570	15.7	69	115	16
DTR 1320	13.2	64	107	13	DTR 1580	15.8	69	115	16
DTR 1330	13.3	64	107	14	DTR 1590	15.9	69	115	16
DTR 1340	13.4	64	107	14	DTR 1600	16.0	69	115	16
DTR 1350	13.5	64	107	14	DTR 1650	16.5	71	119	17
DTR 1360	13.6	64	107	14	DTR 1700	17.0	71	119	17
DTR 1370	13.7	64	107	14	DTR 1750	17.5	74	123	18
DTR 1380	13.8	64	107	14	DTR 1800	18.0	74	123	18
DTR 1390	13.9	64	107	14	DTR 1850	18.5	76	127	19
DTR 1400	14.0	64	107	14	DTR 1900	19.0	76	127	19
DTR 1410	14.1	64	107	14	DTR 1950	19.5	80	131	20
DTR 1420	14.2	67	111	15	DTR 2000	20.0	80	131	20
DTR 1430	14.3	67	111	15					

HSS STRAIGHT SHANK DRILL, REGULAR LENGTH

HSS 直柄钻头普长

DHR SERIES



- **Application** : Drilling in steel, cast steel alloyed and non-alloyed, grey castiron, malleable cast iron, graphite.
- **Surface treatment** : Steam Homo (Black Oxide Finish)
- **应用** : 适用于钢, 铸钢合金和非合金钢, 灰口铸铁, 可锻铸铁的深孔钻削和石墨的加工
- **表面处理** : 氧化发黑处理



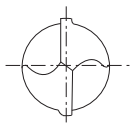
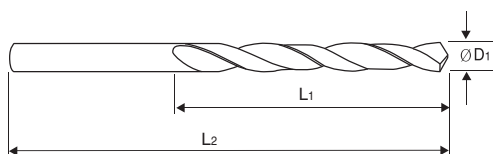
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂	型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
DHR 0100	1.0	18	40	DHR 0370	3.7	48	76
DHR 0110	1.1	20	42	DHR 0380	3.8	48	76
DHR 0120	1.2	20	42	DHR 0390	3.9	51	79
DHR 0130	1.3	22	45	DHR 0400	4.0	54	83
DHR 0140	1.4	23	48	DHR 0410	4.1	54	83
DHR 0150	1.5	23	48	DHR 0420	4.2	54	83
DHR 0160	1.6	25	50	DHR 0430	4.3	54	83
DHR 0170	1.7	25	50	DHR 0440	4.4	56	83
DHR 0180	1.8	28	52	DHR 0450	4.5	56	86
DHR 0190	1.9	28	52	DHR 0460	4.6	56	86
DHR 0200	2.0	29	55	DHR 0470	4.7	59	89
DHR 0210	2.1	29	55	DHR 0480	4.8	59	89
DHR 0220	2.2	33	58	DHR 0490	4.9	62	92
DHR 0230	2.3	33	58	DHR 0500	5.0	62	92
DHR 0240	2.4	35	61	DHR 0510	5.1	62	92
DHR 0250	2.5	35	61	DHR 0520	5.2	64	95
DHR 0260	2.6	37	64	DHR 0530	5.3	64	95
DHR 0270	2.7	37	64	DHR 0540	5.4	64	95
DHR 0280	2.8	39	67	DHR 0550	5.5	64	95
DHR 0290	2.9	42	71	DHR 0560	5.6	67	98
DHR 0300	3.0	42	71	DHR 0570	5.7	67	98
DHR 0310	3.1	42	71	DHR 0580	5.8	67	98
DHR 0320	3.2	42	71	DHR 0590	5.9	67	98
DHR 0330	3.3	45	73	DHR 0600	6.0	70	102
DHR 0340	3.4	45	73	DHR 0610	6.1	70	102
DHR 0350	3.5	45	73	DHR 0620	6.2	70	102
DHR 0360	3.6	48	76	DHR 0630	6.3	70	102

HSS STRAIGHT SHANK DRILL, REGULAR LENGTH

HSS 直柄钻头普长

DHR SERIES



► **Application** : Drilling in steel, cast steel alloyed and non-alloyed, grey castiron, malleable cast iron, graphite.

► **Surface treatment** : Steam Homo (Black Oxide Finish)

► **应用** : 适用于钢, 铸钢合金和非合金钢, 灰口铸铁, 可锻铸铁的深孔钻削和石墨的加工

► **表面处理** : 氧化发黑处理



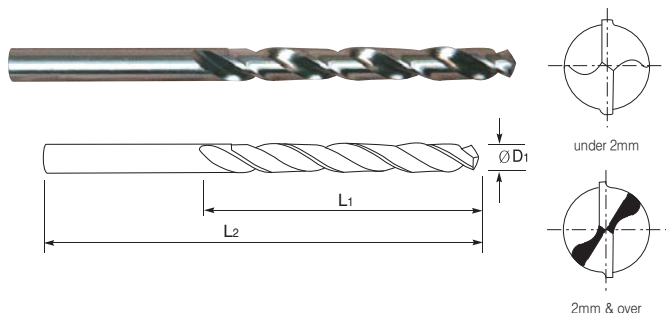
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂	型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
DHR 0640	6.4	73	105	DHR 0980	9.8	95	130
DHR 0650	6.5	73	105	DHR 0990	9.9	95	130
DHR 0660	6.6	73	105	DHR 1000	10.0	95	130
DHR 0670	6.7	73	105	DHR 1010	10.1	98	133
DHR 0680	6.8	73	105	DHR 1020	10.2	98	133
DHR 0690	6.9	73	105	DHR 1030	10.3	98	133
DHR 0700	7.0	73	105	DHR 1040	10.4	98	133
DHR 0710	7.1	75	108	DHR 1050	10.5	100	137
DHR 0720	7.2	75	108	DHR 1060	10.6	100	137
DHR 0730	7.3	75	108	DHR 1070	10.7	100	137
DHR 0740	7.4	78	111	DHR 1080	10.8	103	140
DHR 0750	7.5	78	111	DHR 1090	10.9	103	140
DHR 0760	7.6	78	111	DHR 1100	11.0	103	140
DHR 0770	7.7	81	114	DHR 1110	11.1	103	140
DHR 0780	7.8	81	114	DHR 1120	11.2	106	143
DHR 0790	7.9	81	114	DHR 1130	11.3	106	143
DHR 0800	8.0	81	114	DHR 1140	11.4	106	143
DHR 0810	8.1	84	117	DHR 1150	11.5	106	143
DHR 0820	8.2	84	117	DHR 1160	11.6	109	146
DHR 0830	8.3	84	117	DHR 1170	11.7	109	146
DHR 0840	8.4	87	121	DHR 1180	11.8	109	146
DHR 0850	8.5	87	121	DHR 1190	11.9	109	146
DHR 0860	8.6	87	121	DHR 1200	12.0	111	149
DHR 0870	8.7	87	121	DHR 1210	12.1	111	149
DHR 0880	8.8	89	124	DHR 1220	12.2	111	149
DHR 0890	8.9	89	124	DHR 1230	12.3	111	149
DHR 0900	9.0	89	124	DHR 1240	12.4	114	152
DHR 0910	9.1	89	124	DHR 1250	12.5	114	152
DHR 0920	9.2	92	127	DHR 1260	12.6	114	152
DHR 0930	9.3	92	127	DHR 1270	12.7	114	152
DHR 0940	9.4	92	127	DHR 1280	12.8	114	152
DHR 0950	9.5	92	127	DHR 1290	12.9	114	152
DHR 0960	9.6	95	130	DHR 1300	13.0	114	152
DHR 0970	9.7	95	130				

HSS CO8 STRAIGHT SHANK DRILL, REGULAR LENGTH

HSS Co8 直柄钻头普长

DHC SERIES



► **Application** : Drilling in stainless steels, materials of difficult machining such as titanium and inconel.

► **Surface treatment** : Coloring

► **应用** : 适用于钢, 合金钢, 非合金钢, 灰口铸铁

► **表面处理** : 涂色



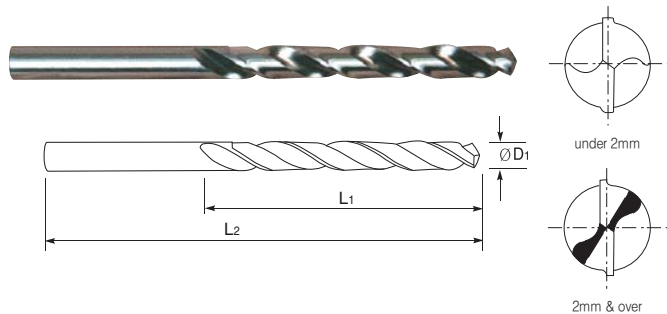
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂	型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
DHC 0200	2.0	29	55	DHC 0560	5.6	67	98
DHC 0210	2.1	29	55	DHC 0570	5.7	67	98
DHC 0220	2.2	33	58	DHC 0580	5.8	67	98
DHC 0230	2.3	33	58	DHC 0590	5.9	67	98
DHC 0240	2.4	35	61	DHC 0600	6.0	70	102
DHC 0250	2.5	35	61	DHC 0610	6.1	70	102
DHC 0260	2.6	37	64	DHC 0620	6.2	70	102
DHC 0270	2.7	37	64	DHC 0630	6.3	70	102
DHC 0280	2.8	39	67	DHC 0640	6.4	73	105
DHC 0290	2.9	42	71	DHC 0650	6.5	73	105
DHC 0300	3.0	42	71	DHC 0660	6.6	73	105
DHC 0310	3.1	42	71	DHC 0670	6.7	73	105
DHC 0320	3.2	42	71	DHC 0680	6.8	73	105
DHC 0330	3.3	45	73	DHC 0690	6.9	73	105
DHC 0340	3.4	45	73	DHC 0700	7.0	73	105
DHC 0350	3.5	45	73	DHC 0710	7.1	75	108
DHC 0360	3.6	48	76	DHC 0720	7.2	75	108
DHC 0370	3.7	48	76	DHC 0730	7.3	75	108
DHC 0380	3.8	48	76	DHC 0740	7.4	78	111
DHC 0390	3.9	51	79	DHC 0750	7.5	78	111
DHC 0400	4.0	54	83	DHC 0760	7.6	78	111
DHC 0410	4.1	54	83	DHC 0770	7.7	81	114
DHC 0420	4.2	54	83	DHC 0780	7.8	81	114
DHC 0430	4.3	54	83	DHC 0790	7.9	81	114
DHC 0440	4.4	56	86	DHC 0800	8.0	81	114
DHC 0450	4.5	56	86	DHC 0810	8.1	84	117
DHC 0460	4.6	56	86	DHC 0820	8.2	84	117
DHC 0470	4.7	59	89	DHC 0830	8.3	84	117
DHC 0480	4.8	59	89	DHC 0840	8.4	87	121
DHC 0490	4.9	62	92	DHC 0850	8.5	87	121
DHC 0500	5.0	62	92	DHC 0860	8.6	87	121
DHC 0510	5.1	62	92	DHC 0870	8.7	87	121
DHC 0520	5.2	64	95	DHC 0880	8.8	89	124
DHC 0530	5.3	64	95	DHC 0890	8.9	89	124
DHC 0540	5.4	64	95	DHC 0900	9.0	89	124
DHC 0550	5.5	64	95	DHC 0910	9.1	89	124

HSS CO8 STRAIGHT SHANK DRILL, REGULAR LENGTH

HSS Co8 直柄钻头普长

DHC SERIES



► **Application** : Drilling in stainless steels, materials of difficult machining such as titanium and inconel.

► **Surface treatment** : Coloring

► **应用** : 适用于钢, 合金钢, 非合金钢, 灰口铸铁

► **表面处理** : 涂色



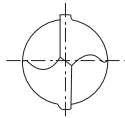
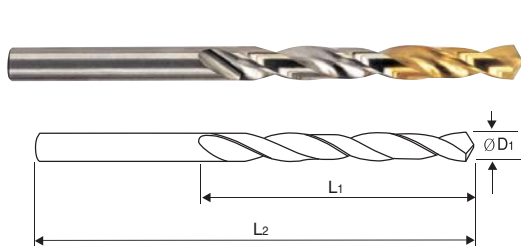
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂	型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
DHC 0920	9.2	92	127	DHC 1120	11.2	106	143
DHC 0930	9.3	92	127	DHC 1130	11.3	106	143
DHC 0940	9.4	92	127	DHC 1140	11.4	106	143
DHC 0950	9.5	92	127	DHC 1150	11.5	106	143
DHC 0960	9.6	95	130	DHC 1160	11.6	109	146
DHC 0970	9.7	95	130	DHC 1170	11.7	109	146
DHC 0980	9.8	95	130	DHC 1180	11.8	109	146
DHC 0990	9.9	95	130	DHC 1190	11.9	109	146
DHC 1000	10.0	95	130	DHC 1200	12.0	111	149
DHC 1010	10.1	98	133	DHC 1210	12.1	111	149
DHC 1020	10.2	98	133	DHC 1220	12.2	111	149
DHC 1030	10.3	98	133	DHC 1230	12.3	111	149
DHC 1040	10.4	98	133	DHC 1240	12.4	114	152
DHC 1050	10.5	100	137	DHC 1250	12.5	114	152
DHC 1060	10.6	100	137	DHC 1260	12.6	114	152
DHC 1070	10.7	100	137	DHC 1270	12.7	114	152
DHC 1080	10.8	103	140	DHC 1280	12.8	114	152
DHC 1090	10.9	103	140	DHC 1290	12.9	114	152
DHC 1100	11.0	103	140	DHC 1300	13.0	114	152
DHC 1110	11.1	103	140				

HSS, STRAIGHT SHANK DRILL WITH TIN COATED

HSS TiN 涂层直柄钻头

DHN SERIES



- **Flute Geometry** : Right hand spiral
- **Point Angle** : 118°, Normal point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, gray cast iron, graphite, malleable cast iron
- 刃形：右螺旋形设计
- 刃点：118度，一般刃点
- 表面处理：光亮体但在实际作业的前端处使用Tin涂层
- 应用：适用于钢，铸铁合金和非合金，灰口铸铁，石墨和可锻造铸铁的加工



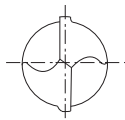
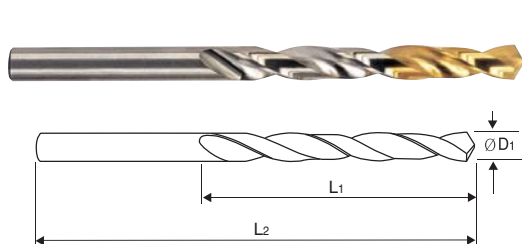
Unit : mm

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DHN 0100	1.0	18	40	DHN 0510	5.1	62	92
DHN 0110	1.1	20	42	DHN 0520	5.2	64	95
DHN 0120	1.2	20	42	DHN 0530	5.3	64	95
DHN 0130	1.3	22	45	DHN 0540	5.4	64	95
DHN 0140	1.4	23	48	DHN 0550	5.5	64	95
DHN 0150	1.5	23	48	DHN 0560	5.6	67	98
DHN 0160	1.6	25	50	DHN 0570	5.7	67	98
DHN 0170	1.7	25	50	DHN 0580	5.8	67	98
DHN 0180	1.8	28	52	DHN 0590	5.9	67	98
DHN 0190	1.9	28	52	DHN 0600	6.0	70	102
DHN 0200	2.0	29	55	DHN 0610	6.1	70	102
DHN 0210	2.1	29	55	DHN 0620	6.2	70	102
DHN 0220	2.2	33	58	DHN 0630	6.3	70	102
DHN 0230	2.3	33	58	DHN 0640	6.4	73	105
DHN 0240	2.4	35	61	DHN 0650	6.5	73	105
DHN 0250	2.5	35	61	DHN 0660	6.6	73	105
DHN 0260	2.6	37	64	DHN 0670	6.7	73	105
DHN 0270	2.7	37	64	DHN 0680	6.8	73	105
DHN 0280	2.8	39	67	DHN 0690	6.9	73	105
DHN 0290	2.9	42	71	DHN 0700	7.0	73	105
DHN 0300	3.0	42	71	DHN 0710	7.1	75	108
DHN 0310	3.1	42	71	DHN 0720	7.2	75	108
DHN 0320	3.2	42	71	DHN 0730	7.3	75	108
DHN 0330	3.3	45	73	DHN 0740	7.4	78	111
DHN 0340	3.4	45	73	DHN 0750	7.5	78	111
DHN 0350	3.5	45	73	DHN 0760	7.6	78	111
DHN 0360	3.6	48	76	DHN 0770	7.7	81	114
DHN 0370	3.7	48	76	DHN 0780	7.8	81	114
DHN 0380	3.8	48	76	DHN 0790	7.9	81	114
DHN 0390	3.9	51	79	DHN 0800	8.0	81	114
DHN 0400	4.0	54	83	DHN 0810	8.1	84	117
DHN 0410	4.1	54	83	DHN 0820	8.2	84	117
DHN 0420	4.2	54	83	DHN 0830	8.3	84	117
DHN 0430	4.3	54	83	DHN 0840	8.4	87	121
DHN 0440	4.4	56	86	DHN 0850	8.5	87	121
DHN 0450	4.5	56	86	DHN 0860	8.6	87	121
DHN 0460	4.6	56	86	DHN 0870	8.7	87	121
DHN 0470	4.7	59	89	DHN 0880	8.8	89	124
DHN 0480	4.8	59	89	DHN 0890	8.9	89	124
DHN 0490	4.9	62	92	DHN 0900	9.0	89	124
DHN 0500	5.0	62	92	DHN 0910	9.1	89	124

HSS, STRAIGHT SHANK DRILL WITH TIN COATED

HSS TiN 涂层直柄钻头

DHN SERIES



- **Flute Geometry** : Right hand spiral
- **Point Angle** : 118°, Normal point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, gray cast iron, graphite, malleable cast iron
- 刃形：右螺旋形设计
- 刃点：118度，一般刃点
- 表面处理：光亮体但在实际作业的前端处使用Tin涂层
- 应用：适用于钢，铸铁合金和非合金，灰口铸铁，石墨和可锻造铸铁的加工



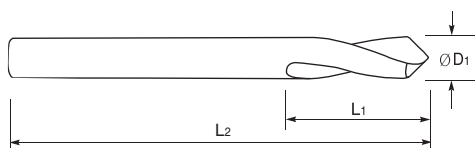
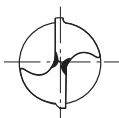
Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂	型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
DHN 0920	9.2	92	127	DHN 1120	11.2	106	143
DHN 0930	9.3	92	127	DHN 1130	11.3	106	143
DHN 0940	9.4	92	127	DHN 1140	11.4	106	143
DHN 0950	9.5	92	127	DHN 1150	11.5	106	143
DHN 0960	9.6	95	130	DHN 1160	11.6	109	146
DHN 0970	9.7	95	130	DHN 1170	11.7	109	146
DHN 0980	9.8	95	130	DHN 1180	11.8	109	146
DHN 0990	9.9	95	130	DHN 1190	11.9	109	146
DHN 1000	10.0	95	130	DHN 1200	12.0	111	149
DHN 1010	10.1	98	133	DHN 1210	12.1	111	149
DHN 1020	10.2	98	133	DHN 1220	12.2	111	149
DHN 1030	10.3	98	133	DHN 1230	12.3	111	149
DHN 1040	10.4	98	133	DHN 1240	12.4	114	152
DHN 1050	10.5	100	137	DHN 1250	12.5	114	152
DHN 1060	10.6	100	137	DHN 1260	12.6	114	152
DHN 1070	10.7	100	137	DHN 1270	12.7	114	152
DHN 1080	10.8	103	140	DHN 1280	12.8	114	152
DHN 1090	10.9	103	140	DHN 1290	12.9	114	152
DHN 1100	11.0	103	140	DHN 1300	13.0	114	152
DHN 1110	11.1	103	140				

HSS CO8 NC SPOT DRILL 90° / 120°

HSS Co8 定心钻头 90° / 120°

NC090 / NC120



► **Application** : For accurate and fast spotting on NC/CNC machines.
Can be used at higher speeds and feeds, compatible with other tooling.

► **应用** : 用于NC/CNC机床上的高速精密中心孔加工, 高的转速并可与其他刀具结合使用。



● NC-SPOT DRILL 90°

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
NC090 020	2.0	8	40
NC090 030	3.0	10	50
NC090 040	4.0	12	52
NC090 050	5.0	15	60
NC090 060	6.0	20	66
NC090 080	8.0	25	79
NC090 100	10.0	25	89
NC090 120	12.0	30	102
NC090 140	14.0	35	115
NC090 160	16.0	35	115
NC090 180	18.0	40	130
NC090 200	20.0	40	131
NC090 250	25.0	45	138

● NC-SPOT DRILL 120°

Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	刃长 FLUTE LENGTH L ₁	总长 OVERALL LENGTH L ₂
NC120 020	2.0	8	40
NC120 030	3.0	10	50
NC120 040	4.0	12	52
NC120 050	5.0	15	60
NC120 060	6.0	20	66
NC120 080	8.0	25	79
NC120 100	10.0	25	89
NC120 120	12.0	30	102
NC120 140	14.0	35	115
NC120 160	16.0	35	115
NC120 180	18.0	40	130
NC120 200	20.0	40	131
NC120 250	25.0	45	138

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

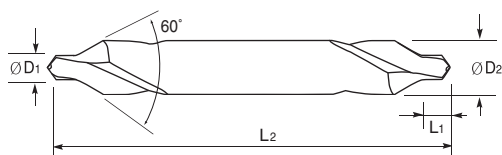
TAP

Special
Tools

HSS-E CENTER DRILL

HSS-E 中心钻

DCT SERIES



► **Application** : Center Drills suitable for center drilling and chamfering in general materials.
Excellent performance with High Vanadium HSS-EX and UMS unique design technology.

► **应用** : 适用于普通材料的中心定位和表面钻削。
高钢高速钢材料制成并具有UMS独特的完美设计

● FORM A (60°)

Unit : mm

型号 CODE No.	刃径 DRILL DIAMETER D ₁	导长 PILOT LENGTH L ₁	柄径 SHANK DIAMETER D ₂	总长 OVERALL LENGTH L ₂
DCT 1010	1.0	1.0	4.0	35
DCT 1015	1.5	1.5	5.0	40
DCT 1020	2.0	2.0	6.0	45
DCT 1025	2.5	2.5	7.7	50
DCT 1030	3.0	3.0	7.7	55
DCT 1040	4.0	4.5	10.0	65
DCT 1050	5.0	5.5	11.0	78

MAXX TAP

SPIRAL FLUTE GUN POINT

- 螺旋槽丝锥
- 刃倾角丝锥



MAXX HSS-EX TAP

MAXX 高速钢 丝锥

CODE No. 型号	MODEL 外形	DESCRIPTION 描述	PAGE 页码
MXSM		MAXX HSS-EX SPIRAL FLUTE TAP MAXX 多用螺旋槽丝锥	163
MXSF		MAXX HSS-EX SPIRAL FLUTE TAP UNIFIED MAXX 多用螺旋槽丝锥	165
MXPM		MAXX HSS-EX POINT TAP MAXX 多用螺旋槽丝锥	166
MXPT		MAXX HSS-EX POINT TAP UNIFIED MAXX 多用螺旋槽丝锥	168
RT2P RT4P		MAXX CPM ROLL TAP BRIGHT MAXX 挤压丝锥	169

MAXX 丝锥的特点

- 特殊设计的螺纹结构(国际专利)
* 防止进给过量, 螺纹和螺距直径稍大.
- 特殊设计沟槽的几何形状.
* 优异的排屑.
* 防止切屑堵塞.
* 提高攻丝质量.
- 广泛的适用性.
* 适用于盲孔和通孔的加工.
- 优异的性能, 适用于各种材料的加工.
* 碳钢, 合金钢, 工具钢 等.

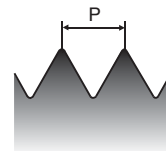
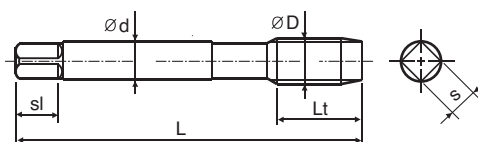
FEATURES OF MAXX TAP

- Thread configuration with a special design. (International patent)
* Prevents over-feeding, thin thread and pitch diameter oversize.
- Flute geometry with special design.
* Better chip evacuation.
* Prevents chip clogging.
* Improves thread quality.
- Applicable for wide applications.
* Blind and through holes.
- Excellent performance on various materials.
* Carbon Steels, Alloyed Steels, Tool Steel etc.

MAXX HSS-EX SPIRAL FLUTE TAP

MAXX 多用螺旋槽丝锥

MXSM SERIES



单位(Unit) : mm

型号 CODE No.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH	螺纹长 THREAD LENGTH	柄径 SHANK DIAMETER	方块 尺寸 SQUARE SIZE	方块 长度 SQUARE LENGTH	槽数 No. OF FLUTE
		D	P	L	Lt	d	s	sl	N
MXSM 020 040	MH1	M2 x 0.4	0.4	40.0	9.5	3.0	2.5	5.0	2
MXSM 022 045	MH1	M2.2 x 0.45	0.45	42.0	9.5	3.0	2.5	5.0	2
MXSM 023 040	MH1	M2.3 x 0.4	0.4	42.0	9.5	3.0	2.5	5.0	2
MXSM 025 045	MH1	M2.5 x 0.45	0.45	44.0	9.5	3.0	2.5	5.0	2
MXSM 026 045	MH1	M2.6 x 0.45	0.45	44.0	9.5	3.0	2.5	5.0	2
MXSM 030 050	MH2	M3 x 0.5	0.5	46.0	11.0	4.0	3.2	6.0	3
MXSM 030 035	MH1	M3 x 0.35	0.35	46.0	11.0	4.0	3.2	6.0	3
MXSM 035 060	MH2	M3.5 x 0.6	0.6	48.0	13.0	4.0	3.2	6.0	3
MXSM 035 035	MH1	M3.5 x 0.35	0.35	48.0	13.0	4.0	3.2	6.0	3
MXSM 040 070	MH2	M4 x 0.7	0.7	52.0	13.0	5.0	4.0	7.0	3
MXSM 040 050	MH2	M4 x 0.5	0.5	52.0	13.0	5.0	4.0	7.0	3
MXSM 045 075	MH2	M4.5 x 0.75	0.75	55.0	13.0	5.0	4.0	7.0	3
MXSM 045 050	MH1	M4.5 x 0.5	0.5	55.0	13.0	5.0	4.0	7.0	3
MXSM 050 080	MH2	M5 x 0.8	0.8	60.0	16.0	5.5	4.5	7.0	3
MXSM 050 050	MH2	M5 x 0.5	0.5	60.0	16.0	5.5	4.5	7.0	3
MXSM 055 050	MH1	M5.5 x 0.5	0.5	60.0	16.0	5.5	4.5	7.0	3
MXSM 060 100	MH2	M6 x 1.0	1.0	62.0	19.0	6.0	4.5	7.0	3
MXSM 060 075	MH2	M6 x 0.75	0.75	62.0	19.0	6.0	4.5	7.0	3
MXSM 060 050	MH2	M6 x 0.5	0.5	62.0	19.0	6.0	4.5	7.0	3
MXSM 070 100	MH2	M7 x 1.0	1.0	65.0	19.0	6.2	5.0	8.0	3
MXSM 070 075	MH2	M7 x 0.75	0.75	65.0	19.0	6.2	5.0	8.0	3
MXSM 080 125	MH2	M8 x 1.25	1.25	70.0	22.0	6.2	5.0	8.0	3
MXSM 080 100	MH2	M8 x 1.0	1.0	70.0	22.0	6.2	5.0	8.0	3
MXSM 080 075	MH2	M8 x 0.75	0.75	70.0	22.0	6.2	5.0	8.0	3
MXSM 090 125	MH2	M9 x 1.25	1.25	72.0	22.0	7.0	5.5	8.0	3
MXSM 090 100	MH2	M9 x 1.0	1.0	72.0	22.0	7.0	5.5	8.0	3
MXSM 090 075	MH2	M9 x 0.75	0.75	72.0	22.0	7.0	5.5	8.0	3
MXSM 100 150	MH2	M10 x 1.5	1.5	75.0	24.0	7.0	5.5	8.0	3
MXSM 100 125	MH2	M10 x 1.25	1.25	75.0	24.0	7.0	5.5	8.0	3
MXSM 100 100	MH2	M10 x 1.0	1.0	75.0	24.0	7.0	5.5	8.0	3
MXSM 100 075	MH2	M10 x 0.75	0.75	75.0	24.0	7.0	5.5	8.0	3
MXSM 110 150	MH2	M11 x 1.5	1.5	80.0	25.0	8.0	6.0	9.0	3
MXSM 110 100	MH2	M11 x 1.0	1.0	80.0	25.0	8.0	6.0	9.0	3
MXSM 110 075	MH2	M11 x 0.75	0.75	80.0	25.0	8.0	6.0	9.0	3
MXSM 120 175	MH2	M12 x 1.75	1.75	82.0	29.0	8.5	6.5	9.0	3
MXSM 120 150	MH2	M12 x 1.5	1.5	82.0	29.0	8.5	6.5	9.0	3
MXSM 120 125	MH2	M12 x 1.25	1.25	82.0	29.0	8.5	6.5	9.0	3
MXSM 120 100	MH2	M12 x 1.0	1.0	82.0	29.0	8.5	6.5	9.0	3
MXSM 140 200	MH2	M14 x 2.0	2.0	88.0	30.0	10.5	8.0	11.0	3

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

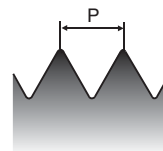
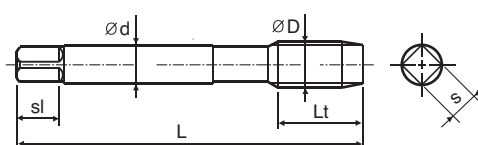
TAP

Special
Tools

MAXX HSS-EX SPIRAL FLUTE TAP

MAXX 多用螺旋槽丝锥

MXSM SERIES



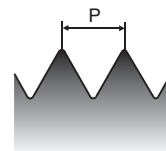
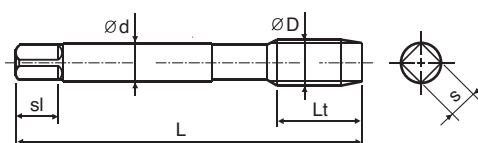
单位(Unit) : mm

型号 CODE No.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH	螺纹长 THREAD LENGTH	柄径 SHANK DIAMETER	方块 尺寸 SQUARE SIZE	方块 长度 SQUARE LENGTH	槽数 No. OF FLUTE
		D	P	L	Lt	d	s	sl	N
MXSM 140 150	MH2	M14 x	1.5	88.0	30.0	10.5	8.0	11.0	3
MXSM 140 125	MH2	M14 x	1.25	88.0	30.0	10.5	8.0	11.0	3
MXSM 140 100	MH2	M14 x	1.0	88.0	30.0	10.5	8.0	11.0	3
MXSM 150 150	MH2	M15 x	1.5	90.0	30.0	10.5	8.0	11.0	3
MXSM 150 100	MH2	M15 x	1.0	90.0	30.0	10.5	8.0	11.0	3
MXSM 160 200	MH2	M16 x	2.0	95.0	32.0	12.5	10.0	13.0	3
MXSM 160 150	MH2	M16 x	1.5	95.0	32.0	12.5	10.0	13.0	3
MXSM 160 100	MH2	M16 x	1.0	95.0	32.0	12.5	10.0	13.0	3
MXSM 180 250	MH3	M18 x	2.5	100.0	37.0	14.0	11.0	14.0	4
MXSM 180 200	MH3	M18 x	2.0	100.0	37.0	14.0	11.0	14.0	4
MXSM 180 150	MH2	M18 x	1.5	100.0	37.0	14.0	11.0	14.0	4
MXSM 180 100	MH2	M18 x	1.0	100.0	37.0	14.0	11.0	14.0	4
MXSM 200 250	MH3	M20 x	2.5	105.0	37.0	15.0	12.0	15.0	4
MXSM 200 200	MH3	M20 x	2.0	105.0	37.0	15.0	12.0	15.0	4
MXSM 200 150	MH3	M20 x	1.5	105.0	37.0	15.0	12.0	15.0	4
MXSM 200 100	MH2	M20 x	1.0	105.0	37.0	15.0	12.0	15.0	4
MXSM 220 250	MH3	M22 x	2.5	115.0	38.0	17.0	13.0	16.0	4
MXSM 220 200	MH3	M22 x	2.0	115.0	38.0	17.0	13.0	16.0	4
MXSM 220 150	MH3	M22 x	1.5	115.0	38.0	17.0	13.0	16.0	4
MXSM 220 100	MH2	M22 x	1.0	115.0	38.0	17.0	13.0	16.0	4
MXSM 240 300	MH3	M24 x	3.0	120.0	45.0	19.0	15.0	18.0	4
MXSM 240 200	MH3	M24 x	2.0	120.0	45.0	19.0	15.0	18.0	4
MXSM 240 150	MH3	M24 x	1.5	120.0	45.0	19.0	15.0	18.0	4
MXSM 240 100	MH2	M24 x	1.0	120.0	45.0	19.0	15.0	18.0	4
MXSM 250 200	MH3	M25 x	2.0	125.0	45.0	19.0	15.0	18.0	4
MXSM 250 150	MH3	M25 x	1.5	125.0	45.0	19.0	15.0	18.0	4
MXSM 260 200	MH3	M26 x	2.0	125.0	45.0	20.0	15.0	18.0	4
MXSM 260 150	MH3	M26 x	1.5	125.0	45.0	20.0	15.0	18.0	4
MXSM 260 100	MH2	M26 x	1.0	125.0	45.0	20.0	15.0	18.0	4
MXSM 270 300	MH3	M27 x	3.0	130.0	45.0	20.0	15.0	18.0	4
MXSM 270 200	MH3	M27 x	2.0	130.0	45.0	20.0	15.0	18.0	4
MXSM 270 150	MH3	M27 x	1.5	130.0	45.0	20.0	15.0	18.0	4
MXSM 280 200	MH3	M28 x	2.0	130.0	45.0	21.0	17.0	20.0	4
MXSM 280 150	MH3	M28 x	1.5	130.0	45.0	21.0	17.0	20.0	4
MXSM 300 350	MH4	M30 x	3.5	135.0	48.0	23.0	17.0	20.0	4
MXSM 300 300	MH3	M30 x	3.0	135.0	48.0	23.0	17.0	20.0	4
MXSM 300 200	MH3	M30 x	2.0	135.0	48.0	23.0	17.0	20.0	4
MXSM 300 150	MH3	M30 x	1.5	135.0	48.0	23.0	17.0	20.0	4
MXSM 300 100	MH2	M30 x	1.0	135.0	48.0	23.0	17.0	20.0	4

MAXX HSS-EX SPIRAL FLUTE TAP UNIFIED

MAXX 多用螺旋槽丝锥

MXSF SERIES



单位(Unit) : mm

型号 CODE No.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH	螺纹长 THREAD LENGTH	柄径 SHANK DIAMETER	方块 尺寸 SQUARE SIZE	方块 长度 SQUARE LENGTH	槽数 No. OF FLUTE
		D	P	L	Lt	d	s	sl	N
MXSF N00256	MH1	#2 - 56 UNC		42.0	9.5	3.0	2.5	5.0	2
MXSF N00264	MH1	#2 - 64 UNF		42.0	9.5	3.0	2.5	5.0	2
MXSF N00348	MH1	#3 - 48 UNC		44.0	9.5	3.0	2.5	5.0	2
MXSF N00356	MH1	#3 - 56 UNF		44.0	9.5	3.0	2.5	5.0	2
MXSF N00440	MH1	#4 - 40 UNC		44.0	9.5	3.0	2.5	5.0	3
MXSF N00448	MH1	#4 - 48 UNF		44.0	9.5	3.0	2.5	5.0	3
MXSF N00540	MH1	#5 - 40 UNC		46.0	11.0	4.0	3.2	6.0	3
MXSF N00544	MH1	#5 - 44 UNF		46.0	11.0	4.0	3.2	6.0	3
MXSF N00632	MH2	#6 - 32 UNC		48.0	13.0	4.0	3.2	6.0	3
MXSF N00640	MH1	#6 - 40 UNF		48.0	13.0	4.0	3.2	6.0	3
MXSF N00832	MH2	#8 - 32 UNC		52.0	13.0	5.0	4.0	7.0	3
MXSF N00836	MH2	#8 - 36 UNF		52.0	13.0	5.0	4.0	7.0	3
MXSF N01024	MH2	#10 - 24 UNC		60.0	16.0	5.5	4.5	7.0	3
MXSF N01032	MH2	#10 - 32 UNF		60.0	16.0	5.5	4.5	7.0	3
MXSF N01224	MH2	#12 - 24 UNC		60.0	16.0	5.5	4.5	7.0	3
MXSF N01228	MH2	#12 - 28 UNF		60.0	16.0	5.5	4.5	7.0	3
MXSF 010420	MH2	1/4 - 20 UNC		62.0	19.0	6.0	4.5	7.0	3
MXSF 010428	MH2	1/4 - 28 UNF		62.0	19.0	6.0	4.5	7.0	3
MXSF 051618	MH2	5/16 - 18 UNC		70.0	22.0	6.1	5.0	8.0	3
MXSF 051624	MH2	5/16 - 24 UNF		70.0	22.0	6.1	5.0	8.0	3
MXSF 030816	MH2	3/8 - 16 UNC		75.0	24.0	7.0	5.5	8.0	3
MXSF 030824	MH2	3/8 - 24 UNF		75.0	24.0	7.0	5.5	8.0	3
MXSF 071614	MH3	7/16 - 14 UNC		80.0	25.0	8.0	6.0	9.0	3
MXSF 071620	MH2	7/16 - 20 UNF		80.0	25.0	8.0	6.0	9.0	3
MXSF 010213	MH3	1/2 - 13 UNC		85.0	29.0	9.0	7.0	10.0	3
MXSF 010220	MH2	1/2 - 20 UNF		85.0	29.0	9.0	7.0	10.0	3
MXSF 091612	MH3	9/16 - 12 UNC		90.0	30.0	10.5	8.0	11.0	3
MXSF 091618	MH2	9/16 - 18 UNF		90.0	30.0	10.5	8.0	11.0	3
MXSF 050811	MH3	5/8 - 11 UNC		95.0	32.0	12.0	9.0	12.0	3
MXSF 050818	MH2	5/8 - 18 UNF		95.0	32.0	12.0	9.0	12.0	3
MXSF 030410	MH3	3/4 - 10 UNC		105.0	37.0	14.0	11.0	14.0	4
MXSF 030416	MH3	3/4 - 16 UNF		105.0	37.0	14.0	11.0	14.0	4
MXSF 070809	MH3	7/8 - 9 UNC		115.0	38.0	17.0	13.0	16.0	4
MXSF 070814	MH3	7/8 - 14 UNF		115.0	38.0	17.0	13.0	16.0	4
MXSF 100008	MH3	1" - 8 UNC		125.0	45.0	20.0	15.0	18.0	4
MXSF 100012	MH3	1" - 12 UNF		125.0	45.0	20.0	15.0	18.0	4

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

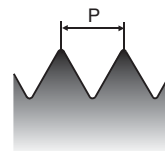
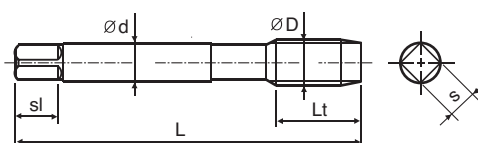
TAP

Special
Tools

MAXX HSS-EX POINT TAP

MAXX 多用直槽丝锥

MXPM SERIES



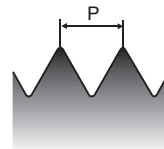
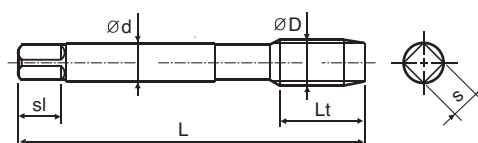
单位(Unit) : mm

型号 CODE No.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH	螺纹长 THREAD LENGTH	柄径 SHANK DIAMETER	方块 尺寸 SQUARE SIZE	方块 长度 SQUARE LENGTH	槽数 No. OF FLUTE
		D	P	L	Lt	d	s	sl	N
MXPM 020040	MH2	M2 x 0.4	0.4	40.0	9.5	3.0	2.5	5.0	2
MXPM 022045	MH2	M2.2 x 0.45	0.45	42.0	9.5	3.0	2.5	5.0	2
MXPM 023040	MH2	M2.3 x 0.4	0.4	42.0	9.5	3.0	2.5	5.0	2
MXPM 025045	MH2	M2.5 x 0.45	0.45	44.0	9.5	3.0	2.5	5.0	2
MXPM 026045	MH2	M2.6 x 0.45	0.45	44.0	9.5	3.0	2.5	5.0	2
MXPM 030050	MH2	M3 x 0.5	0.5	46.0	11.0	4.0	3.2	6.0	3
MXPM 030035	MH2	M3 x 0.35	0.35	46.0	11.0	4.0	3.2	6.0	3
MXPM 035060	MH2	M3.5 x 0.6	0.6	48.0	13.0	4.0	3.2	6.0	3
MXPM 035035	MH2	M3.5 x 0.35	0.35	48.0	13.0	4.0	3.2	6.0	3
MXPM 040070	MH2	M4 x 0.7	0.7	52.0	13.0	5.0	4.0	7.0	3
MXPM 040050	MH2	M4 x 0.5	0.5	52.0	13.0	5.0	4.0	7.0	3
MXPM 045075	MH2	M4.5 x 0.75	0.75	55.0	13.0	5.0	4.0	7.0	3
MXPM 045050	MH2	M4.5 x 0.5	0.5	55.0	13.0	5.0	4.0	7.0	3
MXPM 050080	MH2	M5 x 0.8	0.8	60.0	16.0	5.5	4.5	7.0	3
MXPM 050050	MH2	M5 x 0.5	0.5	60.0	16.0	5.5	4.5	7.0	3
MXPM 055050	MH2	M5.5 x 0.5	0.5	60.0	16.0	5.5	4.5	7.0	3
MXPM 060100	MH2	M6 x 1.0	1.0	62.0	19.0	6.0	4.5	7.0	3
MXPM 060075	MH2	M6 x 0.75	0.75	62.0	19.0	6.0	4.5	7.0	3
MXPM 060050	MH2	M6 x 0.5	0.5	62.0	19.0	6.0	4.5	7.0	3
MXPM 070100	MH2	M7 x 1.0	1.0	65.0	19.0	6.2	5.0	8.0	3
MXPM 070075	MH2	M7 x 0.75	0.75	65.0	19.0	6.2	5.0	8.0	3
MXPM 080125	MH3	M8 x 1.25	1.25	70.0	22.0	6.2	5.0	8.0	3
MXPM 080100	MH3	M8 x 1.0	1.0	70.0	22.0	6.2	5.0	8.0	3
MXPM 080075	MH3	M8 x 0.75	0.75	70.0	22.0	6.2	5.0	8.0	3
MXPM 090125	MH3	M9 x 1.25	1.25	72.0	22.0	7.0	5.5	8.0	3
MXPM 090100	MH3	M9 x 1.0	1.0	72.0	22.0	7.0	5.5	8.0	3
MXPM 090075	MH3	M9 x 0.75	0.75	72.0	22.0	7.0	5.5	8.0	3
MXPM 100150	MH3	M10 x 1.5	1.5	75.0	24.0	7.0	5.5	8.0	3
MXPM 100125	MH3	M10 x 1.25	1.25	75.0	24.0	7.0	5.5	8.0	3
MXPM 100100	MH3	M10 x 1.0	1.0	75.0	24.0	7.0	5.5	8.0	3
MXPM 100075	MH3	M10 x 0.75	0.75	75.0	24.0	7.0	5.5	8.0	3
MXPM 110150	MH3	M11 x 1.5	1.5	80.0	25.0	8.0	6.0	9.0	3
MXPM 110100	MH3	M11 x 1.0	1.0	80.0	25.0	8.0	6.0	9.0	3
MXPM 110075	MH3	M11 x 0.75	0.75	80.0	25.0	8.0	6.0	9.0	3
MXPM 120175	MH4	M12 x 1.75	1.75	82.0	29.0	8.5	6.5	9.0	3
MXPM 120150	MH3	M12 x 1.5	1.5	82.0	29.0	8.5	6.5	9.0	3
MXPM 120125	MH3	M12 x 1.25	1.25	82.0	29.0	8.5	6.5	9.0	3
MXPM 120100	MH3	M12 x 1.0	1.0	82.0	29.0	8.5	6.5	9.0	3
MXPM 140200	MH4	M14 x 2.0	2.0	88.0	30.0	10.5	8.0	11.0	3

MAXX HSS-EX POINT TAP

MAXX 多用直槽丝锥

MXPM SERIES



单位(Unit) : mm

型号 CODE NO.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH	螺纹长 THREAD LENGTH	柄径 SHANK DIAMETER	方块 尺寸 SQUARE SIZE	方块 长度 SQUARE LENGTH	槽数 No. OF FLUTE
		D	P	L	Lt	d	s	sl	N
MXPM 140150	MH3	M14 x	1.5	88.0	30.0	10.5	8.0	11.0	3
MXPM 140125	MH3	M14 x	1.25	88.0	30.0	10.5	8.0	11.0	3
MXPM 140100	MH3	M14 x	1.0	88.0	30.0	10.5	8.0	11.0	3
MXPM 150150	MH3	M15 x	1.5	90.0	30.0	10.5	8.0	11.0	3
MXPM 150100	MH3	M15 x	1.0	90.0	30.0	10.5	8.0	11.0	3
MXPM 160200	MH4	M16 x	2.0	95.0	32.0	12.5	10.0	13.0	3
MXPM 160150	MH3	M16 x	1.5	95.0	32.0	12.5	10.0	13.0	3
MXPM 160100	MH3	M16 x	1.0	95.0	32.0	12.5	10.0	13.0	3
MXPM 180250	MH4	M18 x	2.5	100.0	37.0	14.0	11.0	14.0	3
MXPM 180200	MH4	M18 x	2.0	100.0	37.0	14.0	11.0	14.0	3
MXPM 180150	MH4	M18 x	1.5	100.0	37.0	14.0	11.0	14.0	3
MXPM 180100	MH3	M18 x	1.0	100.0	37.0	14.0	11.0	14.0	3
MXPM 200250	MH4	M20 x	2.5	105.0	37.0	15.0	12.0	15.0	3
MXPM 200200	MH4	M20 x	2.0	105.0	37.0	15.0	12.0	15.0	3
MXPM 200150	MH4	M20 x	1.5	105.0	37.0	15.0	12.0	15.0	3
MXPM 200100	MH3	M20 x	1.0	105.0	37.0	15.0	12.0	15.0	3
MXPM 220250	MH4	M22 x	2.5	115.0	38.0	17.0	13.0	16.0	3
MXPM 220200	MH4	M22 x	2.0	115.0	38.0	17.0	13.0	16.0	3
MXPM 220150	MH4	M22 x	1.5	115.0	38.0	17.0	13.0	16.0	3
MXPM 220100	MH3	M22 x	1.0	115.0	38.0	17.0	13.0	16.0	3
MXPM 240300	MH4	M24 x	3.0	120.0	45.0	19.0	15.0	18.0	3
MXPM 240200	MH4	M24 x	2.0	120.0	45.0	19.0	15.0	18.0	3
MXPM 240150	MH4	M24 x	1.5	120.0	45.0	19.0	15.0	18.0	3
MXPM 240100	MH3	M24 x	1.0	120.0	45.0	19.0	15.0	18.0	3
MXPM 250200	MH4	M25 x	2.0	125.0	45.0	19.0	15.0	18.0	3
MXPM 250150	MH4	M25 x	1.5	125.0	45.0	19.0	15.0	18.0	3
MXPM 260200	MH4	M26 x	2.0	125.0	45.0	20.0	15.0	18.0	4
MXPM 260150	MH4	M26 x	1.5	125.0	45.0	20.0	15.0	18.0	4
MXPM 260100	MH3	M26 x	1.0	125.0	45.0	20.0	15.0	18.0	4
MXPM 270300	MH4	M27 x	3.0	130.0	45.0	20.0	15.0	18.0	4
MXPM 270200	MH4	M27 x	2.0	130.0	45.0	20.0	15.0	18.0	4
MXPM 270150	MH4	M27 x	1.5	130.0	45.0	20.0	15.0	18.0	4
MXPM 280200	MH4	M28 x	2.0	130.0	45.0	21.0	17.0	20.0	4
MXPM 280150	MH4	M28 x	1.5	130.0	45.0	21.0	17.0	20.0	4
MXPM 300350	MH5	M30 x	3.5	135.0	48.0	23.0	17.0	20.0	4
MXPM 300300	MH4	M30 x	3.0	135.0	48.0	23.0	17.0	20.0	4
MXPM 300200	MH4	M30 x	2.0	135.0	48.0	23.0	17.0	20.0	4
MXPM 300150	MH4	M30 x	1.5	135.0	48.0	23.0	17.0	20.0	4
MXPM 300100	MH3	M30 x	1.0	135.0	48.0	23.0	17.0	20.0	4

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

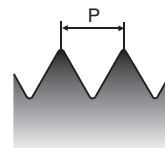
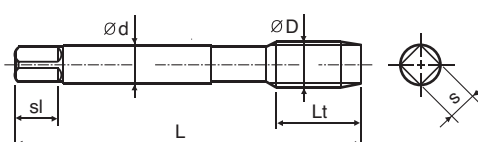
TAP

Special
Tools

MAXX HSS-EX POINT TAP UNIFIED

MAXX 多用直槽丝锥

MXPT SERIES



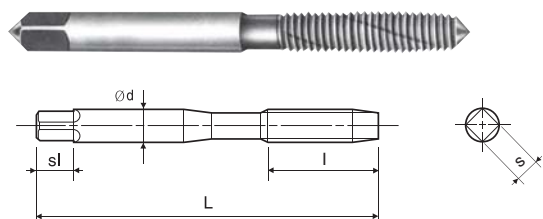
单位(Unit) : mm

型号 CODE NO.	精度 LIMIT	尺寸 SIZE	牙距 PITCH	全长 OVERALL LENGTH L	螺纹长 THREAD LENGTH Lt	柄径 SHANK DIAMETER d	方块 尺寸 SQUARE SIZE s	方块 长度 SQUARE LENGTH sl	槽数 No. OF FLUTE N
MXPT N00256	MH1	#2 - 56 UNC		42.0	9.5	3.0	2.5	5.0	2
MXPT N00264	MH1	#2 - 64 UNF		42.0	9.5	3.0	2.5	5.0	2
MXPT N00348	MH1	#3 - 48 UNC		44.0	9.5	3.0	2.5	5.0	2
MXPT N00356	MH1	#3 - 56 UNF		44.0	9.5	3.0	2.5	5.0	2
MXPT N00440	MH2	#4 - 40 UNC		44.0	9.5	3.0	2.5	5.0	2
MXPT N00448	MH2	#4 - 48 UNF		44.0	9.5	3.0	2.5	5.0	2
MXPT N00540	MH2	#5 - 40 UNC		46.0	11.0	4.0	3.2	6.0	3
MXPT N00544	MH2	#5 - 44 UNF		46.0	11.0	4.0	3.2	6.0	3
MXPT N00632	MH2	#6 - 32 UNC		48.0	13.0	4.0	3.2	6.0	3
MXPT N00640	MH2	#6 - 40 UNF		48.0	13.0	4.0	3.2	6.0	3
MXPT N00832	MH2	#8 - 32 UNC		52.0	13.0	5.0	4.0	7.0	3
MXPT N00836	MH2	#8 - 36 UNF		52.0	13.0	5.0	4.0	7.0	3
MXPT N01024	MH2	#10 - 24 UNC		60.0	16.0	5.5	4.5	7.0	3
MXPT N01032	MH2	#10 - 32 UNF		60.0	16.0	5.5	4.5	7.0	3
MXPT N01224	MH2	#12 - 24 UNC		60.0	16.0	5.5	4.5	7.0	3
MXPT N01228	MH2	#12 - 28 UNF		60.0	16.0	5.5	4.5	7.0	3
MXPT 010420	MH2	1/4 - 20 UNC		62.0	19.0	6.0	4.5	7.0	3
MXPT 010428	MH2	1/4 - 28 UNF		62.0	19.0	6.0	4.5	7.0	3
MXPT 051618	MH3	5/16 - 18 UNC		70.0	22.0	6.1	5.0	8.0	3
MXPT 051624	MH2	5/16 - 24 UNF		70.0	22.0	6.1	5.0	8.0	3
MXPT 030816	MH3	3/8 - 16 UNC		75.0	24.0	7.0	5.5	8.0	3
MXPT 030824	MH2	3/8 - 24 UNF		75.0	24.0	7.0	5.5	8.0	3
MXPT 071614	MH3	7/16 - 14 UNC		80.0	25.0	8.0	6.0	9.0	3
MXPT 071620	MH3	7/16 - 20 UNF		80.0	25.0	8.0	6.0	9.0	3
MXPT 010213	MH3	1/2 - 13 UNC		85.0	29.0	9.0	7.0	10.0	3
MXPT 010220	MH3	1/2 - 20 UNF		85.0	29.0	9.0	7.0	10.0	3
MXPT 091612	MH3	9/16 - 12 UNC		90.0	30.0	10.5	8.0	11.0	3
MXPT 091618	MH3	9/16 - 18 UNF		90.0	30.0	10.5	8.0	11.0	3
MXPT 050811	MH3	5/8 - 11 UNC		95.0	32.0	12.0	9.0	12.0	3
MXPT 050818	MH3	5/8 - 18 UNF		95.0	32.0	12.0	9.0	12.0	3
MXPT 030410	MH3	3/4 - 10 UNC		105.0	37.0	14.0	11.0	14.0	3
MXPT 030416	MH3	3/4 - 16 UNF		105.0	37.0	14.0	11.0	14.0	3
MXPT 070809	MH4	7/8 - 9 UNC		115.0	38.0	17.0	13.0	16.0	3
MXPT 070814	MH3	7/8 - 14 UNF		115.0	38.0	17.0	13.0	16.0	3
MXPT 100008	MH4	1" - 8 UNC		125.0	45.0	20.0	15.0	18.0	3
MXPT 100012	MH3	1" - 12 UNF		125.0	45.0	20.0	15.0	18.0	3

MAXX CPM ROLL TAP BRIGHT

MAXX 挤压丝锥

RT2P / RT4P SERIES



► Suitable for tapping in Aluminum, Magnesium, Zinc, Copper as well as Non-Ferrous metal alloy.

► 适用于铝、镁、锌、铜及有色金属的加工



单位(Unit) : mm

型号 CODE NO.		尺寸 SIZE	牙距 PITCH	精度 LIMIT	全长 OVERALL LENGTH L	螺纹长 LENGTH l	柄径 SHANK DIAMETER d	方块 尺寸 SQUARE SIZE s	方块 长度 SQUARE LENGTH sl
2.0P	4.0P	Thread Size							
RT2P 020040	RT4P 020040	M2	x 0.4	GH4	40	9.0	3.0	2.5	5
RT2P 023045	RT4P 023045	M2.3	x 0.4	GH4	42	10.0	3.0	2.5	5
RT2P 025045	RT4P 025045	M2.5	x 0.45	GH5	44	11.0	3.0	2.5	5
RT2P 026045	RT4P 026045	M2.6	x 0.45	GH5	44	11.0	3.0	2.5	5
RT2P 030050	RT4P 030050	M3	x 0.5	GH6	46	9.0	4.0	3.2	6
RT2P 035060	RT4P 035060	M3.5	x 0.6	GH6	48	9.0	4.0	3.2	6
RT2P 040070	RT4P 040070	M4	x 0.7	GH7	52	10.0	5.0	4.0	7
RT2P 050080	RT4P 050080	M5	x 0.8	GH7	60	11.0	5.5	4.5	7
RT2P 060100	RT4P 060100	M6	x 1	GH7	62	12.0	6.0	4.5	7

RECOMMENDED TAP DRILL SIZES

推菜螺纹底孔用钻头尺寸

● 公制螺纹 For Metric Threads

单位(Unit) : mm

螺纹尺寸	钻头尺寸	最大	最小	螺纹尺寸	钻头尺寸	最大	最小
THREAD SIZE	DRILL SIZE	D1		THREAD SIZE	DRILL SIZE	D1	
		Max	Min			Max	Min
M1 × 0.25	0.75	0.785	0.729	M14 × 2	12.00	12.210	11.835
M1.1 × 0.25	0.85	0.885	0.829	M14 × 1.5	12.50	12.676	12.376
M1.2 × 0.25	0.95	0.985	0.929	M14 × 1	13.00	13.153	12.917
M1.4 × 0.3	1.10	1.142	1.075	M15 × 1.5	13.50	13.676	13.376
M1.6 × 0.35	1.25	1.321	1.221	M15 × 1	14.00	14.153	13.917
M1.7 × 0.35	1.35	1.421	1.321	M16 × 2	14.00	14.210	13.835
M1.8 × 0.35	1.45	1.521	1.421	M16 × 1.5	14.50	14.676	14.376
M2 × 0.4	1.60	1.679	1.567	M16 × 1	15.00	15.153	14.917
M2 × 0.25	1.75	(1.785)	(1.729)	M17 × 1.5	15.50	15.676	15.376
M2.2 × 0.45	1.75	1.838	1.713	M17 × 1	16.00	16.153	15.917
M2.2 × 0.25	1.95	(1.985)	(1.929)	M18 × 2.5	15.50	15.744	15.294
M2.3 × 0.4	1.90	1.979	1.867	M18 × 2	16.00	16.210	15.835
M2.3 × 0.25	2.05	2.061	2.001	M18 × 1.5	16.50	16.676	16.376
M2.5 × 0.45	2.10	2.138	2.013	M18 × 1	17.00	17.153	16.917
M2.5 × 0.35	2.20	2.221	2.121	M20 × 2.5	17.50	17.744	17.294
M2.6 × 0.45	2.20	2.238	2.113	M20 × 2	18.00	18.210	17.835
M2.6 × 0.35	2.20	2.246	2.186	M20 × 1.5	18.50	18.676	18.376
M3 × 0.5	2.50	2.599	2.459	M20 × 1	19.00	19.153	18.917
M3 × 0.35	2.70	2.721	2.621	M22 × 2.5	19.50	19.744	19.294
M3.5 × 0.6	2.90	3.010	2.850	M22 × 2	20.00	20.210	19.835
M3.5 × 0.35	3.20	3.221	3.121	M22 × 1.5	20.50	20.676	20.376
M4 × 0.7	3.30	3.422	3.242	M22 × 1	21.00	21.153	20.917
M4 × 0.5	3.50	3.599	3.459	M24 × 3	21.00	21.252	20.752
M4.5 × 0.75	3.80	3.878	3.688	M24 × 2	22.00	22.210	21.835
M4.5 × 0.5	4.00	4.099	3.959	M24 × 1.5	22.50	22.676	22.376
M5 × 0.8	4.20	4.334	4.134	M24 × 1	23.00	23.153	22.917
M5 × 0.5	4.50	4.599	4.459	M25 × 2	23.00	23.210	22.835
M6 × 1	5.00	5.153	4.917	M25 × 1.5	23.50	23.676	23.376
M6 × 0.75	5.30	5.378	5.188	M25 × 1	24.00	24.153	23.917
M6 × 0.5	5.50	5.550	5.400	M26 × 1.5	24.50	24.676	24.376
M7 × 1	6.00	6.153	5.917	M27 × 3	24.00	24.252	23.752
M7 × 0.75	6.30	6.378	6.188	M27 × 2	25.00	25.210	24.835
M7 × 0.5	6.50	6.550	6.400	M27 × 1.5	25.50	25.676	25.376
M8 × 1.25	6.80	6.912	6.647	M27 × 1	26.00	26.153	25.917
M8 × 1	7.00	7.153	6.917	M28 × 2	26.00	26.210	25.835
M8 × 0.75	7.30	7.378	7.188	M28 × 1.5	26.50	26.676	26.376
M8 × 0.5	7.50	7.520	7.400	M28 × 1	27.00	27.153	26.917
M9 × 1.25	7.80	7.912	7.647	M30 × 3.5	26.50	26.771	26.211
M9 × 1	8.00	8.153	7.917	M30 × 3	27.00	27.252	26.752
M9 × 0.75	8.30	8.378	8.188	M30 × 2	28.00	28.210	27.835
M10 × 1.5	8.50	8.676	8.376	M30 × 1.5	28.50	28.676	28.376
M10 × 1.25	8.80	8.912	8.647	M30 × 1	29.00	29.153	28.917
M10 × 1	9.00	9.153	8.917	M32 × 2	30.00	30.210	29.835
M10 × 0.75	9.30	9.378	9.188	M32 × 1.5	30.50	30.676	30.376
M10 × 0.5	9.50	9.520	9.400	M33 × 3.5	29.50	29.771	29.211
M11 × 1.5	9.50	9.676	9.376	M33 × 3	30.00	30.252	29.752
M11 × 1	10.00	10.153	9.917	M33 × 2	31.00	31.210	30.835
M11 × 0.75	10.30	10.378	10.188	M33 × 1.5	31.50	31.676	31.376
M12 × 1.75	10.30	10.441	10.106	M35 × 1.5	33.50	33.676	33.376
M12 × 1.5	10.50	10.676	10.376	M36 × 4	32.00	32.270	31.670
M12 × 1.25	10.80	10.912	10.647	M36 × 3	33.00	33.252	32.752
M12 × 1	11.00	11.153	10.917	M36 × 2	34.00	34.210	33.835
M12 × 0.5	11.50	11.520	11.400	M36 × 1.5	34.50	34.676	34.376

D1 : Minor diameter of JIS class internal thread. But, the minor diameter D1 shown in () are of JIS class 1 internal threads because their nominal sizes are not specified in JIS class 2.

D1 : 内螺纹小径是JIS级°但是, 在括号内的螺纹小径D1是JIS1级, 因为它们的公称尺寸不属于JIS2级.

RECOMMENDED TAP DRILL SIZES

推荐螺纹底孔用钻头尺寸

● 英制螺纹 For Unified Threads

单位(Unit) : mm

螺纹尺寸 THREAD SIZE	钻头尺寸 DRILL SIZE	最大	最小
		D1	
		Max	Min
#2 - 56UNC	1.80	1.871	1.695
#2 - 64UNF	1.85	1.912	1.756
#3 - 48UNC	2.10	2.146	1.941
#3 - 56UNF	2.10	2.197	2.025
#4 - 40UNC	2.30	2.385	2.157
#4 - 48UNF	2.40	2.458	2.271
#5 - 40UNC	2.60	2.697	2.487
#5 - 44UNF	2.70	2.740	2.551
#6 - 32UNC	2.80	2.895	2.642
#6 - 40UNF	2.90	3.022	2.820
#8 - 32UNC	3.40	3.530	3.302
#8 - 36UNF	3.50	3.606	3.404
#10 - 24UNC	3.90	3.962	3.683
#10 - 32UNF	4.10	4.165	3.963
#12 - 24UNC	4.50	4.597	4.344
#12 - 28UNF	4.60	4.724	4.496
#12 - 32UNF	4.70	4.826	4.623
1/4 - 20UNC	5.10	5.257	4.979
1/4 - 28UNF	5.50	5.588	5.360
1/4 - 32UNEF	5.60	5.690	5.486
5/16 - 18UNC	6.60	6.731	6.401
5/16 - 24UNF	6.90	7.035	6.782
5/16 - 32UNEF	7.10	7.264	7.087
3/8 - 16UNC	8.00	8.153	7.798
3/8 - 24UNF	8.50	8.636	8.382
3/8 - 32UNEF	8.70	8.865	8.661
7/16 - 14UNC	9.40	9.550	9.144
7/16 - 20UNF	9.90	10.033	9.729
7/16 - 28UNEF	10.20	10.338	10.135
1/2 - 13UNC	10.80	11.023	10.592
1/2 - 20UNF	11.50	11.607	11.329
1/2 - 28UNEF	11.80	11.938	11.709
9/16 - 12UNC	12.20	12.446	11.989
9/16 - 18UNF	12.90	13.081	12.751
9/16 - 24UNEF	13.20	13.386	13.132
5/8 - 11UNC	13.60	13.868	13.386

螺纹尺寸 THREAD SIZE	钻头尺寸 DRILL SIZE	最大	最小
		D1	
		Max	Min
5/8 - 18UNF	14.50	14.681	14.351
5/8 - 24UNEF	14.80	14.986	14.732
3/4 - 10UNC	16.50	16.840	16.307
3/4 - 16UNF	17.50	17.678	17.323
3/4 - 20UNEF	17.80	17.958	17.678
7/8 - 9UNC	19.50	19.761	19.177
7/8 - 14UNF	20.50	20.675	20.270
7/8 - 20UNEF	21.00	21.133	20.853
1 - 8UNC	22.20	22.606	21.971
1 - 12UNF	23.20	23.571	23.114
1 - 20UNEF	24.00	24.308	24.028
1 * 1/8 - 7UNC	25.00	25.349	24.638
1 * 1/8 - 12UNF	26.50	26.746	26.289
1 * 1/8 - 18UNEF	27.20	27.381	27.051
1 * 1/8 - 8UN	25.50	25.781	25.146
1 * 1/4 - 7UNC	28.20	28.524	27.813
1 * 1/4 - 12UNF	29.50	29.921	29.464
1 * 1/4 - 18UNEF	30.20	30.556	30.226
1 * 1/4 - 8UN	28.50	28.956	28.321
1 * 3/8 - 6UNC	30.80	31.115	30.353
1 * 3/8 - 12UNF	32.80	33.096	32.639
1 * 3/8 - 18UNEF	33.50	33.731	33.401
1 * 3/8 - 8UN	31.80	32.131	31.496
1 * 1/2 - 6UNC	34.00	34.290	33.528
1 * 1/2 - 12UNF	36.00	36.271	35.814
1 * 1/2 - 18UNEF	36.50	36.881	36.576
1 * 1/2 - 8UN	35.00	35.306	34.671
1 * 5/8 - 18UNEF	39.80	40.081	39.751
1 * 5/8 - 8UN	38.20	38.481	37.846
1 * 5/8 - 12UN	39.20	39.446	38.989
1 * 3/4 - 5UNC	39.50	39.827	38.964
1 * 3/4 - 8UN	41.20	41.656	41.021
1 * 3/4 - 12UN	42.20	42.621	42.164
2 - 4 * 1/2UNC	45.20	45.593	44.679
2 - 8UN	47.80	48.006	47.371
2 - 12UN	48.50	48.971	48.514

D1 : Minor diameter of internal thread.
For UNC and UNF threads, according to JIS Class 2B.
For UNEF and UN threads, according to ANSI B1, 1a, Class 2B.

D1 : 内螺纹小径
依照JIS规格等级为2B的UNC和UNF
依照ANSI B1, 1a规格等级为2B的UNEF和UN螺纹

RECOMMENDED TAPPING SPEEDS

参数推荐表

加工材料		螺旋槽丝锥	攻丝速度	刃倾角丝锥	攻丝速度
WORK MATERIALS		SPIRAL FLUTE	TAPPING SPEED	GUN POINT	TAPPING SPEED
		MXSM,MXSF	(m/min)	MXPM,MXPT	(m/min)
Steels 钢	Low carbon steels 低碳钢	●	8 ~ 13	●	15 ~ 25
	Medium carbon steels 中碳钢	●	7 ~ 12	●	10 ~ 15
	High carbon steels 高碳钢	●	6 ~ 9	●	8 ~ 13
	Alloyed steels 合金钢	●	7 ~ 12	●	10 ~ 15
	Hardened steels up to HRc45 硬化钢达到HRc45	○	3 ~ 5	○	4 ~ 6
	Tool steels 工具钢	●	6 ~ 9	●	7 ~ 10
	Cast steels 铸钢	●	6 ~ 11	●	10 ~ 15
Stainless steels 不锈钢		●	5 ~ 8	●	8 ~ 13
Cast iron 铸铁		○	8 ~ 13	○	10 ~ 15
Aluminum 铝	Aluminum rolled 轧铝	○	10 ~ 20	○	15 ~ 25
	Aluminum alloyed casting 铸铝合金	○	10 ~ 15	○	15 ~ 20
Titanium 钛	Unalloyed Titanium 非钛合金	○	3 ~ 5	○	5 ~ 10
Nickel 镍	Unalloyed Nickel 非镍合金	○	3 ~ 5	○	5 ~ 10
Copper 铜		●	6 ~ 11	●	7 ~ 12
Brass 黄铜		●	10 ~ 20	●	15 ~ 25
Bronze 青铜		●	6 ~ 11	●	10 ~ 20
Zinc 锌	Zinc alloyed casting 铸锌合金	●	7 ~ 12	●	10 ~ 15

● : 推荐 (RECOMMENDED)
○ : 适用于 (SUITABLE)

SPECIAL TOOLS

CUSTOMIZED
SPECIAL TOOL



**We will respond promptly to
any inquiries about Cutting Tools**



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Date

Drill

TAP

Special
Tools

APPLICATIONS

使用事例

ENGINE PARTS 发动机零件



Double Margin Drill for Cylinder Head
发动机主缸用双边缘钻头



Oil Hole Drill for Crank Shaft
发动机曲轴用油孔钻头

MAIN PARTS 主要加工零件

■ ENGINE BLOCK and HOUSING 发动机组和外壳



■ CON-ROD, CRANK SHAFT and GEAR 连杆, 曲轴和齿轮



■ HYDRAULIC VALVE and ABS BLOCK PARTS 液压阀门和 ABS 块零件



APPLICATIONS

使用事例

MAIN PARTS 主要加工零件

■ GAS VALVES 气体阀门



■ BRAKE SYSTEM and STEERING PARTS 制动系统和转向部分



■ OTHER PARTS 其他加工零件



MACHINE SHOP for SPECIAL TOOLS 特殊刀具的加工现场



G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

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REAMER

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铣刀



CUTTER

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We will respond promptly to
any inquiries about Cutting Tools

DRILL

钻头



FORM TOOL

特殊刀具

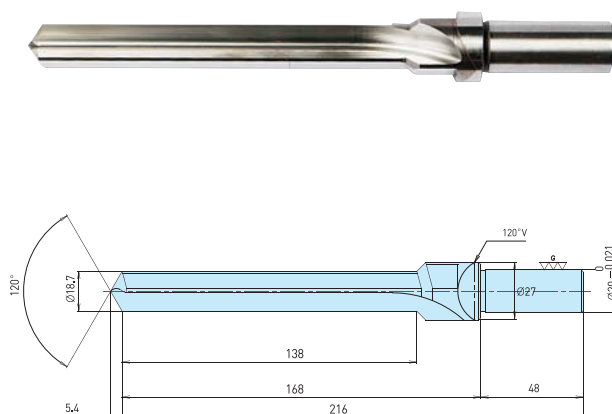


DRILL 钻头

BURNISHING DRILL 抛光钻头

Work : FCD

■ APPLICATION for ENGINE BLOCK
发动机组的应用



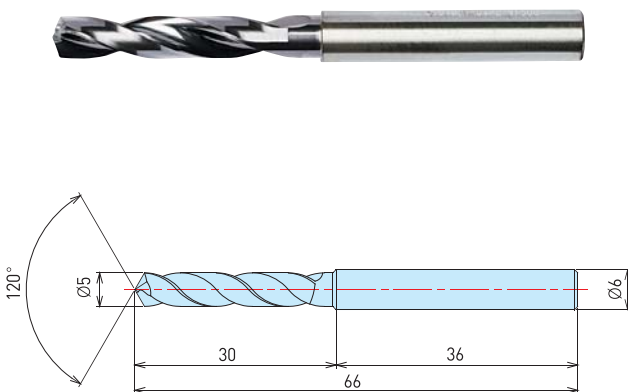
■ FEATURE 特点

TOOL	TOP SOLID
HELIX	0°
POINT ANGLE	120°
FLUTE	2
COATED	None
MATERIAL	K10 / SK3

TWIST DRILL 麻花钻头

Work : S70CVS1

■ APPLICATION for CON-ROD
连杆的应用



■ FEATURE 特点

TOOL	SOLID
HELIX	30°
POINT ANGLE	120°
FLUTE	2
COATED	TIALN
MATERIAL	UMG

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

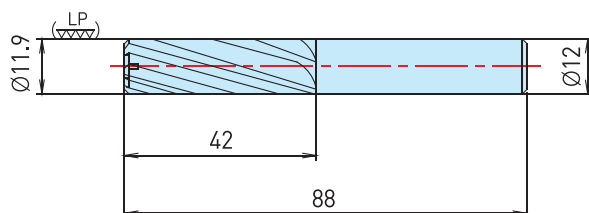
REAMER

铰刀

TWIST REAMER 麻花铰刀

Work : SS410

■ APPLICATION for PLATE CARRIER
移动台的应用



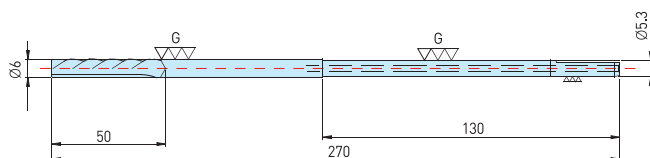
■ FEATURE 特点

TOOL	SOLID
HELIX	20°
POINT ANGLE	0°
FLUTE	6
COATED	TICN
MATERIAL	K20

GUN REAMER 枪钻

Work : AC2A

■ APPLICATION for ENGINE BLOCK
发动机组的应用



■ FEATURE 特点

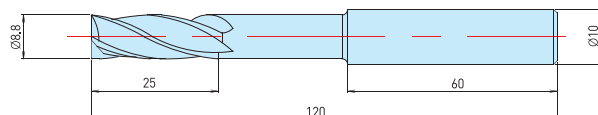
TOOL	TOP SOLID
HELIX	30°
POINT ANGLE	0°
FLUTE	6
COATED	TICN
MATERIAL	UMG

ENDMILL 铣刀

SOLID ENDMILL 钨钢铣刀

Work : SCM440

■ APPLICATION for ENGINE BLOCK
发动机组的应用



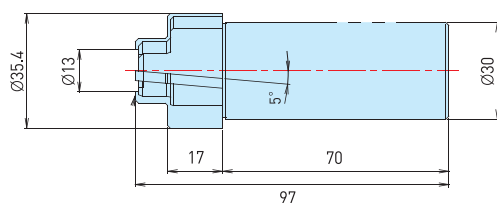
■ FEATURE 特点

TOOL	SOLID
HELIX	30°
POINT ANGLE	180°
FLUTE	4
COATED	None
MATERIAL	K10

ENDMILL 铣刀

Work : AC2A

■ APPLICATION for MASTER CYLINDER
发动机主缸的应用



■ FEATURE 特点

TOOL	TIP BRAZING 顶部焊接
HELIX	5°
POINT ANGLE	180°
FLUTE	4
COATED	None
MATERIAL	K10 / SCM440

G-Mill

H-Mill

V-Mill

T-Mill

CU-Mill

S-Mill

A-Mill

D-Mill

HSS Co8
MillTechnical
Data

Drill

TAP

Special
Tools

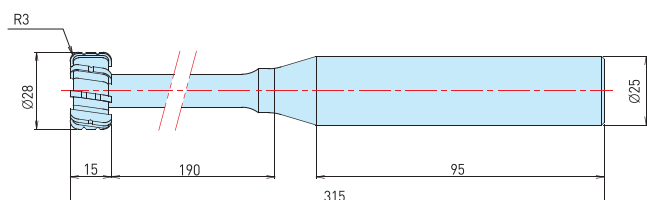
CUTTER

槽铣刀

T-SLOT CUT T-象槽铣刀

Work : SS410

■ APPLICATION for HYDRAULIC VALVE
液压阀的应用



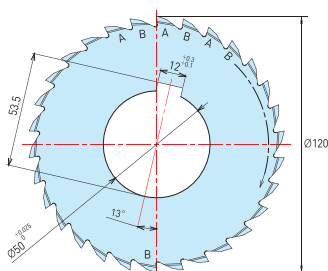
■ FEATURE 特点

TOOL	TIP BRAZING 顶部焊接
HELIX	80°
POINT ANGLE	0°
FLUTE	8
COATED	None
MATERIAL	K20 / SCM440

SIDE CUTTER 盘铣刀

Work : AC2A

■ APPLICATION for GROOVINGE
成形槽的应用



■ FEATURE 特点

TOOL	SOLID
HELIX	0°
POINT ANGLE	0°
FLUTE	30
COATED	None
MATERIAL	UMG



2025

Metalworking and Industrial Supplies

**Quality
Price
Delivery
Service**



Cutting Tools



Carbide Tooling



Abrasives, Files
& Deburring Tools



Toolholding
Workholding



Measuring Tools
& Equipments



Hand &
Power Tools



Shop Supplies,
Safety & Material
Handling



Machinery



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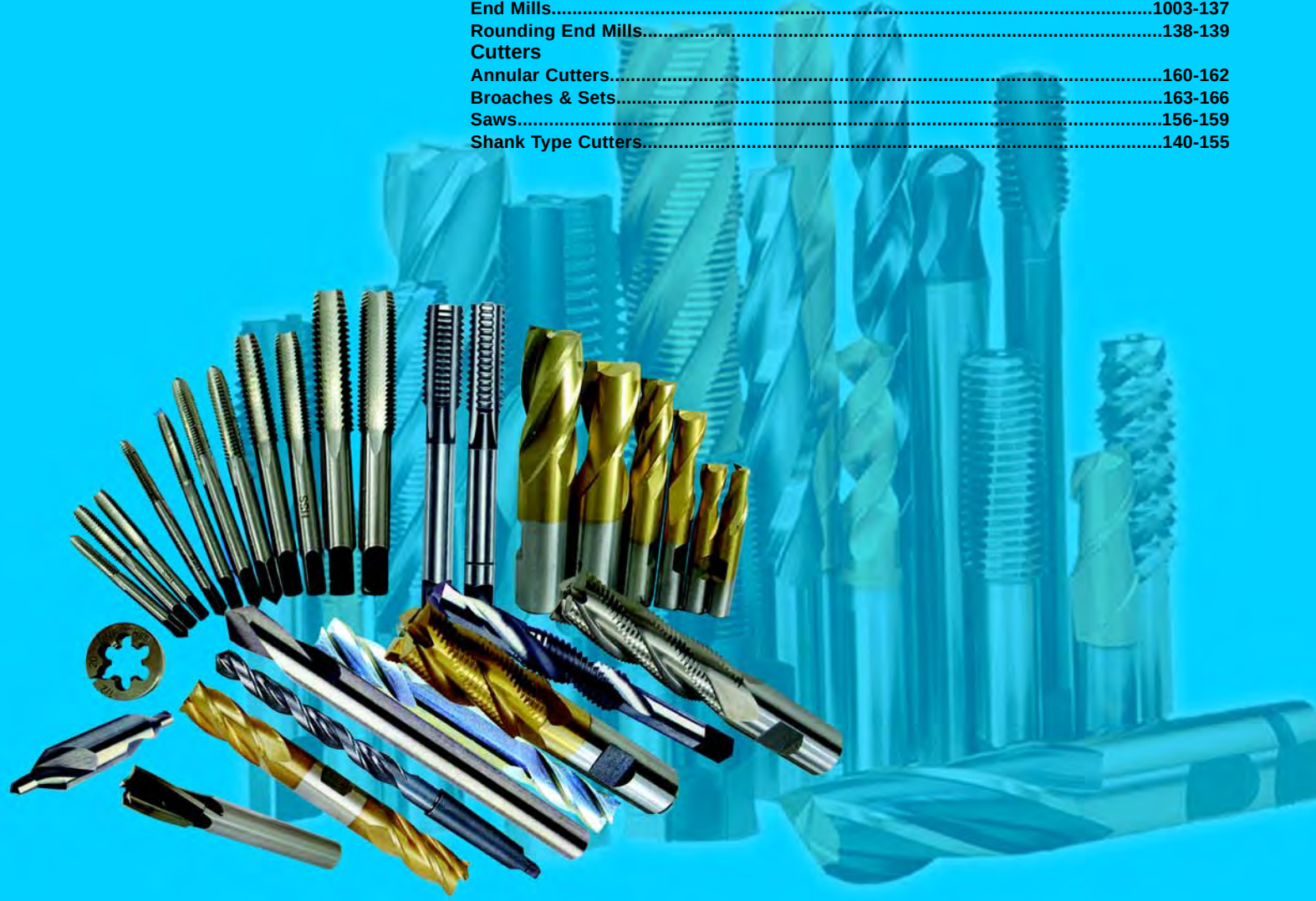
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Jobber Length Drill Sets

套装直柄麻花钻



13 PCS



15 PCS



114 PCS



115PCS

Inch 13 PCS

Metal Box, *Plastic Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
*13pcs 1/16-1/4" by 64ths	201-0004	208-0004	206-0004	207-0004
**13pcs 1/16-1/4" by 64ths	201-0003	208-0003	206-0003	207-0003

Inch & Metric 114 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
114pcs 1/16-1/2" by 64ths, #1-60, 1-13mm by .5mm	201-0009	208-0009	206-0009	207-0009

Inch 15 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
15pcs 1/16-1/2" by 32nds	201-0015	208-0015	206-0015	207-0015

Inch 115 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
115pcs 1/16-1/2" by 64ths A-Z, #1-60	201-0010	208-0010	206-0010	207-0010

Inch 20 PCS, Plastic Box

Specification	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
20pcs #61-80 HSS	208-0019	206-0019	207-0019



13 PCS



19 PCS



25 PCS

Metric 13 PCS ***Metal Box, ****Plastic Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
*1.5-6.5mm by .5mm	201-0002	208-0002	206-0002	207-0002
**1.5-6.5mm by .5mm	201-0001	208-0001	206-0001	207-0001

Metric 19PCS, Metal Box

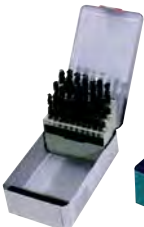
Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
1 to 10mm by .5mm	201-0005	208-0005	206-0005	207-0005

Metric 25PCS, Metal Box

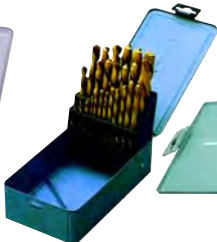
Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
25pcs 1-13mm by .5mm	201-0007	208-0007	206-0007	207-0007



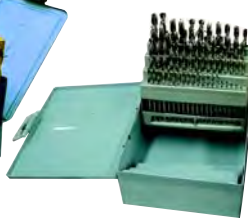
21 PCS



26 PCS



29 PCS



60 PCS

Inch 21 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
1/16" to 3/8" by 64ths	201-0006	208-0021	206-0006	207-0006

Inch 26 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
26pcs A-Z	201-0026	208-0026	206-0026	207-0026

Inch 29 PCS, Metal Box

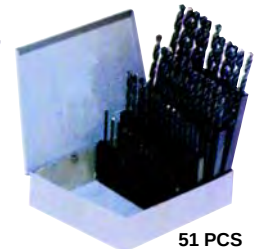
Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
29pcs 1/16-1/2" by 64ths	201-0008	208-0008	206-0008	207-0008

Inch 60 PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
60pcs #1-60 HSS	201-0018	208-0018	206-0018	207-0018



41 PCS



51 PCS

Metric 41PCS, Metal Box

Specification	Rolled Black Oxide Order No.	Ground Black Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
41pcs 6-10mm by .1mm	201-0016	208-0041	206-0016	207-0016
51pcs 1-6mm by .1mm	201-0017	208-0017	206-0016	207-0017

M35 Jobber Length Drill Sets

135° Split Point, Fully Ground

M35 含钴钴高速钢套钻



Metal Box

Pieces of Drills	Specification	Order No.
13	1/16-1/4" by 1/64"	209-5004
21	1/16-3/8"x1/64"	209-5006
25	1-13.0x0.5mm	209-5007
26	A-Z	209-5026
29	1/16-1/2" by 1/64"	209-5008
60	#1-60#	209-5018
115	1/16-1/2", A-Z, #1-60#	209-5010

HSS Screw Machine Drill Sets

135° Split Point, Fully Ground,
Right Hand, Black Finished

高速钢套装全磨美标短钻



Metal Box

Pieces of Drills	Specification	Order No.
26	A-Z	208-1026
29	1/16-1/2" by 1/64"	208-1029
60	#1-60	208-1060
115	A-Z, 1/16-1/2" by 1/64", #1-60	208-1010

Left Hand Jobber Length Drill Sets

118° Point, HSS Fully Ground, Bright Finished

高速钢左旋磨制麻花钻



Metal Box

Pieces of Drills	Specification	Order No.
26	A-Z	206-2127
29	1/16-1/2" by 1/64"	206-2129
60	#1-60	206-2130
115	A-Z, 1/16-1/2" by 1/64", #1-60	206-2135

M35 Screw Machine Drill Sets

135° Split Point, Fully Ground,
Right Hand, Black Finished

高速钢套装全磨美标短钻



Metal Box

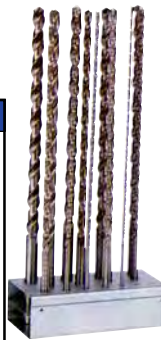
Pieces of Drills	Specification	Order No.
26	A-Z	208-1089
29	1/16-1/2" by 1/64"	208-1088
60	#1-60	208-1080
115	A-Z, 1/16-1/2" by 1/64", #1-60	208-1085

Long Boy Drill Sets

118° Point, High Speed Steel

高速钢美标套装加长钻

Pieces	Specification	Order No.
13	1/8" - 1/2" by 32nds, 8" Length	434-0305
13	1/8" - 1/2" by 32nds, 10" Length	434-0306
13	1/8" - 1/2" by 32nds, 12" Length	434-0307
11	3/16" - 1/2" by 32nds, 18" Length	434-0308
25	1/8-1/2" by 1/64", 8" Length	201-8005
25	1/8-1/2" by 1/64", 10" Length	201-8010
25	1/8-1/2" by 1/64", 12" Length	201-8015



Aircraft Extension Drill Sets

HSS, 118° Point, Right Hand

套装美标超长白钻航空钻

Pieces	Specification	Order No.
13	1/16" to 1/4" by 64ths, 6" length	434-0301
29	1/16 to 1/2" by 64ths, 12" length	434-0302
60	No.1 to 60, 6" length	434-0303
60	No.1 to 60, 12" length	434-0304

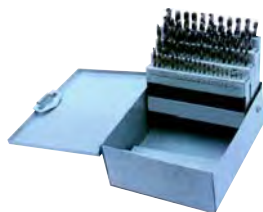


Fast Spiral Jobber Drill Sets

118° Point, HSS, Ground, Bright Finished

全磨美标快旋麻花钻白钻

NEW



Metal Box

Pieces	Specification	Order No.
26	26pcs/set letter size blanks A to Z	334-3596
29	29pcs/set blanks 1/16" to 1/2" by 64ths	334-3599
60	60pcs/set wire size blanks 1 to 60	334-3590
115	115pcs/set (1/16-1/2" by 1/64ths, A-Z, #1-#60)	334-3595

Taper Length Drill Sets

High Speed Steel, For Deep Hole Drilling,
Complete with Metal Box

高速钢全磨美标锥长度套钻



Pieces of Drills	Specification	Order No.
16	33/64" to 3/4" by 64ths	310-6916
16	49/64" to 1" by 64ths	310-6917
26	A through Z	310-6926
29	1/16" to 1/2" by 64ths	310-6929
60	No.1 to No. 60	310-6960

Silver & Deming Drill Sets 套装等柄钻头



HSS

Pieces of Drills	Shank	Specification	Wooden Stand Order No.	Plastic Case Order No.
5	1/2"	17/32", 9/16", 5/8", 3/4", 1"	301-0204	
5	1/2"	9/16", 5/8", 3/4", 7/8", 1"	301-0215	301-0205
6	1/2"	1-1/8" to 1-1/2" by 16ths ,exclude 7/16"	301-0206	
8	1/2"	9/16-1" by 16ths	301-0218	301-0208
8	1/2"	1-1/16 to 1-1/2" by 16ths	301-0288	301-0298
10	1/2"	9/16 to 1"by 16ths ,1-1/8",1-1/4"	301-0210	
12	1/2"	9/16 to 1-1/4" by 16ths	301-0212	
13	1/2"	17/32 to 1" by 16ths & 32nds	301-0213	
16	1/2"	17/32 to 1" by 32nds	301-0216	
17	1/2"	17/32 to 1-1/32" by 32nds	301-0217	
32	1/2"	33/64 to 1" by 64ths	301-0232	
40	1/2"	33/64" to 1" by 64ths & 1-1/16" to 1-1/2" by 16ths	301-0240	
5	3/4"	1,1-1/8,1-1/4,1-3/8,1-1/2"	301-0225	301-0235
6	3/4"	7/8,1,1-1/8,1-1/4,1-3/8,1-1/2"	301-0224	
16	1/4"	17/64 to 1/2" by 64ths	301-0096	
8	3/8"	25/64 to 1/2" by 64ths	301-0398	

Cobalt

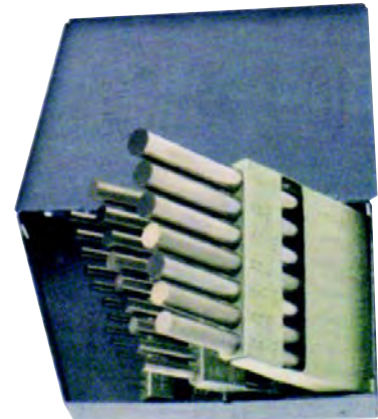
Pieces of Drills	Shank	Specification	Wooden Stand Order No.	Plastic Case Order No.
32	1/2"	9/16" to 1" by 164ths.	301-0990	
13	1/2"	17/32"-3/4" by 32nds,13/16-1" by 16ths,	301-0993	
5	1/2"	9/16 - 1" by 8ths	301-0995	
8	1/2"	9/16" to 1" by 16ths	301-0998	301-1000
6	1/2"	7/8 to 1-1/2" by 8ths		301-1002
16	1/2"	9/16 to 1-1/2"by 16th		301-1004

Drill Blank Sets 套装钻胚

High Speed Steel, Ground

Pieces	Specification	Order No.
13	with metal box 1.5-6.5mmx0.5mm,3.2mm,4.8mm	305-8302
19	with metal box,1.0-10.0mmx0.5mm	305-8305
25	with metal box,1.0-13.0mmx0.5mm	305-8307
41	6-10mm by 0.1mm with metal box	305-8341
51	1-6mm by 0.1mm with metal box	305-8351

Pieces	Specification	Order No.
115	(1/16-1/2" by 1/64ths,A-Z,# 1-#60) with metal index	305-8315
20	wire size blanks #61-80	305-8320
26	letter size blanks A to Z	305-8326
29	blanks 1/16" to 1/2" by 64ths	305-8329
60	wire size blanks #1 to #60	305-8360



Jobber Length Drills 美标麻花钻

High Speed Steel, 118° Point

- Right hand cutting direction.
- Suited for a wide range of materials.
- Features a standard helix.
- Heavy duty operations in stainless steel, titanium, inconel, and other hard metals.

Fractional Sizes

Size	Flute Length	OAL	Rolled Black Oxide Order No.	Ground Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.	TiCN-Coated Order No.	TiAlN-Coated Order No.
1/64"	3/16"	3/4"	234-4001	334-4001	334-3001	334-5001	335-3001	335-4001
1/32	1/2	1-3/8	234-4002	334-4002	334-3002	334-5002	335-3002	335-4002
3/64	3/4	1-3/4	234-4003	334-4003	334-3003	334-5003	335-3003	335-4003
1/16	7/8	1-7/8	234-4004	334-4004	334-3004	334-5004	335-3004	335-4004
5/64	1	2	234-4005	334-4005	334-3005	334-5005	335-3005	335-4005
3/32	1-1/4	2-1/4	234-4006	334-4006	334-3006	334-5006	335-3006	335-4006
7/64	1-1/2	2-5/8	234-4007	334-4007	334-3007	334-5007	335-3007	335-4007
1/8	1-5/8	2-3/4	234-4008	334-4008	334-3008	334-5008	335-3008	335-4008
9/64	1-3/4	2-7/8	234-4009	334-4009	334-3009	334-5009	335-3009	335-4009
5/32	2	3-1/8	234-4010	334-4010	334-3010	334-5010	335-3010	335-4010
11/64	2-1/8	3-1/4	234-4011	334-4011	334-3011	334-5011	335-3011	335-4011
3/16	2-5/16	3-1/2	234-4012	334-4012	334-3012	334-5012	335-3012	335-4012
13/64	2-7/16	3-5/8	234-4013	334-4013	334-3013	334-5013	335-3013	335-4013
7/32	2-1/2	3-3/4	234-4014	334-4014	334-3014	334-5014	335-3014	335-4014
15/64	2-5/8	3-7/8	234-4015	334-4015	334-3015	334-5015	335-3015	335-4015
1/4	2-3/4	4	234-4016	334-4016	334-3016	334-5016	335-3016	335-4016
17/64	2-7/8	4-1/8	234-4017	334-4017	334-3017	334-5017	335-3017	335-4017
9/32	2-15/16	4-1/4	234-4018	334-4018	334-3018	334-5018	335-3018	335-4018
19/64	3-1/16	4-3/8	234-4019	334-4019	334-3019	334-5019	335-3019	335-4019
5/16	3-3/16	4-1/2	234-4020	334-4020	334-3020	334-5020	335-3020	335-4020
21/64	3-5/16	4-5/8	234-4021	334-4021	334-3021	334-5021	335-3021	335-4021
11/32	3-7/16	4-3/4	234-4022	334-4022	334-3022	334-5022	335-3022	335-4022
23/64	3-1/2	4-7/8	234-4023	334-4023	334-3023	334-5023	335-3023	335-4023
3/8	3-5/8	5	234-4024	334-4024	334-3024	334-5024	335-3024	335-4024
25/64	3-3/4	5-1/8	234-4025	334-4025	334-3025	334-5025	335-3025	335-4025
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7/16	4-1/16	5-1/2	234-4028	334-4028	334-3028	334-5028	335-3028	335-4028
29/64	4-3/16	5-5/8	234-4029	334-4029	334-3029	334-5029	335-3029	335-4029
15/32	4-5/16	5-3/4	234-4030	334-4030	334-3030	334-5030	335-3030	335-4030
31/64	4-3/8	5-7/8	234-4031	334-4031	334-3031	334-5031	335-3031	335-4031
1/2	4-1/2	6	234-4032	334-4032	334-3032	334-5032	335-3032	335-4032
33/64	4-13/16	6-5/8	234-4033	334-4033	334-3033	334-5033	335-3033	335-4033
17/32	4-13/16	6-5/8	234-4034	334-4034	334-3034	334-5034	335-3034	335-4034
35/64	4-13/16	6-5/8	234-4035	334-4035	334-3035	334-5035	335-3035	335-4035
9/16	4-13/16	6-5/8	234-4036	334-4036	334-3036	334-5036	335-3036	335-4036
37/64	4-13/16	6-5/8	234-4037	334-4037	334-3037	334-5037	335-3037	335-4037
19/32	5-3/16	7-1/8	234-4038	334-4038	334-3038	334-5038	335-3038	335-4038
39/64	5-3/16	7-1/8	234-4039	334-4039	334-3039	334-5039	335-3039	335-4039
5/8	5-3/16	7-1/8	234-4040	334-4040	334-3040	334-5040	335-3040	335-4040
41/64	5-3/16	7-1/8	234-4041	334-4041	334-3041	334-5041	335-3041	335-4041
21/32	5-3/16	7-1/8	234-4042	334-4042	334-3042	334-5042	335-3042	335-4042
43/64	5-5/8	7-5/8	234-4043	334-4043	334-3043	334-5043	335-3043	335-4043
11/16	5-5/8	7-5/8	234-4044	334-4044	334-3044	334-5044	335-3044	335-4044
3/4	5-5/8	7-5/8	234-4048	334-4048	334-3048	334-5048	335-3048	335-4048

Letter Sizes

Size	Flute Length	OAL	Rolled Black Oxide Order No.	Ground Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.	TiCN-Coated Order No.	TiAlN-Coated Order No.
A	2-5/8"	3-7/8"	234-4201	334-4201	334-3201	334-5201	335-3201	335-4201
B	2-3/4	4	234-4202	334-4202	334-3202	334-5202	335-3202	335-4202
C	2-3/4	4	234-4203	334-4203	334-3203	334-5203	335-3203	335-4203
D	2-3/4	4	234-4204	334-4204	334-3204	334-5204	335-3204	335-4204
E	2-3/4	4	234-4205	334-4205	334-3205	334-5205	335-3205	335-4205
F	2-7/8	4-1/8	234-4206	334-4206	334-3206	334-5206	335-3206	335-4206
G	2-7/8	4-1/8	234-4207	334-4207	334-3207	334-5207	335-3207	335-4207
H	2-7/8	4-1/8	234-4208	334-4208	334-3208	334-5208	335-3208	335-4208
I	2-7/8	4-1/8	234-4209	334-4209	334-3209	334-5209	335-3209	335-4209
J	2-7/8	4-1/8	234-4210	334-4210	334-3210	334-5210	335-3210	335-4210
K	2-15/16	4-1/4	234-4211	334-4211	334-3211	334-5211	335-3211	335-4211
L	2-15/16	4-1/4	234-4212	334-4212	334-3212	334-5212	335-3212	335-4212
M	3-1/16	4-3/8	234-4213	334-4213	334-3213	334-5213	335-3213	335-4213
N	3-1/16	4-3/8	234-4214	334-4214	334-3214	334-5214	335-3214	335-4214
O	3-3/16	4-1/2	234-4215	334-4215	334-3215	334-5215	335-3215	335-4215
P	3-5/16	4-5/8	234-4216	334-4216	334-3216	334-5216	335-3216	335-4216
Q	3-7/16	4-3/4	234-4217	334-4217	334-3217	334-5217	335-3217	335-4217
R	3-7/16	4-3/4	234-4218	334-4218	334-3218	334-5218	335-3218	335-4218
S	3-1/2	4-7/8	234-4219	334-4219	334-3219	334-5219	335-3219	335-4219
T	3-1/2	4-7/8	234-4220	334-4220	334-3220	334-5220	335-3220	335-4220
U	3-5/8	5	234-4221	334-4221	334-3221	334-5221	335-3221	335-4221
V	3-5/8	5	234-4222	334-4222	334-3222	334-5222	335-3222	335-4222
W	3-3/4	5-1/8	234-4223	334-4223	334-3223	334-5223	335-3223	335-4223
X	3-3/4	5-1/8	234-4224	334-4224	334-3224	334-5224	335-3224	335-4224
Y	3-7/8	5-1/4	234-4225	334-4225	334-3225	334-5225	335-3225	335-4225
Z	3-7/8	5-1/4	234-4226	334-4226	334-3226	334-5226	335-3226	335-4226

Jobber Length Drills

美标麻花钻

- Right hand cutting direction.
- Suited for a wide range of materials.
- Features a standard helix.

High Speed Steel, 118° Point

118°, Ground

- Heavy duty operations in stainless steel, titanium, inconel, and other hard metals.

Number Sizes



Size	Flute Length	OAL	Rolled Black Oxide	Black Oxide Order No.	Bright Order No.	TiN-Coated Order No.	TiCN-Coated Order No.	TiALN-Coated Order No.
#1	2-5/8"	3-7/8"	234-4101	334-4101	334-3101	334-5101	335-3101	335-4101
#2	2-5/8"	3-7/8"	234-4102	334-4102	334-3102	334-5102	335-3102	335-4102
#3	2-1/2	3-3/4	234-4103	334-4103	334-3103	334-5103	335-3103	335-4103
#4	2-1/2	3-3/4	234-4104	334-4104	334-3104	334-5104	335-3104	335-4104
#5	2-1/2	3-3/4	234-4105	334-4105	334-3105	334-5105	335-3105	335-4105
#6	2-1/2	3-3/4	234-4106	334-4106	334-3106	334-5106	335-3106	335-4106
#7	2-7/16	3-5/8	234-4107	334-4107	334-3107	334-5107	335-3107	335-4107
#8	2-7/16	3-5/8	234-4108	334-4108	334-3108	334-5108	335-3108	335-4108
#9	2-7/16	3-5/8	234-4109	334-4109	334-3109	334-5109	335-3109	335-4109
#10	2-7/16	3-5/8	234-4110	334-4110	334-3110	334-5110	335-3110	335-4110
#11	2-5/16	3-1/2	234-4111	334-4111	334-3111	334-5111	335-3111	335-4111
#12	2-5/16	3-1/2	234-4112	334-4112	334-3112	334-5112	335-3112	335-4112
#13	2-5/16	3-1/2	234-4113	334-4113	334-3113	334-5113	335-3113	335-4113
#14	2-3/16	3-3/8	234-4114	334-4114	334-3114	334-5114	335-3114	335-4114
#15	2-3/16	3-3/8	234-4115	334-4115	334-3115	334-5115	335-3115	335-4115
#16	2-3/16	3-3/8	234-4116	334-4116	334-3116	334-5116	335-3116	335-4116
#17	2-3/16	3-3/8	234-4117	334-4117	334-3117	334-5117	335-3117	335-4117
#18	2-1/8	3-1/4	234-4118	334-4118	334-3118	334-5118	335-3118	335-4118
#19	2-1/8	3-1/4	234-4119	334-4119	334-3119	334-5119	335-3119	335-4119
#20	2-1/8	3-1/4	234-4120	334-4120	334-3120	334-5120	335-3120	335-4120
#21	2-1/8	3-1/4	234-4121	334-4121	334-3121	334-5121	335-3121	335-4120
#22	2	3-1/8	234-4122	334-4122	334-3122	334-5122	335-3122	335-4122
#23	2	3-1/8	234-4123	334-4123	334-3123	334-5123	335-3123	335-4123
#24	2	3-1/8	234-4124	334-4124	334-3124	334-5124	335-3124	335-4124
#25	1-7/8	3	234-4125	334-4125	334-3125	334-5125	335-3125	335-4125
#26	1-7/8	3	234-4126	334-4126	334-3126	334-5126	335-3126	335-4126
#27	1-7/8	3	234-4127	334-4127	334-3127	334-5127	335-3127	335-4127
#28	1-3/4	2-7/8	234-4128	334-4128	334-3128	334-5128	335-3128	335-4128
#29	1-3/4	2-7/8	234-4129	334-4129	334-3129	334-5129	335-3129	335-4129
#30	1-5/8	2-3/4	234-4130	334-4130	334-3130	334-5130	335-3130	335-4130
#31	1-5/8	2-3/4	234-4131	334-4131	334-3131	334-5131	335-3131	335-4131
#32	1-5/8	2-3/4	234-4132	334-4132	334-3132	334-5132	335-3132	335-4132
#33	1-1/2	2-5/8	234-4133	334-4133	334-3133	334-5133	335-3133	335-4133
#34	1-1/2	2-5/8	234-4134	334-4134	334-3134	334-5134	335-3134	335-4134
#35	1-1/2	2-5/8	234-4135	334-4135	334-3135	334-5135	335-3135	335-4135
#36	1-7/16	2-1/2	234-4136	334-4136	334-3136	334-5136	335-3136	335-4136
#37	1-7/16	2-1/2	234-4137	334-4137	334-3137	334-5137	335-3137	335-4137
#38	1-7/16	2-1/2	234-4138	334-4138	334-3138	334-5138	335-3138	335-4138
#39	1-3/8	2-3/8	234-4139	334-4139	334-3139	334-5139	335-3139	335-4139
#40	1-3/8	2-3/8	234-4140	334-4140	334-3140	334-5140	335-3140	335-4140
#41	1-3/8	2-3/8	234-4141	334-4141	334-3141	334-5141	335-3141	335-4141
#42	1-1/4	2-1/4	234-4142	334-4142	334-3142	334-5142	335-3142	335-4142
#43	1-1/4	2-1/4	234-4143	334-4143	334-3143	334-5143	335-3143	335-4143
#44	1-1/8	2-1/8	234-4144	334-4144	334-3144	334-5144	335-3144	335-4144
#45	1-1/8	2-1/8	234-4145	334-4145	334-3145	334-5145	335-3145	335-4145
#46	1-1/8	2-1/8	234-4146	334-4146	334-3146	334-5146	335-3146	335-4146
#47	1	2	234-4147	334-4147	334-3147	334-5147	335-3147	335-4147
#48	1	2	234-4148	334-4148	334-3148	334-5148	335-3147	335-4148
#49	1	2	234-4149	334-4149	334-3149	334-5149	335-3149	335-4149
#50	1	2	234-4150	334-4150	334-3150	334-5150	335-3150	335-4150
#51	1	2	234-4151	334-4151	334-3151	334-5151	335-3151	335-4151
#52	7/8	1-7/8	234-4152	334-4152	334-3152	334-5152	335-3152	335-4152
#53	7/8	1-7/8	234-4153	334-4153	334-3153	334-5153	335-3153	335-4153
#54	7/8	1-7/8	234-4154	334-4154	334-3154	334-5154	335-3154	335-4154
#55	7/8	1-7/8	234-4155	334-4155	334-3155	334-5155	335-3155	335-4155
#56	3/4	1-3/4	234-4156	334-4156	334-3156	334-5156	335-3156	331-4156
#57	3/4	1-3/4	234-4157	334-4157	334-3157	334-5157	335-3157	331-4157
#58	11/16	1-5/8	234-4158	334-4158	334-3158	334-5158	335-3158	331-4158
#59	11/16	1-5/8	234-4159	334-4159	334-3159	334-5159	335-3159	331-4159
#60	11/16	1-5/8	234-4160	334-4160	334-3160	334-5160	335-3160	331-4160
#61	11/16	1-5/8	234-4161	334-4161	334-3161	334-5161	335-3161	335-4161
#62	5/8	1-1/2	234-4162	334-4162	334-3162	334-5162	335-3162	335-4162
#63	5/8	1-1/2	234-4163	334-4163	334-3163	334-5163	335-3163	335-4163
#64	5/8	1-1/2	234-4164	334-4164	334-3164	334-5164	335-3164	335-4164
#65	5/8	1-1/2	234-4165	334-4165	334-3165	334-5165	335-3165	335-4165
#66	1/2	1-3/8	234-4166	334-4166	334-3166	334-5166	335-3166	335-4166
#67	1/2	1-3/8	234-4167	334-4167	334-3167	334-5167	335-3167	335-4167
#68	1/2	1-3/8	234-4168	334-4168	334-3168	334-5168	335-3168	335-4168
#69	1/2	1-3/8	234-4169	334-4169	334-3169	334-5169	335-3169	335-4169
#70	3/8	1-1/4	234-4170	334-4170	334-3170	334-5170	335-3170	335-4170
#71	3/8	1-1/4	234-4171	334-4171	334-3171	334-5171	335-3171	335-4171
#72	5/16	1-1/8	234-4172	334-4172	334-3172	334-5172	335-3172	335-4172
#73	5/16	1-1/8	234-4173	334-4173	334-3173	334-5173	335-3173	335-4173
#74	1/4	1-1/8	234-4174	334-4174	334-3174	334-5174	335-3174	335-4174
#75	1/4	1-1/8	234-4175	334-4175	334-3175	334-5175	335-3175	335-4175
#76	3/16	7/8	234-4176	334-4176	334-3176	334-5176	335-3176	335-4176
#77	3/16	7/8	234-4177	334-4177	334-3177	334-5177	335-3177	335-4177
#78	3/16	7/8	234-4178	334-4178	334-3178	334-5178	335-3178	335-4178
#79	1/8	3/4	234-4179	334-4179	334-3179	334-5179	335-3179	335-4179
#80	1/8	3/4	234-4180	334-4180	334-3180	334-5180	335-3180	335-4180

Split Point Jobber Length Drills

135° Split Point, Fully Ground

- Right hand cutting direction.
- 135° Split point is self-centering and reduces thrust.
- Heavy duty operations in stainless steel, titanium, inconel, and other hard metals.

双后角美标麻花钻



Fractional Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	HSS TiN-Coated Order No.	M35 Cobalt Order No.
1/64"	3/16"	3/4"	134-2001	134-1001	330-4001
1/32	1/2	1-3/8	134-2002	134-1002	330-4002
3/64	3/4	1-3/4	134-2003	134-1003	330-4003
1/16	7/8	1-7/8	134-2004	134-1004	330-4004
5/64	1	2	134-2005	134-1005	330-4005
3/32	1-1/4	2-1/4	134-2006	134-1006	330-4006
7/64	1-1/2	2-5/8	134-2007	134-1007	330-4007
1/8	1-5/8	2-3/4	134-2008	134-1008	330-4008
9/64	1-3/4	2-7/8	134-2009	134-1009	330-4009
5/32	2	3-1/8	134-2010	134-1010	330-4010
11/64	2-1/8	3-1/4	134-2011	134-1011	330-4011
3/16	2-5/16	3-1/2	134-2012	134-1012	330-4012
13/64	2-7/16	3-5/8	134-2013	134-1013	330-4013
7/32	2-1/2	3-3/4	134-2014	134-1014	330-4014
15/64	2-5/8	3-7/8	134-2015	134-1015	330-4015
1/4	2-3/4	4	134-2016	134-1016	330-4016
17/64	2-7/8	4-1/8	134-2017	134-1017	330-4017
9/32	2-15/16	4-1/4	134-2018	134-1018	330-4018
19/64	3-1/16	4-3/8	134-2019	134-1019	330-4019
5/16	3-3/16	4-1/2	134-2020	134-1020	330-4020
21/64	3-5/16	4-5/8	134-2021	134-1021	330-4021
11/32	3-7/16	4-3/4	134-2022	134-1022	330-4022
23/64	3-1/2	4-7/8	134-2023	134-1023	330-4023
3/8	3-5/8	5	134-2024	134-1024	330-4024
25/64	3-3/4	5-1/8	134-2025	134-1025	330-4025
13/32	3-7/8	5-1/4	134-2026	134-1026	330-4026
27/64	3-15/16	5-3/8	134-2027	134-1027	330-4027
7/16	4-1/16	5-1/2	134-2028	134-1028	330-4028
29/64	4-3/16	5-5/8	134-2029	134-1029	330-4029
15/32	4-5/16	5-3/4	134-2030	134-1030	330-4030
31/64	4-3/8	5-7/8	134-2031	134-1031	330-4031
1/2	4-1/2	6	134-2032	134-1032	330-4032
33/64	4-13/16	6-5/8	134-2033	134-1033	330-4033
17/32	4-13/16	6-5/8	134-2034	134-1034	330-4034
35/64	4-13/16	6-5/8	134-2035	134-1035	330-4035
9/16	4-13/16	6-5/8	134-2036	134-1036	330-4036
37/64	4-13/16	6-5/8	134-2037	134-1037	330-4037
19/32	5-3/16	7-1/8	134-2038	134-1038	330-4038
39/64	5-3/16	7-1/8	134-2039	134-1039	330-4039
5/8	5-3/16	7-1/8	134-2040	134-1040	330-4040
41/64	5-3/16	7-1/8	134-2041	134-1041	330-4041
21/32	5-3/16	7-1/8	134-2042	134-1042	330-4042
43/64	5-5/8	7-5/8	134-2043	134-1043	330-4043
11/16	5-5/8	7-5/8	134-2044	134-1044	330-4044
3/4	5-5/8	7-5/8	134-2048	134-1048	330-4048

Letter Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	HSS TiN-Coated Order No.	M35 Cobalt Order No.
A	2-5/8"	3-7/8"	134-2201	134-1201	330-4201
B	2-3/4	4	134-2202	134-1202	330-4202
C	2-3/4	4	134-2203	134-1203	330-4203
D	2-3/4	4	134-2204	134-1204	330-4204
E	2-3/4	4	134-2205	134-1205	330-4205
F	2-7/8	4-1/8	134-2206	134-1206	330-4206
G	2-7/8	4-1/8	134-2207	134-1207	330-4207
H	2-7/8	4-1/8	134-2208	134-1208	330-4208
I	2-7/8	4-1/8	134-2209	134-1209	330-4209
J	2-7/8	4-1/8	134-2210	134-1210	330-4210
K	2-15/16	4-1/4	134-2211	134-1211	330-4211
L	2-15/16	4-1/4	134-2212	134-1212	330-4212
M	3-1/16	4-3/8	134-2213	134-1213	330-4213
N	3-1/16	4-3/8	134-2214	134-1214	330-4214
O	3-3/16	4-1/2	134-2215	134-1215	330-4215
P	3-3/16	4-5/8	134-2216	134-1216	330-4216
Q	3-7/16	4-3/4	134-2217	134-1217	330-4217
R	3-7/16	4-3/4	134-2218	134-1218	330-4218
S	3-1/2	4-7/8	134-2219	134-1219	330-4219
T	3-1/2	4-7/8	134-2220	134-1220	330-4220
U	3-5/8	5	134-2221	134-1221	330-4221
V	3-5/8	5	134-2222	134-1222	330-4222
W	3-3/4	5-1/8	134-2223	134-1223	330-4223
X	3-3/4	5-1/8	134-2224	134-1224	330-4224
Y	3-7/8	5-1/4	134-2225	134-1225	330-4225
Z	3-7/8	5-1/4	134-2226	134-1226	330-4226

Number Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	HSS TiN-Coated Order No.	M35 Cobalt Order No.
#1	2-5/8"	3-7/8"	134-2101	134-1101	330-4101
#2	2-5/8	3-7/8	134-2102	134-1102	330-4102
#3	2-1/2	3-3/4	134-2103	134-1103	330-4103
#4	2-1/2	3-3/4	134-2104	134-1104	330-4104
#5	2-1/2	3-3/4	134-2105	134-1105	330-4105
#6	2-1/2	3-3/4	134-2106	134-1106	330-4106
#7	2-7/16	3-5/8	134-2107	134-1107	330-4107
#8	2-7/16	3-5/8	134-2108	134-1108	330-4108
#9	2-7/16	3-5/8	134-2109	134-1109	330-4109
#10	2-7/16	3-5/8	134-2110	134-1110	330-4110
#11	2-5/16	3-1/2	134-2111	134-1111	330-4111
#12	2-5/16	3-1/2	134-2112	134-1112	330-4112
#13	2-5/16	3-1/2	134-2113	134-1113	330-4113
#14	2-3/16	3-3/8	134-2114	134-1114	330-4114
#15	2-3/16	3-3/8	134-2115	134-1115	330-4115
#16	2-3/16	3-3/8	134-2116	134-1116	330-4116
#17	2-3/16	3-3/8	134-2117	134-1117	330-4117
#18	2-1/8	3-1/4	134-2118	134-1118	330-4118
#19	2-1/8	3-1/4	134-2119	134-1119	330-4119
#20	2-1/8	3-1/4	134-2120	134-1120	330-4120
#21	2-1/8	3-1/4	134-2121	134-1121	330-4121
#22	2	3-1/8	134-2122	134-1122	330-4122
#23	2	3-1/8	134-2123	134-1123	330-4123
#24	2	3-1/8	134-2124	134-1124	330-4124
#25	1-7/8	3	134-2125	134-1125	330-4125
#26	1-7/8	3	134-2126	134-1126	330-4126
#27	1-7/8	3	134-2127	134-1127	330-4127
#28	1-3/4	2-7/8	134-2128	134-1128	330-4128
#29	1-3/4	2-7/8	134-2129	134-1129	330-4129
#30	1-5/8	2-3/4	134-2130	134-1130	330-4130
#31	1-5/8	2-3/4	134-2131	134-1131	330-4131
#32	1-5/8	2-3/4	134-2132	134-1132	330-4132
#33	1-1/2	2-5/8	134-2133	134-1133	330-4133
#34	1-1/2	2-5/8	134-2134	134-1134	330-4134
#35	1-1/2	2-5/8	134-2135	134-1135	330-4135
#36	1-7/16	2-1/2	134-2136	134-1136	330-4136
#37	1-7/16	2-1/2	134-2137	134-1137	330-4137
#38	1-7/16	2-1/2	134-2138	134-1138	330-4138
#39	1-3/8	2-3/8	134-2139	134-1139	330-4139
#40	1-3/8	2-3/8	134-2140	134-1140	330-4140
#41	1-3/8	2-3/8	134-2141	134-1141	330-4141
#42	1-1/4	2-1/4	134-2142	134-1142	330-4142
#43	1-1/4	2-1/4	134-2143	134-1143	330-4143
#44	1-1/8	2-1/8	134-2144	134-1144	330-4144
#45	1-1/8	2-1/8	134-2145	134-1145	330-4145
#46	1-1/8	2-1/8	134-2146	134-1146	330-4146
#47	1	2	134-2147	134-1147	330-4147
#48	1	2	134-2148	134-1148	330-4148
#49	1	2	134-2149	134-1149	330-4149
#50	1	2	134-2150	134-1150	330-4150
#51	1	2	134-2151	134-1151	330-4151
#52	7/8	1-7/8	134-2152	134-1152	330-4152
#53	7/8	1-7/8	134-2153	134-1153	330-4153
#54	7/8	1-7/8	134-2154	134-1154	330-4154
#55	7/8	1-7/8	134-2155	134-1155	330-4155
#56	3/4	1-3/4	134-2156	134-1156	330-4156
#57	3/4	1-3/4	134-2157	134-1157	330-4157
#58	11/16	1-5/8	134-2158	134-1158	330-4158
#59	11/16	1-5/8	134-2159	134-1159	330-4159
#60	11/16	1-5/8	134-2160	134-1160	330-4160
#61	11/16	1-5/8	134-2161	134-1161	330-4161
#62	5/8	1-1/2	134-2162	134-1162	330-4162
#63	5/8	1-1/2	134-2163	134-1163	330-4163
#64	5/8	1-1/2	134-2164	134-1164	330-4164
#65	5/8	1-1/2	134-2165	134-1165	330-4165
#66	1/2	1-3/8	134-2166	134-1166	330-4166
#67	1/2	1-3/8	134-2167	134-1167	330-4167
#68	1/2	1-3/8	134-2168	134-1168	330-4168
#69	1/2	1-3/8	134-2169	134-1169	330-4169
#70	3/8	1-1/4	134-2170	134-1170	330-4170
#71	3/8	1-1/4	134-2171	134-1171	330-4171
#72	5/16	1-1/8	134-2172	134-1172	330-4172
#73	5/16	1-1/8	134-2173	134-1173	330-4173
#74	1/4	1-1/8	134-2174	134-1174	330-4174
#75	1/4	1-1/8	134-2175	134-1175	330-4175
#76	3/16	7/8	134-2176	134-1176	330-4176
#77	3/16	7/8	134-2177	134-1177	330-4177
#78	3/16	7/8	134-2178	134-1178	330-4178
#79	1/8	3/4	134-2179	134-1179	330-4179
#80	1/8	3/4	134-2180	134-1180	330-4180

Special Jobber Length Drills

全磨美标快旋 / 慢旋麻花钻 / 左旋麻花钻

Fast Spiral HSS Ground, 118° Point, Bright Finish,
Helix angle 35°- 40°Slow Spiral HSS Ground, 118° Point, Bright Finish,
Helix angle 10°-12°Left Hand Ground, 118° Point, Bright Finish,
Standard Helix angle

Letter Sizes

Size	Flute Length	OAL	Fast Order No.	Slow Order No.	Left Hand Order No.
A	2-5/8"	3-7/8"	334-3701	334-4701	234-9601
B	2-3/4	4	334-3702	334-4702	234-9602
C	2-3/4	4	334-3703	334-4703	234-9603
D	2-3/4	4	334-3704	334-4704	234-9604
E	2-3/4	4	334-3705	334-4705	234-9605
F	2-7/8	4-1/8	334-3706	334-4706	234-9606
G	2-7/8	4-1/8	334-3707	334-4707	234-9607
H	2-7/8	4-1/8	334-3708	334-4708	234-9608
I	2-7/8	4-1/8	334-3709	334-4709	234-9609
J	2-7/8	4-1/8	334-3710	334-4710	234-9610
K	2-15/16	4-1/4	334-3711	334-4711	234-9611
L	2-15/16	4-1/4	334-3712	334-4712	234-9612
M	3-1/16	4-3/8	334-3713	334-4713	234-9613
N	3-1/16	4-3/8	334-3714	334-4714	234-9614
O	3-3/16	4-1/2	334-3715	334-4715	234-9615
P	3-5/16	4-5/8	334-3716	334-4716	234-9616
Q	3-7/16	4-3/4	334-3717	334-4717	234-9617
R	3-7/16	4-3/4	334-3718	334-4718	234-9618
S	3-1/2	4-7/8	334-3719	334-4719	234-9619
T	3-1/2	4-7/8	334-3720	334-4720	234-9620
U	3-5/8	5	334-3721	334-4721	234-9621
V	3-5/8	5	334-3722	334-4722	234-9622
W	3-3/4	5-1/8	334-3723	334-4723	234-9623
X	3-3/4	5-1/8	334-3724	334-4724	234-9624
Y	3-7/8	5-1/4	334-3725	334-4725	234-9625
Z	3-7/8	5-1/4	334-3726	334-4726	234-9626

Fractional Sizes

Size	Flute Length	OAL	Fast Order No.	Slow Order No.	Left Hand Order No.
1/64"	3/16"	3/4"	334-3501	334-4501	234-9301
1/32	1/2	1-3/8	334-3502	334-4502	234-9302
3/64	3/4	1-3/4	334-3503	334-4503	234-9303
1/16	7/8	1-7/8	334-3504	334-4504	234-9304
5/64	1	2	334-3505	334-4505	234-9305
3/32	1-1/4	2-1/4	334-3506	334-4506	234-9306
7/64	1-1/2	2-5/8	334-3507	334-4507	234-9307
1/8	1-5/8	2-3/4	334-3508	334-4508	234-9308
9/64	1-3/4	2-7/8	334-3509	334-4509	234-9309
5/32	2	3-1/8	334-3510	334-4510	234-9310
11/64	2-1/8	3-1/4	334-3511	334-4511	234-9311
3/16	2-5/16	3-1/2	334-3512	334-4512	234-9312
13/64	2-7/16	3-5/8	334-3513	334-4513	234-9313
7/32	2-1/2	3-3/4	334-3514	334-4514	234-9314
15/64	2-5/8	3-7/8	334-3515	334-4515	234-9315
1/4	2-3/4	4	334-3516	334-4516	234-9316
17/64	2-7/8	4-1/8	334-3517	334-4517	234-9317
9/32	2-15/16	4-1/4	334-3518	334-4518	234-9318
19/64	3-1/16	4-3/8	334-3519	334-4519	234-9319
5/16	3-3/16	4-1/2	334-3520	334-4520	234-9320
21/64	3-5/16	4-5/8	334-3521	334-4521	234-9321
11/32	3-7/16	4-3/4	334-3522	334-4522	234-9322
23/64	3-1/2	4-7/8	334-3523	334-4523	234-9323
3/8	3-5/8	5	334-3524	334-4524	234-9324
25/64	3-3/4	5-1/8	334-3525	334-4525	234-9325
13/32	3-7/8	5-1/4	334-3526	334-4526	234-9326
27/64	3-15/16	5-3/8	334-3527	334-4527	234-9327
7/16	4-1/16	5-1/2	334-3528	334-4528	234-9328
29/64	4-3/16	5-5/8	334-3529	334-4529	234-9329
15/32	4-5/16	5-3/4	334-3530	334-4530	234-9330
31/64	4-3/8	5-7/8	334-3531	334-4531	234-9331
1/2	4-1/2	6	334-3532	334-4532	234-9332
33/64	4-13/16	6-5/8	334-3533	334-4533	234-9333
17/32	4-13/16	6-5/8	334-3534	334-4534	234-9334
35/64	4-13/16	6-5/8	334-3535	334-4535	234-9335
9/16	4-13/16	6-5/8	334-3536	334-4536	234-9336
37/64	4-13/16	6-5/8	334-3537	334-4537	234-9337
19/32	5-3/16	7-1/8	334-3538	334-4538	234-9338
39/64	5-3/16	7-1/8	334-3539	334-4539	234-9339
5/8	5-3/16	7-1/8	334-3540	334-4540	234-9340
41/64	5-3/16	7-1/8	334-3541	334-4541	234-9341
21/32	5-3/16	7-1/8	334-3542	334-4542	234-9342
43/64	5-5/8	7-5/8	334-3543	334-4543	234-9343
11/16	5-5/8	7-5/8	334-3544	334-4544	234-9344
3/4	5-5/8	7-5/8	334-3548	334-4548	234-9348



Fast Spiral



Slow Spiral



Left Hand

Number Sizes

Size	Flute Length	OAL	Fast Order No.	Slow Order No.	Left Hand Order No.
#1	2-5/8"	3-7/8"	334-3601	334-4601	234-9501
#2	2-5/8	3-7/8	334-3602	334-4602	234-9502
#3	2-1/2	3-3/4	334-3603	334-4603	234-9503
#4	2-1/2	3-3/4	334-3604	334-4604	234-9504
#5	2-1/2	3-3/4	334-3605	334-4605	234-9505
#6	2-1/2	3-3/4	334-3606	334-4606	234-9506
#7	2-7/16	3-5/8	334-3607	334-4607	234-9507
#8	2-7/16	3-5/8	334-3608	334-4608	234-9508
#9	2-7/16	3-5/8	334-3609	334-4609	234-9509
#10	2-7/16	3-5/8	334-3610	334-4610	234-9510
#11	2-5/16	3-1/2	334-3611	334-4611	234-9511
#12	2-5/16	3-1/2	334-3612	334-4612	234-9512
#13	2-5/16	3-1/2	334-3613	334-4613	234-9513
#14	2-3/16	3-3/8	334-3614	334-4614	234-9514
#15	2-3/16	3-3/8	334-3615	334-4615	234-9515
#16	2-3/16	3-3/8	334-3616	334-4616	234-9516
#17	2-3/16	3-3/8	334-3617	334-4617	234-9517
#18	2-1/8	3-1/4	334-3618	334-4618	234-9518
#9	2-1/8	3-1/4	334-3619	334-4619	234-9519
#20	2-1/8	3-1/4	334-3620	334-4620	234-9520
#21	2-1/8	3-1/4	334-3621	334-4621	234-9521
#22	2	3-1/8	334-3622	334-4622	234-9522
#23	2	3-1/8	334-3623	334-4623	234-9523
#24	2	3-1/8	334-3624	334-4624	234-9524
#25	1-7/8	3	334-3625	334-4625	234-9525
#26	1-7/8	3	334-3626	334-4626	234-9526
#27	1-7/8	3	334-3627	334-4627	234-9527
#28	1-3/4	2-7/8	334-3628	334-4628	234-9528
#29	1-3/4	2-7/8	334-3629	334-4629	234-9529
#30	1-5/8	2-3/4	334-3630	334-4630	234-9530
#31	1-5/8	2-3/4	334-3631	334-4631	234-9531
#32	1-5/8	2-3/4	334-3632	334-4632	234-9532
#33	1-1/2	2-5/8	334-3633	334-4633	234-9533
#34	1-1/2	2-5/8	334-3634	334-4634	234-9534
#35	1-1/2	2-5/8	334-3635	334-4635	234-9535
#36	1-7/16	2-1/2	334-3636	334-4636	234-9536
#37	1-7/16	2-1/2	334-3637	334-4637	234-9537
#38	1-7/16	2-1/2	334-3638	334-4638	234-9538
#39	1-3/8	2-3/8	334-3639	334-4639	234-9539
#40	1-3/8	2-3/8	334-3640	334-4640	234-9540
#41	1-3/8	2-3/8	334-3641	334-4641	234-9541
#42	1-1/4	2-1/4	334-3642	334-4642	234-9542
#43	1-1/4	2-1/4	334-3643	334-4643	234-9543
#44	1-1/8	2-1/8	334-3644	334-4644	234-9544
#45	1-1/8	2-1/8	334-3645	334-4645	234-9545
#46	1-1/8	2-1/8	334-3646	334-4646	234-9546
#47	1	2	334-3647	334-4647	234-9547
#48	1	2	334-3648	334-4648	234-9548
#49	1	2	334-3649	334-4649	234-9549
#50	1	2	334-3650	334-4650	234-9550
#51	1	2	334-3651	334-4651	234-9551
#52	7/8	1-7/8	334-3652	334-4652	234-9552
#53	7/8	1-7/8	334-3653	334-4653	234-9553
#54	7/8	1-7/8	334-3654	334-4654	234-9554
#55	7/8	1-7/8	334-3655	334-4655	234-9555
#56	3/4	1-3/4	334-3656	334-4656	234-9556
#57	3/4	1-3/4	334-3657	334-4657	234-9557
#58	11/16	1-5/8	334-3658	334-4658	234-9558
#59	11/16	1-5/8	334-3659	334-4659	234-9559
#60	11/16	1-5/8	334-3660	334-4660	234-9560
#61	11/16	1-5/8	334-3661	334-4661	234-9561
#62	5/8	1-1/2	334-3662	334-4662	234-9562
#63	5/8	1-1/2	334-3663	334-4663	234-9563
#64	5/8	1-1/2	334-3664	334-4664	234-9564
#65	5/8	1-1/2	334-3665	334-4665	234-9565
#66	1/2	1-3/8	334-3666	334-4666	234-9566
#67	1/2	1-3/8	334-3667	334-4667	234-9567
#68	1/2	1-3/8	334-3668	334-4668	234-9568
#69	1/2	1-3/8	334-3669	334-4669	234-9569
#70	3/8	1-1/4	334-3670	334-4670	234-9570
#71	3/8	1-1/4	334-3671	334-4671	234-9571
#72	5/16	1-1/8	334-3672	334-4672	234-9572
#73	5/16	1-1/8	334-3673	334-4673	234-9573
#74	1/4	1	334-3674	334-4674	234-9574
#75	1/4	1	334-3675	334-4675	234-9575
#76	3/16	7/8	334-3676	334-4676	234-9576
#77	3/16	7/8	334-3677	334-4677	234-9577
#78	3/16	7/8	334-3678	334-4678	234-9578
#79	1/8	3/4	334-3679	334-4679	234-9579
#80	1/8	3/4	334-3680	334-4680	234-9580

Screw Machine Drills 磨制美标短型麻花钻

Ground, 135° Split Point, Right Hand

- Primarily for use in screw machines.
- Ideal medium duty portable or machine drilling of low tensile strength materials.
- 135 deg split point drills are self-centering and reduce "walking" at the drill point.
- Heavy-duty-short length provides increased rigidity.



Fractional Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	M35 Cobalt Ground Order No.
3/64	1/2"	1-3/8	334-1003	330-1003
1/16	5/8	1-5/8	334-1004	330-1004
5/64	11/16	1-11/16	334-1005	330-1005
3/32	3/4	1-3/4	334-1006	330-1006
7/64	13/16	1-13/16	334-1007	330-1007
1/8	7/8	1-7/8	334-1008	330-1008
9/64	15/16	1-15/16	334-1009	330-1009
5/32	1	2-1/16	334-1010	330-1010
11/64	1-1/16	2-1/8	334-1011	330-1011
3/16	1-1/8	2-3/16	334-1012	330-1012
13/64	1-3/16	2-1/4	334-1013	330-1013
7/32	1-1/4	2-3/8	334-1014	330-1014
15/64	1-5/16	2-7/16	334-1015	330-1015
1/4	1-3/8	2-1/2	334-1016	330-1016
17/64	1-7/16	2-5/8	334-1017	330-1017
9/32	1-1/2	2-11/16	334-1018	330-1018
19/64	1-9/16	2-3/4	334-1019	330-1019
5/16	1-5/8	2-13/16	334-1020	330-1020
21/64	1-11/16	2-15/16	334-1021	330-1021
11/32	1-11/16	3	334-1022	330-1022
23/64	1-3/4	3-1/16	334-1023	330-1023
3/8	1-13/16	3-1/8	334-1024	330-1024
25/64	1-7/8	3-1/4	334-1025	330-1025
13/32	1-15/16	3-5/16	334-1026	330-1026
27/64	2	3-3/8	334-1027	330-1027
7/16	2-1/16	3-7/16	334-1028	330-1028
29/64	2-1/8	3-9/16	334-1029	330-1029
15/32	2-1/8	3-5/8	334-1030	330-1030
31/64	2-3/16	3-11/16	334-1031	330-1031
1/2	2-1/4	3-3/4	334-1032	330-1032
33/64	2-3/8	3-7/8	334-1033	330-1033
17/32	2-3/8	3-7/8	334-1034	330-1034
35/64	2-1/2	4	334-1035	330-1035
9/16	2-1/2	4	334-1036	330-1036
37/64	2-5/8	4-1/8	334-1037	330-1037
19/32	2-5/8	4-1/8	334-1038	330-1038
39/64	2-3/4	4-1/4	334-1039	330-1039
5/8	2-3/4	4-1/4	334-1040	330-1040
41/64	2-7/8	4-1/2	334-1041	330-1041
21/32	2-7/8	4-1/2	334-1042	330-1042
43/64	2-7/8	4-5/8	334-1043	330-1043
11/16	2-7/8	4-5/8	334-1044	330-1044
45/64	3	4-3/4	334-1045	330-1045
23/32	3	4-3/4	334-1046	330-1046
47/64	3-1/8	5	334-1047	330-1047
3/4	3-1/8	5	334-1048	330-1048
49/64	3-1/4	5-1/8	334-1049	330-1049
25/32	3-1/4	5-1/8	334-1050	330-1050
51/64	3-3/8	5-1/4	334-1051	330-1051
13/16	3-3/8	5-1/4	334-1052	330-1052
53/64	3-1/2	5-3/8	334-1053	330-1053
27/32	3-1/2	5-3/8	334-1054	330-1054
55/64	3-1/2	5-1/2	334-1055	330-1055
7/8	3-1/2	5-1/2	334-1056	330-1056
57/64	3-5/8	5-5/8	334-1057	330-1057
29/32	3-5/8	5-5/8	334-1058	330-1058

Fractional Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	M35 Cobalt Ground Order No.
59/64"	3-3/4"	5-3/4"	334-1059	330-1059
15/16	3-3/4	5-3/4	334-1060	330-1060
61/64	3-7/8	5-7/8	334-1061	330-1061
31/32	3-7/8	5-7/8	334-1062	330-1062
63/64	4	6	334-1063	330-1063
1	4	6	334-1100	330-1064
1-1/16	4	6-1/4	334-1104	330-1104
1-1/8	4	6-3/8	334-1108	330-1108
1-3/16	4-1/4	6-5/8	334-1112	330-1112
1-1/4	4-3/8	6-3/4	334-1116	330-1116
1-5/16	4-3/8	7	334-1120	330-1120
1-3/8	4-1/2	7-1/8	334-1124	330-1124
1-7/16	4-3/4	7-3/8	334-1128	330-1128
1-1/2	4-7/8	7-1/2	334-1132	330-1132
1-9/16	4-7/8	7-3/4	334-1136	330-1136
1-5/8	4-7/8	7-3/4	334-1140	330-1140
1-11/16	5-1/8	8	334-1144	330-1144
1-3/4	5-1/8	8	334-1148	330-1148
1-13/16	5-3/8	8-1/4	334-1152	330-1152
1-7/8	5-3/8	8-1/4	334-1156	330-1156
1-15/16	5-5/8	8-1/2	334-1160	330-1160
2	5-5/8	8-1/2	334-1164	330-1164

Letter Sizes

Size	Flute Length	OAL	HSS Black Oxide Order No.	M35 Cobalt Ground Order No.
A	1-5/16"	2-7/16"	334-1301	330-1301
B	1-3/8	2-1/2	334-1302	330-1302
C	1-3/8	2-1/2	334-1303	330-1303
D	1-3/8	2-1/2	334-1304	330-1304
E	1-3/8	2-1/2	334-1305	330-1305
F	1-7/16	2-5/8	334-1306	330-1306
G	1-7/16	2-5/8	334-1307	330-1307
H	1-1/2	2-11/16	334-1308	330-1308
I	1-1/2	2-11/16	334-1309	330-1309
J	1-1/2	2-11/16	334-1310	330-1310
K	1-1/2	2-11/16	334-1311	330-1311
L	1-9/16	2-3/4	334-1312	330-1312
M	1-9/16	2-3/4	334-1313	330-1313
N	1-5/8	2-13/16	334-1314	330-1314
O	1-11/16	2-15/16	334-1315	330-1315
P	1-11/16	2-15/16	334-1316	330-1316
Q	1-11/16	3	334-1317	330-1317
R	1-11/16	3	334-1318	330-1318
S	1-3/4	3-1/16	334-1319	330-1319
T	1-3/4	3-1/16	334-1320	330-1320
U	1-13/16	3-1/8	334-1321	330-1321
V	1-7/8	3-1/4	334-1322	330-1322
W	1-7/8	3-1/4	334-1323	330-1323
X	1-15/16	3-5/16	334-1324	330-1324
Y	1-15/16	3-5/16	334-1325	330-1325
Z	2	3-3/8	334-1326	330-1326

Screw Machine Drills Continued

Ground, 135° Split Point, Right Hand

磨制美标短型麻花钻



Number Sizes

Size	Flute Length	OAL	Ground Black Oxide Order No.	M35 Cobalt Ground Order No.
#1	1-5/16"	2-7/16"	334-1201	330-1201
#2	1-5/16	2-7/16	334-1202	330-1202
#3	1-1/4	2-3/8	334-1203	330-1203
#4	1-1/4	2-3/8	334-1204	330-1204
#5	1-1/4	2-3/8	334-1205	330-1205
#6	1-1/4	2-3/8	334-1206	330-1206
#7	1-3/16	2-1/4	334-1207	330-1207
#8	1-3/16	2-1/4	334-1208	330-1208
#9	1-3/16	2-1/4	334-1209	330-1209
#10	1-3/16	2-1/4	334-1210	330-1210
#11	1-3/16	2-1/4	334-1211	330-1211
#12	1-3/16	2-1/4	334-1212	330-1212
#13	1-1/8	2-3/16	334-1213	330-1213
#14	1-1/8	2-3/16	334-1214	330-1214
#15	1-1/8	2-3/16	334-1215	330-1215
#16	1-1/8	2-3/16	334-1216	330-1216
#17	1-1/8	2-3/16	334-1217	330-1217
#18	1-1/16	2-1/8	334-1218	330-1218
#19	1-1/16	2-1/8	334-1219	330-1219
#20	1-1/16	2-1/8	334-1220	330-1220
#21	1-1/16	2-1/8	334-1221	330-1221
#22	1-1/16	2-1/8	334-1222	330-1222
#23	1	2-1/16	334-1223	330-1223
#24	1	2-1/16	334-1224	330-1224
#25	1	2-1/16	334-1225	330-1225
#26	1	2-1/16	334-1226	330-1226
#27	1	2-1/16	334-1227	330-1227
#28	15/16	1-15/16	334-1228	330-1228
#29	15/16	1-15/16	334-1229	330-1229
#30	15/16	1-15/16	334-1230	330-1230
#31	7/8	1-7/8	334-1231	330-1231
#32	7/8	1-7/8	334-1232	330-1232
#33	7/8	1-7/8	334-1233	330-1233
#34	7/8	1-7/8	334-1234	330-1234
#35	7/8	1-7/8	334-1235	330-1235
#36	13/16	1-13/16	334-1236	330-1236
#37	13/16	1-13/16	334-1237	330-1237
#38	13/16	1-13/16	334-1238	330-1238
#39	13/16	1-13/16	334-1239	330-1239
#40	13/16	1-13/16	334-1240	330-1240
#41	13/16	1-13/16	334-1241	330-1241
#42	3/4	1-3/4	334-1242	330-1242
#43	3/4	1-3/4	334-1243	330-1243
#44	3/4	1-3/4	334-1244	330-1244
#45	3/4	1-3/4	334-1245	330-1245
#46	3/4	1-3/4	334-1246	330-1246
#47	3/4	1-3/4	334-1247	330-1247
#48	11/16	1-11/16	334-1248	330-1248
#49	11/16	1-11/16	334-1249	330-1249
#50	11/16	1-11/16	334-1250	330-1250
#51	11/16	1-11/16	334-1251	330-1251
#52	11/16	1-11/16	334-1252	330-1252
#53	5/8	1-5/8	334-1253	330-1253
#54	5/8	1-5/8	334-1254	330-1254
#55	5/8	1-5/8	334-1255	330-1255
#56	1/2	1-3/8	334-1256	330-1256
#57	1/2	1-3/8	334-1257	330-1257
#58	1/2	1-3/8	334-1258	330-1258
#59	1/2	1-3/8	334-1259	330-1259
#60	1/2	1-3/8	334-1260	330-1260

Taper Length Drills 全磨美标锥长度钻

High Speed Steel, Right Hand, Black Oxide

- Designed for general purpose drilling where a length longer than jobber drill length is required.
- Performs very well in a wide range of materials.
- Shank diameter is the same as drill diameter.



M35, Right Hand

- Taper length is a longer straight shank general purpose drill used where a deeper hole is required. Shank size is the same as the diameter of the drill
- Cobalt drills are more durable than HSS. When used in applications that generate higher temperatures, cobalt retains its strength and hardness while offering more abrasion resistance than HSS.
- Fore use in high-tensile alloys, titanium, Inconel and highnickel stainless steels.



Fractional Sizes

Size	Flute Length	OAL	HSS 118° Order No.	M35-135° Order No.
1/64"	5/16"	1-1/2"	310-2001	310-8001
1/32	3/4	2	310-2002	310-8002
3/64	1-1/8	2-1/4	310-2003	310-8003
1/16	1-3/4	3	310-2004	310-8004
5/64	2	3-3/4	310-2005	310-8005
3/32	2-1/4	4-1/4	310-2006	310-8006
7/64	2-1/2	4-5/8	310-2007	310-8007
1/8	2-3/4	5-1/8	310-2008	310-8008
9/64	3	5-3/8	310-2009	310-8009
5/32	3	5-3/8	310-2010	310-8010
11/64	3-3/8	5-3/4	310-2011	310-8011
3/16	3-3/8	5-3/4	310-2012	310-8012
13/64	3-5/8	6	310-2013	310-8013
7/32	3-5/8	6	310-2014	310-8014
15/64	3-3/4	6-1/8	310-2015	310-8015
1/4	3-3/4	6-1/8	310-2016	310-8016
17/64	3-7/8	6-1/4	310-2017	310-8017
9/32	3-7/8	6-1/4	310-2018	310-8018
19/64	4	6-3/8	310-2019	310-8019
5/16	4	6-3/8	310-2020	310-8020
21/64	4-1/8	6-1/2	310-2021	310-8021
11/32	4-1/8	6-1/2	310-2022	310-8022
23/64	4-1/4	6-3/4	310-2023	310-8023
3/8	4-1/4	6-3/4	310-2024	310-8024
25/64	4-3/8	7	310-2025	310-8025
13/32	4-3/8	7	310-2026	310-8026
27/64	4-5/8	7-1/4	310-2027	310-8027
7/16	4-5/8	7-1/4	310-2028	310-8028
29/64	4-3/4	7-1/2	310-2029	310-8029
15/32	4-3/4	7-1/2	310-2030	310-8030
31/64	4-3/4	7-3/4	310-2031	310-8031
1/2"	4-3/4	7-3/4	310-2032	310-8032
33/64	4-3/4	8	310-2033	310-8033
17/32	4-3/4	8	310-2034	310-8034
35/64	4-7/8	8-1/4	310-2035	310-8035
9/16	4-7/8	8-1/4	310-2036	310-8036
37/64	4-7/8	8-3/4	310-2037	310-8037
19/32	4-7/8	8-3/4	310-2038	310-8038
39/64	4-7/8	8-3/4	310-2039	310-8039
5/8	4-7/8	8-3/4	310-2040	310-8040
41/64	5-1/8	9	310-2041	310-8041
21/32	5-1/8	9	310-2042	310-8042
43/64	5-3/8	9-1/4	310-2043	310-8043
11/16	5-3/8	9-1/4	310-2044	310-8044
45/64	5-5/8	9-1/2	310-2045	310-8045
23/32	5-5/8	9-1/2	310-2046	310-8046
47/64	5-7/8	9-3/4	310-2047	310-8047
3/4	5-7/8	9-3/4	310-2048	310-8048
49/64	6	9-7/8	310-2049	

Size	Flute Length	OAL	HSS 118° Order No.
25/32	6	9-7/8	310-2050
51/64	6-1/8"	10	310-2051
13/16	6-1/8	10	310-2052
53/64	6-1/8	10	310-2053
27/32	6-1/8	10	310-2054
55/64	6-1/8	10	310-2055
7/8	6-1/8	10	310-2056
57/64	6-1/8	10	310-2057
29/32	6-1/8	10	310-2058
59/64	6-1/8	10-3/4	310-2059
15/16	6-1/8	10-3/4	310-2060
61/64	6-3/8	11	310-2061
31/32	6-3/8	11	310-2062
63/64"	6-3/8	11	310-2063
1	6-3/8	11	310-2064
1-1/64	6-1/2	11-1/8	310-2101
1-1/32	6-1/2	11-1/8	310-2102
1-3/64	6-5/8	11-1/4	310-2103
1-1/16	6-5/8	11-1/4	310-2104
1-5/64	6-7/8	11-1/2	310-2105
1-3/32	6-7/8	11-1/2	310-2106
1-7/64	7-1/8	11-3/4	310-2107
1-1/8	7-1/8	11-3/4	310-2108
1-9/64	7-1/4	11-7/8	310-2109
1-5/32	7-1/4	11-7/8	310-2110
1-11/64	7-3/8	12	310-2111
1-3/16	7-3/8	12	310-2112
1-13/64	7-1/2	12-1/8	310-2113
1-7/32	7-1/2	12-1/8	310-2114
1-15/64	7-7/8	12-1/2	310-2115
1-1/4	7-7/8	12-1/2	310-2116
1-9/32	8-1/2	14-1/8	310-2118
1-5/16	8-5/8	14-1/4	310-2120
1-11/32	8-3/4	14-3/8	310-2122
1-3/8	8-7/8	14-1/2	310-2124
1-13/32	9	14-5/8	310-2126
1-7/16	9-1/8	14-3/4	310-2128
1-15/32	9-1/4	14-7/8	310-2130
1-1/2	9-3/8	15	310-2132
1-9/16	9-5/8	15-1/4	310-2136
1-5/8	9-7/8	15-5/8	310-2140
1-21/32	9-7/8	15-5/8	310-2142
1-11/16	10	15-3/4	310-2144
1-3/4	10-1/2	16-1/4	310-2148
1-13/16	10-1/2	16-1/4	310-2152
1-7/8	10-3/4	16-1/2	310-2156
1-15/16	10-3/4	16-5/8	310-2160
2	10-3/4	16-5/8	310-2164

Taper Length Drills Continued

全磨美标锥长度钻

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- Designed for general purpose drilling where a length longer than jobber drill length is required.
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M35, Right Hand

- Taper length is a longer straight shank general purpose drill used where a deeper hole is required. Shank size is the same as the diameter of the drill
- Cobalt drills are more durable than HSS. When used in applications that generate higher temperatures, cobalt retains its strength and hardness while offering more abrasion resistance than HSS.
- Fore use in high-tensile alloys, titanium, Inconel and highnickel stainless steels.



Number Sizes

Size	Flute Length	OAL	HSS 118° Order No.	M35-135° Order No.
#1	3-3/4"	6-1/8"	310-2401	310-8401
#2	3-3/4	6-1/8	310-2402	310-8402
#3	3-5/8	6	310-2403	310-8403
#4	3-5/8	6	310-2404	310-8404
#5	3-5/8	6	310-2405	310-8405
#6	3-5/8	6	310-2406	310-8406
#7	3-5/8	6	310-2407	310-8407
#8	3-5/8	6	310-2408	310-8408
#9	3-5/8	6	310-2409	310-8409
#10	3-5/8	6	310-2410	310-8410
#11	3-5/8	6	310-2411	310-8411
#12	3-5/8	6	310-2412	310-8412
#13	3-3/8	5-3/4	310-2413	310-8413
#14	3-3/8	5-3/4	310-2414	310-8414
#15	3-3/8	5-3/4	310-2415	310-8415
#16	3-3/8	5-3/4	310-2416	310-8416
#17	3-3/8	5-3/4	310-2417	310-8417
#18	3-3/8	5-3/4	310-2418	310-8418
#19	3-3/8	5-3/4	310-2419	310-8419
#20	3-3/8	5-3/4	310-2420	310-8420
#21	3-3/8	5-3/4	310-2421	310-8421
#22	3-3/8	5-3/4	310-2422	310-8422
#23	3	5-3/8	310-2423	310-8423
#24	3	5-3/8	310-2424	310-8424
#25	3	5-3/8	310-2425	310-8425
#26	3	5-3/8	310-2426	310-8426
#27	3	5-3/8	310-2427	310-8427
#28	3	5-3/8	310-2428	310-8428
#29	3	5-3/8	310-2429	310-8429
#30	3	5-3/8	310-2430	310-8430
#31	2-3/4	5-1/8	310-2431	310-8431
#32	2-3/4	5-1/8	310-2432	310-8432
#33	2-3/4	5-1/8	310-2433	310-8433
#34	2-3/4	5-1/8	310-2434	310-8434
#35	2-3/4	5-1/8	310-2435	310-8435
#36	2-1/2	4-5/8	310-2436	310-8436
#37	2-1/2	4-5/8	310-2437	310-8437
#38	2-1/2	4-5/8	310-2438	310-8438
#39	2-1/2	4-5/8	310-2439	310-8439
#40	2-1/2	4-5/8	310-2440	310-8440
#41	2-1/2	4-5/8	310-2441	310-8441
#42	2-1/4	4-1/4	310-2442	310-8442
#43	2-1/4	4-1/4	310-2443	310-8443
#44	2-1/4	4-1/4	310-2444	310-8444
#45	2-1/4	4-1/4	310-2445	310-8445
#46	2-1/4	4-1/4	310-2446	310-8446

Size	Flute Length	OAL	HSS 118° Order No.	M35-135° Order No.
#47	2-1/4	4-1/4	310-2447	310-8447
#48	2	3-3/4	310-2448	310-8448
#49	2	3-3/4	310-2449	310-8449
#50	2	3-3/4	310-2450	310-8450
#51	2	3-3/4	310-2451	310-8451
#52	2	3-3/4	310-2452	310-8452
#53	1-3/4	3	310-2453	310-8453
#54	1-3/4	3	310-2454	310-8454
#55	1-3/4	3	310-2455	310-8455
#56	1-1/8	2-1/4	310-2456	310-8456
#57	1-1/8	2-1/4	310-2457	310-8457
#58	1-1/8	2-1/4	310-2458	310-8458
#59	1-1/8	2-1/4	310-2459	310-8459
#60	1-1/8	2-1/4	310-2460	310-8460

Letter Sizes

Size	Flute Length	OAL	HSS 118° Order No.	M35-135° Order No.
A	3-3/4"	6-1/8"	310-2301	310-8301
B	3-3/4	6-1/8	310-2302	310-8302
C	3-3/4	6-1/8	310-2303	310-8303
D	3-3/4	6-1/8	310-2304	310-8304
E	3-3/4	6-1/8	310-2305	310-8305
F	3-7/8	6-1/4	310-2306	310-8306
G	3-7/8	6-1/4	310-2307	310-8307
H	3-7/8	6-1/4	310-2308	310-8308
I	3-7/8	6-1/4	310-2309	310-8309
J	3-7/8	6-1/4	310-2310	310-8310
K	3-7/8	6-1/4	310-2311	310-8311
L	4	6-3/8	310-2312	310-8312
M	4	6-3/8	310-2313	310-8313
N	4	6-3/8	310-2314	310-8314
O	4-1/8	6-1/2	310-2315	310-8315
P	4-1/8	6-1/2	310-2316	310-8316
Q	4-1/8	6-1/2	310-2317	310-8317
R	4-1/8	6-1/2	310-2318	310-8318
S	4-1/4	6-3/4	310-2319	310-8319
T	4-1/4	6-3/4	310-2320	310-8320
U	4-1/4	6-3/4	310-2321	310-8321
V	4-3/8	7	310-2322	310-8322
W	4-3/8	7	310-2323	310-8323
X	4-3/8	7	310-2324	310-8324
Y	4-3/8	7	310-2325	310-8325
Z	4-5/8	7-1/4	310-2326	310-8326

DIN338 HSS Twist Drills

德标 338 全磨麻花钻



Size (mm)	Flute Length (mm)	OAL (mm)	Rolled Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.	Size (mm)	Flute Length (mm)	OAL (mm)	Rolled Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
0.20	2.5	19	201-0020	206-0020	207-0020	3.90	43	75	201-0390	206-0390	207-0390
0.25	3	19	201-0025	206-0025	207-0025	3.95	43	75	201-0395	206-0395	207-0395
0.30	3	19	201-0030	206-0030	207-0030	4.00	43	75	201-0400	206-0400	207-0400
0.35	4	19	201-0035	206-0035	207-0035	4.05	43	75	201-0405	206-0405	207-0405
0.40	5	20	201-0040	206-0040	207-0040	4.10	43	75	201-0410	206-0410	207-0410
0.45	5	20	201-0045	206-0045	207-0045	4.15	43	75	201-0415	206-0415	207-0415
0.50	6	22	201-0050	206-0050	207-0050	4.20	43	75	201-0420	206-0420	207-0420
0.55	7	24	201-0055	206-0055	207-0055	4.25	43	75	201-0425	206-0425	207-0425
0.60	7	24	201-0060	206-0060	207-0060	4.30	47	80	201-0430	206-0430	207-0430
0.65	8	26	201-0065	206-0065	207-0065	4.35	47	80	201-0435	206-0435	207-0435
0.70	9	28	201-0070	206-0070	207-0070	4.40	47	80	201-0440	206-0440	207-0440
0.75	9	28	201-0075	206-0075	207-0075	4.45	47	80	201-0445	206-0445	207-0445
0.80	10	30	201-0080	206-0080	207-0080	4.50	47	80	201-0450	206-0450	207-0450
0.85	11	32	201-0085	206-0085	207-0085	4.55	47	80	201-0455	206-0455	207-0455
0.90	11	32	201-0090	206-0090	207-0090	4.60	47	80	201-0460	206-0460	207-0460
0.95	11	32	201-0095	206-0095	207-0095	4.65	47	80	201-0465	206-0465	207-0465
0.98	12	34	201-0098	206-0098	207-0098	4.70	47	80	201-0470	206-0470	207-0470
1.00	12	34	201-0100	206-0100	207-0100	4.75	47	80	201-0475	206-0475	207-0475
1.05	12	34	201-0105	206-0105	207-0105	4.80	52	86	201-0480	206-0480	207-0480
1.10	14	36	201-0110	206-0110	207-0110	4.85	52	86	201-0485	206-0485	207-0485
1.15	14	36	201-0115	206-0115	207-0115	4.90	52	86	201-0490	206-0490	207-0490
1.20	16	38	201-0120	206-0120	207-0120	4.95	52	86	201-0495	206-0495	207-0495
1.25	16	38	201-0125	206-0125	207-0125	5.00	52	86	201-0500	206-0500	207-0500
1.30	16	38	201-0130	206-0130	207-0130	5.10	52	86	201-0510	206-0510	207-0510
1.35	18	40	201-0135	206-0135	207-0135	5.20	52	86	201-0520	206-0520	207-0520
1.40	18	40	201-0140	206-0140	207-0140	5.25	52	86	201-0525	206-0525	207-0525
1.45	18	40	201-0145	206-0145	207-0145	5.30	52	86	201-0530	206-0530	207-0530
1.50	18	40	201-0150	206-0150	207-0150	5.40	57	93	201-0540	206-0540	207-0540
1.55	20	43	201-0155	206-0155	207-0155	5.50	57	93	201-0550	206-0550	207-0550
1.60	20	43	201-0160	206-0160	207-0160	5.60	57	93	201-0560	206-0560	207-0560
1.65	20	43	201-0165	206-0165	207-0165	5.70	57	93	201-0570	206-0570	207-0570
1.70	20	43	201-0170	206-0170	207-0170	5.75	57	93	201-0575	206-0575	207-0575
1.75	22	48	201-0175	206-0175	207-0175	5.80	57	93	201-0580	206-0580	207-0580
1.80	22	48	201-0180	206-0180	207-0180	5.90	57	93	201-0590	206-0590	207-0590
1.85	22	48	201-0185	206-0185	207-0185	6.00	57	93	201-0600	206-0600	207-0600
1.90	22	48	201-0190	206-0190	207-0190	6.10	63	101	201-0610	206-0610	207-0610
1.95	24	49	201-0195	206-0195	207-0195	6.20	63	101	201-0620	206-0620	207-0620
2.00	24	49	201-0200	206-0200	207-0200	6.25	63	101	201-0625	206-0625	207-0625
2.05	24	49	201-0205	206-0205	207-0205	6.30	63	101	201-0630	206-0630	207-0630
2.10	24	49	201-0210	206-0210	207-0210	6.35	63	101	201-0635	206-0635	207-0635
2.15	27	53	201-0215	206-0215	207-0215	6.40	63	101	201-0640	206-0640	207-0640
2.20	27	53	201-0220	206-0220	207-0220	6.50	63	101	201-0650	206-0650	207-0650
2.25	27	53	201-0225	206-0225	207-0225	6.60	63	101	201-0660	206-0660	207-0660
2.30	27	53	201-0230	206-0230	207-0230	6.70	63	101	201-0670	206-0670	207-0670
2.35	27	53	201-0235	206-0235	207-0235	6.75	69	109	201-0675	206-0675	207-0675
2.40	30	57	201-0240	206-0240	207-0240	6.80	69	109	201-0680	206-0680	207-0680
2.45	30	57	201-0245	206-0245	207-0245	6.90	69	109	201-0690	206-0690	207-0690
2.50	30	57	201-0250	206-0250	207-0250	7.00	69	109	201-0700	206-0700	207-0700
2.55	30	57	201-0255	206-0255	207-0255	7.10	69	109	201-0710	206-0710	207-0710
2.60	30	57	201-0260	206-0260	207-0260	7.20	69	109	201-0720	206-0720	207-0720
2.65	30	57	201-0265	206-0265	207-0265	7.25	69	109	201-0725	206-0725	207-0725
2.70	33	61	201-0270	206-0270	207-0270	7.30	69	109	201-0730	206-0730	207-0730
2.75	33	61	201-0275	206-0275	207-0275	7.40	69	109	201-0740	206-0740	207-0740
2.80	33	61	201-0280	206-0280	207-0280	7.50	69	109	201-0750	206-0750	207-0750
2.85	33	61	201-0285	206-0285	207-0285	7.60	75	117	201-0760	206-0760	207-0760
2.90	33	61	201-0290	206-0290	207-0290	7.70	75	117	201-0770	206-0770	207-0770
2.95	33	61	201-0295	206-0295	207-0295	7.75	75	117	201-0775	206-0775	207-0775
3.00	33	61	201-0300	206-0300	207-0300	7.80	75	117	201-0780	206-0780	207-0780
3.05	36	65	201-0305	206-0305	207-0305	7.90	75	117	201-0790	206-0790	207-0790
3.10	36	65	201-0310	206-0310	207-0310	8.00	75	117	201-0800	206-0800	207-0800
3.15	36	65	201-0315	206-0315	207-0315	8.10	75	117	201-0810	206-0810	207-0810
3.20	36	65	201-0320	206-0320	207-0320	8.20	75	117	201-0820	206-0820	207-0820
3.25	36	65	201-0325	206-0325	207-0325	8.25	75	117	201-0825	206-0825	207-0825
3.30	36	65	201-0330	206-0330	207-0330	8.30	75	117	201-0830	206-0830	207-0830
3.35	36	65	201-0335	206-0335	207-0335	8.40	75	117	201-0840	206-0840	207-0840
3.40	39	70	201-0340	206-0340	207-0340	8.50	75	117	201-0850	206-0850	207-0850
3.45	39	70	201-0345	206-0345	207-0345	8.60	81	125	201-0860	206-0860	207-0860
3.50	39	70	201-0350	206-0350	207-0350	8.70	81	125	201-0870	206-0870	207-0870
3.55	39	70	201-0355	206-0355	207-0355	8.75	81	125	201-0875	206-0875	207-0875
3.60	39	70	201-0360	206-0360	207-0360	8.80	81	125	201-0880	206-0880	207-0880
3.65	39	70	201-0365	206-0365	207-0365	8.90	81	125	201-0890	206-0890	207-0890
3.70	39	70	201-0370	206-0370	207-0370	9.00	81	125	201-0900	206-0900	207-0900
3.75	39	70	201-0375	206-0375	207-0375	9.10	81	125	201-0910	206-0910	207-0910
3.80	43	75	201-0380	206-0380	207-0380	9.20	81	125	201-0920	206-0920	207-0920
3.85	43	75	201-0385	206-0385	207-0385	9.25	81	125	201-0925	206-0925	207-0925

DIN338 HSS Twist Drills Continued

德标 338 全磨麻花钻



Size (mm)	Flute Length (mm)	OAL (mm)	Rolled Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.	Size (mm)	Flute Length (mm)	OAL (mm)	Rolled Black Oxide Order No.	Ground Bright Order No.	Ground TiN-Coated Order No.
9.30	81	125	201-0930	206-0930	207-0930	12.40	101	151	201-1240	206-1240	207-1240
9.40	81	125	201-0940	206-0940	207-0940	12.50	101	151	201-1250	206-1250	207-1250
9.50	81	125	201-0950	206-0950	207-0950	12.60	101	151	201-1260	206-1260	207-1260
9.60	87	133	201-0960	206-0960	207-0960	12.70	101	151	201-1270	206-1270	207-1270
9.70	87	133	201-0970	206-0970	207-0970	12.75	101	151	201-1275	206-1275	207-1275
9.75	87	133	201-0975	206-0975	207-0975	12.80	101	151	201-1280	206-1280	207-1280
9.80	87	133	201-0980	206-0980	207-0980	12.90	101	151	201-1290	206-1290	207-1290
9.90	87	133	201-0990	206-0990	207-0990	13.00	101	151	201-1300	206-1300	207-1300
10.00	87	133	201-1000	206-1000	207-1000	13.10	101	151	201-1310	206-1310	207-1310
10.10	87	133	201-1010	206-1010	207-1010	13.20	101	151	201-1320	206-1320	207-1320
10.20	87	133	201-1020	206-1020	207-1020	13.25	108	160	201-1325	206-1325	207-1325
10.25	87	133	201-1025	206-1025	207-1025	13.30	108	160	201-1330	206-1330	207-1330
10.30	87	133	201-1030	206-1030	207-1030	13.40	108	160	201-1340	206-1340	207-1340
10.40	87	133	201-1040	206-1040	207-1040	13.50	108	160	201-1350	206-1350	207-1350
10.50	87	133	201-1050	206-1050	207-1050	13.60	108	160	201-1360	206-1360	207-1360
10.60	94	142	201-1060	206-1060	207-1060	13.70	108	160	201-1370	206-1370	207-1370
10.70	94	142	201-1070	206-1070	207-1070	13.75	108	160	201-1375	206-1375	207-1375
10.75	94	142	201-1075	206-1075	207-1075	13.80	108	160	201-1380	206-1380	207-1380
10.80	94	142	201-1080	206-1080	207-1080	13.90	108	160	201-1390	206-1390	207-1390
10.90	94	142	201-1090	206-1090	207-1090	14.00	108	160	201-1400	206-1400	207-1400
11.00	94	142	201-1100	206-1100	207-1100	14.25	114	169	201-1425	206-1425	207-1425
11.10	94	142	201-1110	206-1110	207-1110	14.50	114	169	201-1450	206-1450	207-1450
11.20	94	142	201-1120	206-1120	207-1120	14.75	114	169	201-1475	206-1475	207-1475
11.25	94	142	201-1125	206-1125	207-1125	15.00	114	169	201-1500	206-1500	207-1500
11.30	94	142	201-1130	206-1130	207-1130	15.25	120	178	201-1525	206-1525	207-1525
11.40	94	142	201-1140	206-1140	207-1140	15.50	120	178	201-1550	206-1550	207-1550
11.50	94	142	201-1150	206-1150	207-1150	15.75	120	178	201-1575	206-1575	207-1575
11.60	94	142	201-1160	206-1160	207-1160	16.00	120	178	201-1600	206-1600	207-1600
11.70	94	142	201-1170	206-1170	207-1170	16.50	125	187	201-1650	206-1650	207-1650
11.75	94	142	201-1175	206-1175	207-1175	17.00	125	187	201-1700	206-1700	207-1700
11.80	94	142	201-1180	206-1180	207-1180	17.50	130	191	201-1750	206-1750	207-1750
11.90	101	151	201-1190	206-1190	207-1190	18.00	130	191	201-1800	206-1800	207-1800
12.00	101	151	201-1200	206-1200	207-1200	18.50	135	198	201-1850	206-1850	207-1850
12.10	101	151	201-1210	206-1210	207-1210	19.00	135	198	201-1900	206-1900	207-1900
12.20	101	151	201-1220	206-1220	207-1220	19.50	140	205	201-1950	206-1950	207-1950
12.25	101	151	201-1225	206-1225	207-1225	20.00	140	205	201-2000	206-2000	207-2000
12.30	101	151	201-1230	206-1230	207-1230						

Drill Guide

For drilling perfect pocket holes in face frames quickly and easily.



Order No. 830-2020

Drill Stop Sets

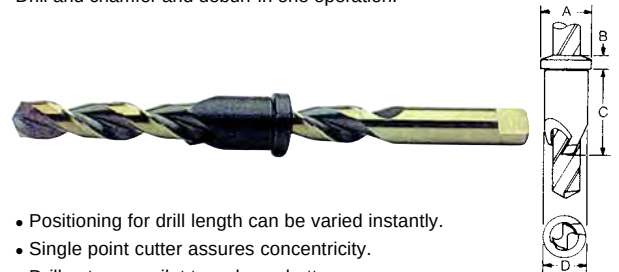
Allows drilling to exact depth. Locks onto the bit for drill press depth precision.



Pieces	Specification	Order No.
7	1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2".	300-0007
4	5/8", 3/4", 7/8", 1"	300-0004

Chamfer Bit

Drill and chamfer and deburr in one operation.



- Positioning for drill length can be varied instantly.
- Single point cutter assures concentricity.
- Drill acts as a pilot to reduce chatter.
- Easily resharpened on any drill grinder without damage to the drill.
- Can provide an additional chamfer diameter to a multi-diameter drill.
- 90° Included angle.
- Drill bit not included.

Drill Size	Dimensions				Order No.
	A	B	C	D	
1/8"	7/16"	1/4"	5/8	5/16"	830-2030

DIN338 Cobalt Jobber Length Drills 德标 338 钴高速钢全磨麻花钻



DIN Length, High Speed Steel, 135° Point, Fully Ground

- For general purpose portable and production drilling.
- Right hand cutting direction.
- Manufactured to DIN length.



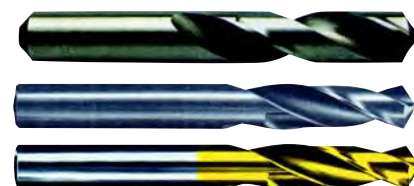
Size (mm)	Flute Length mm(in.)	OAL mm(in.)	Order No.	Size (mm)	Flute Length mm(in.)	OAL mm(in.)	Order No.	Size (mm)	Flute Length mm(in.)	OAL mm(in.)	Order No.
.15	1.50(1/16)	19(3/4)	332-0015	3.00	33.00(1-5/16)	61(2-13/32)	332-0300	9.10	81.00(3-3/16)	125(4-29/32)	332-0910
.16	1.50(1/16)	19(3/4)	332-0016	3.05	33.00(1-5/16)	61(2-13/32)	332-0305	9.20	81.00(3-3/16)	125(4-29/32)	332-0920
.17	1.50(1/16)	19(3/4)	332-0017	3.10	36.00(1-7/16)	65(2-9/16)	332-0310	9.25	81.00(3-3/16)	125(4-29/32)	332-0925
.18	1.50(1/16)	19(3/4)	332-0018	3.15	36.00(1-7/16)	65(2-9/16)	332-0315	9.30	81.00(3-3/16)	125(4-29/32)	332-0930
.19	1.50(1/16)	19(3/4)	332-0019	3.20	36.00(1-7/16)	65(2-9/16)	332-0320	9.40	81.00(3-3/16)	125(4-29/32)	332-0940
.20	2.50(3/32)	19(3/4)	332-0020	3.25	36.00(1-7/16)	65(2-9/16)	332-0325	9.50	81.00(3-3/16)	125(4-29/32)	332-0950
.21	2.50(3/32)	19(3/4)	332-0021	3.30	36.00(1-7/16)	65(2-9/16)	332-0330	9.60	87.00(3-7/16)	133(5-1/4)	332-0960
.22	2.50(3/32)	19(3/4)	332-0022	3.40	39.00(1-17/32)	70(2-3/4)	332-0340	9.70	87.00(3-7/16)	133(5-1/4)	332-0970
.23	2.50(3/32)	19(3/4)	332-0023	3.50	39.00(1-17/32)	70(2-3/4)	332-0350	9.75	87.00(3-7/16)	133(5-1/4)	332-0975
.24	2.50(3/32)	19(3/4)	332-0024	3.60	39.00(1-17/32)	70(2-3/4)	332-0360	9.80	87.00(3-7/16)	133(5-1/4)	332-0980
.25	3.00(1/8)	19(3/4)	332-0025	3.70	39.00(1-17/32)	70(2-3/4)	332-0370	9.90	87.00(3-7/16)	133(5-1/4)	332-0990
.26	3.00(1/8)	19(3/4)	332-0026	3.75	39.00(1-17/32)	70(2-3/4)	332-0375	10.00	87.00(3-7/16)	133(5-1/4)	332-1000
.27	3.00(1/8)	19(3/4)	332-0027	3.80	43.00(1-11/16)	75(2-15/16)	332-0380	10.10	87.00(3-7/16)	133(5-1/4)	332-1010
.28	3.00(1/8)	19(3/4)	332-0028	3.90	43.00(1-11/16)	75(2-15/16)	332-0390	10.20	87.00(3-7/16)	133(5-1/4)	332-1020
.29	3.00(1/8)	19(3/4)	332-0029	4.00	43.00(1-11/16)	75(2-15/16)	332-0400	10.25	87.00(3-7/16)	133(5-1/4)	332-1025
.30	3.00(1/8)	19(3/4)	332-0030	4.10	43.00(1-11/16)	75(2-15/16)	332-0410	10.30	87.00(3-7/16)	133(5-1/4)	332-1030
.32	4.00(5/32)	19(3/4)	332-0032	4.20	43.00(1-11/16)	75(2-15/16)	332-0420	10.40	87.00(3-7/16)	133(5-1/4)	332-1040
.34	4.00(5/32)	19(3/4)	332-0034	4.25	43.00(1-11/16)	75(2-15/16)	332-0425	10.50	87.00(3-7/16)	133(5-1/4)	332-1050
.35	4.00(5/32)	19(3/4)	332-0035	4.30	47.00(1-27/32)	80(3-5/32)	332-0430	10.60	87.00(3-7/16)	133(5-1/4)	332-1060
.36	4.00(5/32)	19(3/4)	332-0036	4.40	47.00(1-27/32)	80(3-5/32)	332-0440	10.70	94.00(3-11/16)	142(5-19/32)	332-1070
.38	4.00(5/32)	19(3/4)	332-0038	4.50	47.00(1-27/32)	80(3-5/32)	332-0450	10.80	94.00(3-11/16)	142(5-19/32)	332-1080
.40	5.00(3/16)	20(25/32)	332-0040	4.60	47.00(1-27/32)	80(3-5/32)	332-0460	10.90	94.00(3-11/16)	142(5-19/32)	332-1090
.42	5.00(3/16)	20(25/32)	332-0042	4.70	47.00(1-27/32)	80(3-5/32)	332-0470	11.00	94.00(3-11/16)	142(5-19/32)	332-1100
.44	5.00(3/16)	20(25/32)	332-0044	4.75	47.00(1-27/32)	80(3-5/32)	332-0475	11.10	94.00(3-11/16)	142(5-19/32)	332-1110
.45	5.00(3/16)	20(25/32)	332-0045	4.80	52.00(2-1/16)	86(3-3/8)	332-0480	11.20	94.00(3-11/16)	142(5-19/32)	332-1120
.46	5.00(3/16)	20(25/32)	332-0046	4.90	52.00(2-1/16)	86(3-3/8)	332-0490	11.25	94.00(3-11/16)	142(5-19/32)	332-1125
.48	5.00(3/16)	20(25/32)	332-0048	5.00	52.00(2-1/16)	86(3-3/8)	332-0500	11.30	94.00(3-11/16)	142(5-19/32)	332-1130
.50	6.00(1/4)	22(7/8)	332-0050	5.10	52.00(2-1/16)	86(3-3/8)	332-0510	11.40	94.00(3-11/16)	142(5-19/32)	332-1140
.55	7.00(9/32)	24(15/16)	332-0055	5.20	52.00(2-1/16)	86(3-3/8)	332-0520	11.50	94.00(3-11/16)	142(5-19/32)	332-1150
.60	7.00(9/32)	24(15/16)	332-0060	5.25	52.00(2-1/16)	86(3-3/8)	332-0525	11.60	94.00(3-11/16)	142(5-19/32)	332-1160
.65	8.00(5/16)	26(1-1/32)	332-0065	5.30	52.00(2-1/16)	86(3-3/8)	332-0530	11.70	94.00(3-11/16)	142(5-19/32)	332-1170
.70	9.00(11/32)	28(1-3/32)	332-0070	5.40	57.00(2-1/4)	93(3-21/32)	332-0540	11.75	94.00(3-11/16)	142(5-19/32)	332-1175
.75	9.00(11/32)	28(1-3/32)	332-0075	5.50	57.00(2-1/4)	93(3-21/32)	332-0550	11.80	94.00(3-11/16)	142(5-19/32)	332-1180
.80	10.00(13/32)	30(1-3/16)	332-0080	5.60	57.00(2-1/4)	93(3-21/32)	332-0560	11.90	101.00(3-31/32)	151(5-15/16)	332-1190
.85	10.00(13/32)	30(1-3/16)	332-0085	5.70	57.00(2-1/4)	93(3-21/32)	332-0570	12.00	101.00(3-31/32)	151(5-15/16)	332-1200
.90	11.00(27/64)	32(1-1/4)	332-0090	5.75	57.00(2-1/4)	93(3-21/32)	332-0575	12.10	101.00(3-31/32)	151(5-15/16)	332-1210
.95	11.00(27/64)	32(1-1/4)	332-0095	5.80	57.00(2-1/4)	93(3-21/32)	332-0580	12.20	101.00(3-31/32)	151(5-15/16)	332-1220
1.00	12.00(15/32)	34(1-11/32)	332-0100	5.90	57.00(2-1/4)	93(3-21/32)	332-0590	12.25	101.00(3-31/32)	151(5-15/16)	332-1225
1.05	12.00(15/32)	34(1-11/32)	332-0105	6.00	57.00(2-1/4)	93(3-21/32)	332-0600	12.30	101.00(3-31/32)	151(5-15/16)	332-1230
1.10	14.00(9/16)	36(1-7/16)	332-0110	6.10	63.00(2-15/32)	101(3-21/32)	332-0610	12.40	101.00(3-31/32)	151(5-15/16)	332-1240
1.15	14.00(9/16)	36(1-7/16)	332-0115	6.20	63.00(2-15/32)	101(3-21/32)	332-0620	12.50	101.00(3-31/32)	151(5-15/16)	332-1250
1.20	16.00(5/8)	38(1-1/2)	332-0120	6.25	63.00(2-15/32)	101(3-21/32)	332-0625	12.60	101.00(3-31/32)	151(5-15/16)	332-1260
1.25	16.00(5/8)	38(1-1/2)	332-0125	6.30	63.00(2-15/32)	101(3-21/32)	332-0630	12.70	101.00(3-31/32)	151(5-15/16)	332-1270
1.30	16.00(5/8)	38(1-1/2)	332-0130	6.40	63.00(2-15/32)	101(3-21/32)	332-0640	12.80	101.00(3-31/32)	151(5-15/16)	332-1280
1.35	18.00(23/32)	40(1-9/16)	332-0135	6.50	63.00(2-15/32)	101(3-21/32)	332-0650	12.90	101.00(3-31/32)	151(5-15/16)	332-1290
1.40	18.00(23/32)	40(1-9/16)	332-0140	6.60	63.00(2-15/32)	101(3-21/32)	332-0660	13.00	101.00(3-31/32)	151(5-15/16)	332-1300
1.45	18.00(23/32)	40(1-9/16)	332-0145	6.70	63.00(2-15/32)	101(3-21/32)	332-0670	13.10	101.00(3-31/32)	151(5-15/16)	332-1310
1.50	18.00(23/32)	40(1-9/16)	332-0150	6.75	63.00(2-15/32)	101(3-21/32)	332-0675	13.20	101.00(3-31/32)	151(5-15/16)	332-1320
1.55	20.00(25/32)	43(1-11/16)	332-0155	6.80	63.00(2-15/32)	101(3-21/32)	332-0680	13.30	108.00(4-1/4)	160(6-5/16)	332-1330
1.60	20.00(25/32)	43(1-11/16)	332-0160	6.90	69.00(2-23/32)	109(4-9/32)	332-0690	13.40	108.00(4-1/4)	160(6-5/16)	332-1340
1.65	20.00(25/32)	43(1-11/16)	332-0165	7.00	69.00(2-23/32)	109(4-9/32)	332-0700	13.50	108.00(4-1/4)	160(6-5/16)	332-1350
1.70	20.00(25/32)	43(1-11/16)	332-0170	7.10	69.00(2-23/32)	109(4-9/32)	332-0710	13.60	108.00(4-1/4)	160(6-5/16)	332-1360
1.75	22.00(7/8)	46(1-13/16)	332-0175	7.20	69.00(2-23/32)	109(4-9/32)	332-0720	13.70	108.00(4-1/4)	160(6-5/16)	332-1370
1.80	22.00(7/8)	46(1-13/16)	332-0180	7.25	69.00(2-23/32)	109(4-9/32)	332-0725	13.75	108.00(4-1/4)	160(6-5/16)	332-1375
1.85	22.00(7/8)	46(1-13/16)	332-0185	7.30	69.00(2-23/32)	109(4-9/32)	332-0730	13.80	108.00(4-1/4)	160(6-5/16)	332-1380
1.90	22.00(7/8)	46(1-13/16)	332-0190	7.40	69.00(2-23/32)	109(4-9/32)	332-0740	13.90	108.00(4-1/4)	160(6-5/16)	332-1390
1.95	24.00(15/16)	49(1-15/16)	332-0195	7.50	69.00(2-23/32)	109(4-9/32)	332-0750	14.00	108.00(4-1/4)	160(6-5/16)	332-1400
2.00	24.00(15/16)	49(1-15/16)	332-0200	7.60	75.00(2-15/16)	117(4-19/32)	332-0760	14.25	114.00(4-1/2)	169(6-5/8)	332-1425
2.05	24.00(15/16)	49(1-15/16)	332-0205	7.70	75.00(2-15/16)	117(4-19/32)	332-0770	14.50	114.00(4-1/2)	169(6-5/8)	332-1450
2.10	24.00(15/16)	49(1-15/16)	332-0210	7.75	75.00(2-15/16)	117(4-19/32)	332-0775	14.75	114.00(4-1/2)	169(6-5/8)	332-1475
2.15	27.00(1-1/16)	53(2-3/32)	332-0215	7.80	75.00(2-15/16)	117(4-19/32)	332-0780	15.00	114.00(4-1/2)	169(6-5/8)	332-1500
2.20	27.00(1-1/16)	53(2-3/32)	332-0220	7.85	75.00(2-15/16)	117(4-					

DIN1897 Twist/Screw Drills

High Speed Steel, Ground

德标 1897 全磨短钻

- Primarily for use in screw machines.
- Ideal medium duty portable or machine drilling of low tensile strength materials.
- Heavy-duty-short length provides increased rigidity.

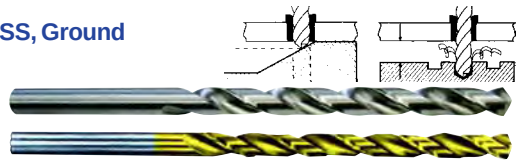


Size (mm)	Flute Length (mm)	OAL (mm)	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.	Size (mm)	Flute Length (mm)	OAL (mm)	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
0.80	5	24	202-4008	334-9008	202-5008	8.6	37	79	202-4086	334-9086	202-5086
0.90	6	25	202-4009	334-9009	202-5009	8.7	40	84	202-4087	334-9087	202-5087
1.00	6	26	202-4010	334-9010	202-5010	8.8	40	84	202-4088	334-9088	202-5088
1.10	7	28	202-4011	334-9011	202-5011	8.9	40	84	202-4089	334-9089	202-5089
1.20	8	30	202-4012	334-9012	202-5012	9.0	40	84	202-4090	334-9090	202-5090
1.30	8	30	202-4013	334-9013	202-5013	9.2	40	84	202-4092	334-9092	202-5092
1.40	9	32	202-4014	334-9014	202-5014	9.3	40	84	202-4093	334-9093	202-5093
1.50	9	32	202-4015	334-9015	202-5015	9.4	40	84	202-4094	334-9094	202-5094
1.60	10	34	202-4016	334-9016	202-5016	9.5	43	89	202-4095	334-9095	202-5095
1.70	10	34	202-4017	334-9017	202-5017	9.6	43	89	202-4096	334-9096	202-5096
1.80	11	36	202-4018	334-9018	202-5018	9.7	43	89	202-4097	334-9097	202-5097
1.90	11	36	202-4019	334-9019	202-5019	9.8	43	89	202-4098	334-9098	202-5098
2.0	12	38	202-4020	334-9020	202-5020	9.9	43	89	202-4099	334-9099	202-5099
2.1	12	38	202-4021	334-9021	202-5021	10.0	43	89	202-4100	334-9100	202-5100
2.2	13	40	202-4022	334-9022	202-5022	10.10	43	89	202-4101	334-9101	202-5101
2.3	13	40	202-4023	334-9023	202-5023	10.20	43	89	202-4102	334-9102	202-5102
2.4	14	43	202-4024	334-9024	202-5024	10.30	43	89	202-4103	334-9103	202-5103
2.5	14	43	202-4025	334-9025	202-5025	10.40	43	89	202-4104	334-9104	202-5104
2.6	14	43	202-4026	334-9026	202-5026	10.50	43	89	202-4105	334-9105	202-5105
2.7	16	46	202-4027	334-9027	202-5027	10.60	43	89	202-4106	334-9106	202-5106
2.8	16	46	202-4028	334-9028	202-5028	10.70	47	95	202-4107	334-9107	202-5107
2.9	16	46	202-4029	334-9029	202-5029	10.80	47	95	202-4108	334-9108	202-5108
3.0	16	46	202-4030	334-9030	202-5030	10.90	47	95	202-4109	334-9109	202-5109
3.1	18	49	202-4031	334-9031	202-5031	11.00	47	95	202-4110	334-9110	202-5110
3.2	18	49	202-4032	334-9032	202-5032	11.10	47	95	202-4111	334-9111	202-5111
3.3	18	49	202-4033	334-9033	202-5033	11.20	47	95	202-4112	334-9112	202-5112
3.4	20	52	202-4034	334-9034	202-5034	11.30	47	95	202-4113	334-9113	202-5113
3.5	20	52	202-4035	334-9035	202-5035	11.40	47	95	202-4114	334-9114	202-5114
3.6	20	52	202-4036	334-9036	202-5036	11.50	47	95	202-4115	334-9115	202-5115
3.7	20	52	202-4037	334-9037	202-5037	11.60	47	95	202-4116	334-9116	202-5116
3.8	22	55	202-4038	334-9038	202-5038	11.70	47	95	202-4117	334-9117	202-5117
3.9	22	55	202-4039	334-9039	202-5039	11.80	47	95	202-4118	334-9118	202-5118
4.0	22	55	202-4040	334-9040	202-5040	11.90	51	102	202-4119	334-9119	202-5119
4.1	22	55	202-4041	334-9041	202-5041	12.00	51	102	202-4120	334-9120	202-5120
4.2	22	55	202-4042	334-9042	202-5042	12.10	51	102	202-4121	334-9121	202-5121
4.3	24	58	202-4043	334-9043	202-5043	12.20	51	102	202-4122	334-9122	202-5122
4.4	24	58	202-4044	334-9044	202-5044	12.30	51	102	202-4123	334-9123	202-5123
4.5	24	58	202-4045	334-9045	202-5045	12.40	51	102	202-4124	334-9124	202-5124
4.6	24	58	202-4046	334-9046	202-5046	12.50	51	102	202-4125	334-9125	202-5125
4.7	24	58	202-4047	334-9047	202-5047	12.60	51	102	202-4126	334-9126	202-5126
4.8	26	62	202-4048	334-9048	202-5048	12.70	51	102	202-4127	334-9127	202-5127
4.9	26	62	202-4049	334-9049	202-5049	12.80	51	102	202-4128	334-9128	202-5128
5.0	26	62	202-4050	334-9050	202-5050	12.90	51	102	202-4129	334-9129	202-5129
5.1	26	62	202-4051	334-9051	202-5051	13.00	51	102	202-4130	334-9130	202-5130
5.2	26	62	202-4052	334-9052	202-5052	13.10	51	102	202-4131	334-9131	202-5131
5.3	28	66	202-4053	334-9053	202-5053	13.20	51	102	202-4132	334-9132	202-5132
5.4	28	66	202-4054	334-9054	202-5054	13.30	54	107	202-4133	334-9133	202-5133
5.5	28	66	202-4055	334-9055	202-5055	13.40	54	107	202-4134	334-9134	202-5134
5.6	28	66	202-4056	334-9056	202-5056	13.50	54	107	202-4135	334-9135	202-5135
5.7	28	66	202-4057	334-9057	202-5057	13.60	54	107	202-4136	334-9136	202-5136
5.8	28	66	202-4058	334-9058	202-5058	13.70	54	107	202-4137	334-9137	202-5137
5.9	28	66	202-4059	334-9059	202-5059	13.80	54	107	202-4138	334-9138	202-5138
6.0	28	66	202-4060	334-9060	202-5060	13.90	54	107	202-4139	334-9139	202-5139
6.1	31	70	202-4061	334-9061	202-5061	14.00	54	107	202-4140	334-9140	202-5140
6.2	31	70	202-4062	334-9062	202-5062	14.25	56	111	202-4142	334-9142	202-5142
6.3	31	70	202-4063	334-9063	202-5063	14.50	56	111	202-4145	334-9145	202-5145
6.4	31	70	202-4064	334-9064	202-5064	14.75	56	111	202-4147	334-9147	202-5147
6.5	31	70	202-4065	334-9065	202-5065	15.00	56	111	202-4150	334-9150	202-5150
6.6	31	70	202-4066	334-9066	202-5066	15.25	58	115	202-4152	334-9152	202-5152
6.7	31	70	202-4067	334-9067	202-5067	15.50	58	115	202-4155	334-9155	202-5155
6.8	34	74	202-4068	334-9068	202-5068	15.75	58	115	202-4157	334-9157	202-5157
6.9	34	74	202-4069	334-9069	202-5069	16.00	58	115	202-4160	334-9160	202-5160
7.0	34	74	202-4070	334-9070	202-5070	16.25	60	119	202-4162	334-9162	202-5162
7.1	34	74	202-4071	334-9071	202-5071	16.50	60	119	202-4165	334-9165	202-5165
7.2	34	74	202-4072	334-9072	202-5072	16.75	60	119	202-4167	334-9167	202-5167
7.3	34	74	202-4073	334-9073	202-5073	17.00	60	119	202-4170	334-9170	202-5170
7.4	34	74	202-4074	334-9074	202-5074	17.25	62	123	202-4172	334-9172	202-5172
7.5	34	74	202-4075	334-9075	202-5075	17.50	62	123	202-4175	334-9175	202-5175
7.6	37	79	202-4076	334-9076	202-5076	17.75	62	123	202-4177	334-9177	202-5177
7.7	37	79	202-4077	334-9077	202-5077	18.00	62	123	202-4180	334-9180	202-5180
7.8	37	79	202-4078	334-9078	202-5078	18.25	64	127	202-4182	334-9182	202-5182
7.9	37	79	202-4079	334-9079	202-5079	18.50	64	127	202-4185	334-9185	202-5185
8.0	37	79	202-4080	334-9080	202-5080	18.75	64	127	202-4187	334-9187	202-5187
8.1	37	79	202-4081	334-9081	202-5081	19.00	64	127	202-4190	334-9190	202-5190
8.3	37	79	202-4083	334-9083	202-5083	19.25	66	131	202-4192	334-9192	202-5192
8.4	37	79	202-4084	334-9084	202-5084	19.50	66	131	202-4195	334-9195	202-5195
8.5	37	79	202-4085	334-9085	202-5085	19.75	66	131	202-4197	334-9197	202-5197
						20.00	66	131	202-4200	334-9200	202-5200

DIN340 Twist Drills 德标 340 全磨加长钻

HSS, Ground

- Taper length is a longer, straight shank, general purpose drill used where a deeper holes is required.
- Shank diameter is the same as the drill diameter.



Size (mm)	Flute Length	OAL (mm)	Bright Order No.	Black Order No.	Ground TiN-Coated	Size (mm)	Flute Length	OAL	Bright Order No.	Black Order No.	Ground TiN-Coated
3	66	100	305-0300	310-2530	203-4030	9.9	121	184	305-0990	310-2599	203-4099
3.1	69	106	305-0310	310-2531	203-4031	10.0	121	184	305-1000	310-2600	203-4100
3.2	69	106	305-0320	310-2532	203-4032	10.1	121	184	305-1010	310-2601	203-4101
3.25	69	106	305-0325	310-2802		10.2	121	184	305-1020	310-2602	203-4102
3.3	69	106	305-0330	310-2533	203-4033	10.25	121	184	305-1025	310-2830	
3.4	73	112	305-0340	310-2534	203-4034	10.3	121	184	305-1030	310-2603	203-4103
3.5	73	112	305-0350	310-2535	203-4035	10.4	121	184	305-1040	310-2604	203-4104
3.6	73	112	305-0360	310-2536	203-4036	10.5	121	184	305-1050	310-2605	203-4105
3.7	73	112	305-0370	310-2537	203-4037	10.6	121	184	305-1060	310-2606	203-4106
3.75	73	112	305-0375	310-2804		10.7	128	195	305-1070	310-2607	203-4107
3.8	78	119	305-0380	310-2538	203-4038	10.75	128	195	305-1075	310-2832	
3.9	78	119	305-0390	310-2539	203-4039	10.8	128	195	305-1080	310-2608	203-4108
4.0	78	119	305-0400	310-3540	203-4040	10.9	128	195	305-1090	310-2609	203-4108
4.1	78	119	305-0410	310-2541	203-4041	11.0	128	195	305-1100	310-2610	203-4110
4.2	78	119	305-0420	310-2542	203-4042	11.1	128	195	305-1110	310-2611	203-4111
4.25	78	119	305-0425	310-2806		11.2	128	195	305-1120	310-2612	203-4112
4.3	82	126	305-0430	310-2543	203-4043	11.25	128	195	305-1125	310-2834	
4.4	82	126	305-0440	310-2544	203-4044	11.3	128	195	305-1130	310-2613	203-4113
4.5	82	126	305-0450	310-2545	203-4045	11.4	128	195	305-1140	310-2614	203-4114
4.6	82	126	305-0460	310-2546	203-4046	11.5	128	195	305-1150	310-2615	203-4115
4.7	82	126	305-0470	310-2547	203-4047	11.6	128	195	305-1160	310-2616	203-4116
4.75	82	126	305-0475	310-2808		11.7	128	195	305-1170	310-2617	203-4117
4.8	87	132	305-0480	310-2548	203-4048	11.75	128	195	305-1175	310-2836	
4.9	87	132	305-0490	310-2549	203-4049	11.8	128	195	305-1180	310-2618	203-4118
5.0	87	132	305-0500	310-2550	203-4050	11.9	134	205	305-1190	310-2619	203-4119
5.1	87	132	305-0510	310-2551	203-4051	12.0	134	205	305-1200	310-2620	203-4120
5.2	87	132	305-0520	310-2552	203-4052	12.1	134	205	305-1210	310-2621	203-4121
5.25	87	132	305-0525	310-2810		12.2	134	205	305-1220	310-2622	203-4122
5.3	87	132	305-0530	310-2553	203-4053	12.25	134	205	305-1225	310-2838	
5.4	91	139	305-0540	310-2554	203-4054	12.3	134	205	305-1230	310-2623	203-4123
5.5	91	139	305-0550	310-2555	203-4055	12.4	134	205	305-1240	310-2624	203-4124
5.6	91	139	305-0560	310-2556	203-4056	12.5	134	205	305-1250	310-2625	203-4125
5.7	91	139	305-0570	310-2557	203-4057	12.6	134	205	305-1260	310-2626	203-4126
5.75	91	139	305-0575	310-2812		12.7	134	205	305-1270	310-2627	203-4127
5.8	91	139	305-0580	310-2558	203-4058	12.75	134	205	305-1275	310-2840	
5.9	91	139	305-0590	310-2559	203-4059	12.8	134	205	305-1280	310-2628	203-4128
6.0	91	139	305-0600	310-2560	203-4060	12.9	134	205	305-1290	310-2629	203-4129
6.1	97	148	305-0610	310-2561	203-4061	13.0	134	205	305-1300	310-2630	203-4130
6.2	97	148	305-0620	310-2562	203-4062	13.1	134	205	305-1310	310-2631	203-4131
6.25	97	148	305-0625	310-2814		13.2	134	205	305-1320	310-2632	203-4132
6.3	97	148	305-0630	310-2563	203-4063	13.25	134	205	305-1325	310-2842	
6.4	97	148	305-0640	310-2564	203-4064	13.3	140	214	305-1330	310-2633	203-4133
6.5	97	148	305-0650	310-2565	203-4065	13.4	140	214	305-1340	310-2634	203-4133
6.6	97	148	305-0660	310-2566	203-4066	13.5	140	214	305-1350	310-2635	203-4134
6.7	97	148	305-0670	310-2567	203-4067	13.6	140	214	305-1360	310-2636	203-4136
6.75	102	156	305-0675	310-2816		13.7	140	214	305-1370	310-2637	203-4137
6.8	102	156	305-0680	310-2568	203-4068	13.75	140	214	305-1375	310-2844	
6.9	102	156	305-0690	310-2569	203-4069	13.8	140	214	305-1380	310-2638	203-4138
7.0	102	156	305-0700	310-2570	203-4070	13.9	140	214	305-1390	310-2639	203-4139
7.1	102	156	305-0710	310-2571	203-4071	14.0	140	214	305-1400	310-2640	203-4140
7.2	102	156	305-0720	310-2572	203-7072	14.25	144	220	305-1425	310-2846	203-4142
7.25	102	156	305-0725	310-2818		14.5	144	220	305-1450	310-2641	203-4145
7.3	102	156	305-0730	310-2573	203-4073	14.75	144	220	305-1475	310-2848	203-4147
7.4	102	156	305-0740	310-2574	203-4074	15.0	144	220	305-1500	310-2620	203-4150
7.5	102	156	305-0750	310-2575	203-4075	15.25	149	227	305-1525	310-2850	203-4152
7.6	109	165	305-0760	310-2576	203-4076	15.5	149	227	305-1550	310-2655	203-4155
7.7	109	165	305-0770	310-2577	203-4077	15.75	149	227	305-1575	310-2852	203-4157
7.75	109	165	305-0775	310-2820		16.0	149	227	305-1600	310-2660	203-4160
7.8	109	165	305-0780	310-2578	203-4078	16.25	154	235	305-1625	310-2854	203-4162
7.9	109	165	305-0790	310-2579	203-4079	16.5	154	235	305-1650	310-2665	203-4165
8.0	109	165	305-0800	310-2580	203-4080	16.75	154	235	305-1675	310-2856	203-4167
8.1	109	165	305-0810	310-2581	203-4081	17.0	154	235	305-1700	310-2670	203-4170
8.2	109	165	305-0820	310-2582	203-4082	17.25	158	241	305-1725	310-2858	203-4172
8.25	109	165	305-0825	310-2822		17.5	158	241	305-1750	310-2675	203-4175
8.3	109	165	305-0830	310-2583	203-4083	17.75	158	241	305-1775	310-2860	203-4177
8.4	109	165	305-0840	310-2584	203-4084	18.0	158	241	305-1800	310-2680	203-4180
8.5	109	165	305-0850	310-2585	203-4085	18.25	162	247		310-2862	203-4182
8.6	115	175	305-0860	310-2586	203-4086	18.5	162	247	305-1850	310-2685	203-4185
8.7	115	175	305-0870	310-2587	203-4087	18.75	162	247		310-2864	203-4187
8.75	115	175	305-0875	310-2824		19.0	162	247	305-1900	310-2690	203-4190
8.8	115	175	305-0880	310-2588	203-4088	19.25	166	254		310-2866	203-4192
8.9	115	175	305-0890	310-2589	203-4089	19.5	166	254	305-1950	310-2695	203-4195
9.0	115	175	305-0900	310-2590	203-4090	20.0	166	254	305-2000	310-2700	203-4197
9.1	115	175	305-0910	310-2591	203-4091	20.5	171	261	305-2050	310-2705	203-4200
9.2	115	175	305-0920	310-2592	203-4092	21.0	171	261	305-2100	310-2710	
9.25	115	175	305-0925	310-2826		21.5	171	261	305-2150	310-2715	
9.3	115	175	305-0930	310-2593	203-4093	22.0	176	268	305-2200	310-2720	
9.4	115	175	305-0940	310-2594	203-4094	22.5	176	268	305-2250	310-2725	
9.5	115	175	305-0950	310-2595	203-4095	23.0	180	275	305-2300	310-2730	
9.6	121	184	305-0960	310-2596	203-4096	23.5	180	275	305-2350	310-2735	
9.7	121	184	305-0970	310-2597	203-4097	24.0	180	275	305-2400	310-2740	
9.75	121	184	305-0975	310-2828		24.5	185	282	305-2450	310-2745	
9.8	121	184	305-0980	310-2598	203-4098	25.0	185	282	305-2500	310-2750	

Split Point Parabolic Jobber Drills

HSS, 135° Point, Ground

高速钢全磨美标抛物线 135 度分割刃钻头

- Eliminate peck feeding
- Rapid chip disposal
- Increased coolant flow

Fractional Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
1/64"	3/16"	3/4"	134-8301	134-8001	134-9001
1/32	1/2	1-3/8	134-8302	134-8002	134-9002
3/64	3/4	1-3/4	134-8303	134-8003	134-9003
1/16	7/8	1-7/8	134-8304	134-8004	134-9004
5/64	1	2	134-8305	134-8005	134-9005
3/32	1-1/4	2-1/4	134-8306	134-8006	134-9006
7/64	1-1/2	2-5/8	134-8307	134-8007	134-9007
1/8	1-5/8	2-3/4	134-8308	134-8008	134-9008
9/64	1-3/4	2-7/8	134-8309	134-8009	134-9009
5/32	2	3-1/8	134-8310	134-8010	134-9010
11/64	2-1/8	3-1/4	134-8311	134-8011	134-9011
3/16	2-5/16	3-1/2	134-8312	134-8012	134-9012
13/64	2-7/16	3-5/8	134-8313	134-8013	134-9013
7/32	2-1/2	3-3/4	134-8314	134-8014	134-9014
15/64	2-5/8	3-7/8	134-8315	134-8015	134-9015
1/4	2-3/4	4	134-8316	134-8016	134-9016
17/64	2-7/8	4-1/8	134-8317	134-8017	134-9017
9/32	2-15/16	4-1/4	134-8318	134-8018	134-9018
19/64	3-1/16	4-3/8	134-8319	134-8019	134-9019
5/16	3-3/16	4-1/2	134-8320	134-8020	134-9020
21/64	3-5/16	4-5/8	134-8321	134-8021	134-9021
11/32	3-7/16	4-3/4	134-8322	134-8022	134-9022
23/64	3-1/2	4-7/8	134-8323	134-8023	134-9023
3/8	3-5/8	5	134-8324	134-8024	134-9024
25/64	3-3/4	5-1/8	134-8325	134-8025	134-9025
13/32	3-7/8	5-1/4	134-8326	134-8026	134-9026
27/64	3-15/16	5-3/8	134-8327	134-8027	134-9027
7/16	4-1/16	5-1/2	134-8328	134-8028	134-9028
29/64	4-3/16	5-5/8	134-8329	134-8029	134-9029
15/32	4-5/16	5-3/4	134-8330	134-8030	134-9030
31/64	4-3/8	5-7/8	134-8331	134-8031	134-9031
1/2	4-1/2	6	134-8332	134-8032	134-9032
33/64	4-13/16	6-5/8	134-8333	134-8033	134-9033
17/32	4-13/16	6-5/8	134-8334	134-8034	134-9034
35/64	4-13/16	6-5/8	134-8335	134-8035	134-9035
9/16	4-13/16	6-5/8	134-8336	134-8036	134-9036
37/64	4-13/16	6-5/8	134-8337	134-8037	134-9037
19/32	5-3/16	7-1/8	134-8338	134-8038	134-9038
39/64	5-3/16	7-1/8	134-8339	134-8039	134-9039
5/8	5-3/16	7-1/8	134-8340	134-8040	134-9040
41/64	5-3/16	7-1/8	134-8341	134-8041	134-9041
21/32	5-3/16	7-1/8	134-8342	134-8042	134-9042
43/64	5-5/8	7-5/8	134-8343	134-8043	134-9043
11/16	5-5/8	7-5/8	134-8344	134-8044	134-9044

Letter Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
A	2-5/8"	3-7/8"	134-8801	134-8201	134-9201
B	2-3/4	4	134-8802	134-8202	134-9202
C	2-3/4	4	134-8803	134-8203	134-9203
D	2-3/4	4	134-8804	134-8204	134-9204
E	2-3/4	4	134-8805	134-8205	134-9205
F	2-7/8	4-1/8	134-8806	134-8206	134-9206
G	2-7/8	4-1/8	134-8807	134-8207	134-9207
H	2-7/8	4-1/8	134-8808	134-8208	134-9208
I	2-7/8	4-1/8	134-8809	134-8209	134-9209
J	2-7/8	4-1/8	134-8810	134-8210	134-9210
K	2-15/16	4-1/4	134-8811	134-8211	134-9211
L	2-15/16	4-1/4	134-8812	134-8212	134-9212
M	3-1/16	4-3/8	134-8813	134-8213	134-9213
N	3-1/16	4-3/8	134-8814	134-8214	134-9214
O	3-3/16	4-1/2	134-8815	134-8215	134-9215
P	3-5/16	4-5/8	134-8816	134-8216	134-9216
Q	3-7/16	4-3/4	134-8817	134-8217	134-9217
R	3-7/16	4-3/4	134-8818	134-8218	134-9218
S	3-1/2	4-7/8	134-8819	134-8219	134-9219
T	3-1/2	4-7/8	134-8820	134-8220	134-9220
U	3-5/8	5	134-8821	134-8221	134-9221
V	3-5/8	5	134-8822	134-8222	134-9222
W	3-3/4	5-1/8	134-8823	134-8223	134-9223
X	3-3/4	5-1/8	134-8824	134-8224	134-9224
Y	3-7/8	5-1/4	134-8825	134-8225	134-9225
Z	3-7/8	5-1/4	134-8826	134-8226	134-9226

Number Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
#1	2-5/8"	3-7/8"	134-8401	134-8101	134-9101
#2	2-5/8	3-7/8	134-8402	134-8102	134-9102
#3	2-1/2	3-3/4	134-8403	134-8103	134-9103
#4	2-1/2	3-3/4	134-8404	134-8104	134-9104
#5	2-1/2	3-3/4	134-8405	134-8105	134-9105
#6	2-1/2	3-3/4	134-8406	134-8106	134-9106
#7	2-7/16	3-5/8	134-8407	134-8107	134-9107
#8	2-7/16	3-5/8	134-8408	134-8108	134-9108
#9	2-7/16	3-5/8	134-8409	134-8109	134-9109
#10	2-7/16	3-5/8	134-8410	134-8110	134-9110
#11	2-5/16	3-1/2	134-8411	134-8111	134-9111
#12	2-5/16	3-1/2	134-8412	134-8112	134-9112
#13	2-5/16	3-1/2	134-8413	134-8113	134-9113
#14	2-3/16	3-3/8	134-8414	134-8114	134-9114
#15	2-3/16	3-3/8	134-8415	134-8115	134-9115
#16	2-3/16	3-3/8	134-8416	134-8116	134-9116
#17	2-3/16	3-3/8	134-8417	134-8117	134-9117
#18	2-1/8	3-1/4	134-8418	134-8118	134-9118
#19	2-1/8	3-1/4	134-8419	134-8119	134-9119
#20	2-1/8	3-1/4	134-8420	134-8120	134-9120
#21	2-1/8	3-1/4	134-8421	134-8121	134-9121
#22	2	3-1/8	134-8422	134-8122	134-9122
#23	2	3-1/8	134-8423	134-8123	134-9123
#24	2	3-1/8	134-8424	134-8124	134-9124
#25	1-7/8	3	134-8425	134-8125	134-9125
#26	1-7/8	3	134-8426	134-8126	134-9126
#27	1-7/8	3	134-8427	134-8127	134-9127
#28	1-3/4	2-7/8	134-8428	134-8128	134-9128
#29	1-3/4	2-7/8	134-8429	134-8129	134-9129
#30	1-5/8	2-3/4	134-8430	134-8130	134-9130
#31	1-5/8	2-3/4	134-8431	134-8131	134-9131
#32	1-5/8	2-3/4	134-8432	134-8132	134-9132
#33	1-1/2	2-5/8	134-8433	134-8133	134-9133
#34	1-1/2	2-5/8	134-8434	134-8134	134-9134
#35	1-1/2	2-5/8	134-8435	134-8135	134-9135
#36	1-7/16	2-1/2	134-8436	134-8136	134-9136
#37	1-7/16	2-1/2	134-8437	134-8137	134-9137
#38	1-7/16	2-1/2	134-8438	134-8138	134-9138
#39	1-3/8	2-3/8	134-8439	134-8139	134-9139
#40	1-3/8	2-3/8	134-8440	134-8140	134-9140
#41	1-3/8	2-3/8	134-8441	134-8141	134-9141
#42	1-1/4	2-1/4	134-8442	134-8142	134-9142
#43	1-1/4	2-1/4	134-8443	134-8143	134-9143
#44	1-1/8	2-1/8	134-8444	134-8144	134-9144
#45	1-1/8	2-1/8	134-8445	134-8145	134-9145
#46	1-1/8	2-1/8	134-8446	134-8146	134-9146
#47	1	2	134-8447	134-8147	134-9147
#48	1	2	134-8448	134-8148	134-9148
#49	1	2	134-8449	134-8149	134-9149
#50	1	2	134-8450	134-8150	134-9150
#51	1	2	134-8451	134-8151	134-9151
#52	7/8	1-7/8	134-8452	134-8152	134-9152
#53	7/8	1-7/8	134-8453	134-8153	134-9153
#54	7/8	1-7/8	134-8454	134-8154	134-9154
#55	7/8	1-7/8	134-8455	134-8155	134-9155
#56	3/4	1-3/4	134-8456	134-8156	134-9156
#57	3/4	1-3/4	134-8457	134-8157	134-9157
#58	11/16	1-5/8	134-8458	134-8158	134-9158
#59	11/16	1-5/8	134-8459	134-8159	134-9159
#60	11/16	1-5/8	134-8460	134-8160	134-9160



Split Point Parabolic Taper Length Drills

HSS, 135° Point, Ground

全磨美标抛物线锥长度 135 度分割刃白钻

- The wide land parabolic flute design provides superior performance in a greater range of materials and applications
- Unique flute form produces closer tolerances due to improved chip and coolant flow, and higher torsional rigidity 135° Self-centering split point reduces thrust
- Taper length (longer flute and overall length) improves reach and deep hole drilling capability



Fractional Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
1/64"	5/16"	1-1/2"	134-8901	134-8501	134-9501
1/32	3/4	2	134-8902	134-8502	134-9502
3/64	1-1/8"	2-1/4	134-8903	134-8503	134-9503
1/16	1-3/4	3	134-8904	134-8504	134-9504
5/64	2	3-3/4	134-8905	134-8505	134-9505
3/32	2-1/4	4-1/4	134-8906	134-8506	134-9506
7/64	2-1/2	4-5/8	134-8907	134-8507	134-9507
1/8	2-3/4	5-1/8	134-8908	134-8508	134-9508
9/64	3	5-3/8	134-8909	134-8509	134-9509
5/32	3	5-3/8	134-8910	134-8510	134-9510
11/64	3-3/8	5-3/4	134-8911	134-8511	134-9511
3/16	3-3/8	5-3/4	134-8912	134-8512	134-9512
13/64	3-5/8	6	134-8913	134-8513	134-9513
7/32	3-5/8	6	134-8914	134-8514	134-9514
15/64	3-3/4	6-1/8	134-8915	134-8515	134-9515
1/4	3-3/4	6-1/8	134-8916	134-8516	134-9516
17/16	3-7/8	6-1/4	134-8917	134-8517	134-9517
9/32	3-7/8	6-1/4	134-8918	134-8518	134-9518
19/64	4	6-3/8	134-8919	134-8519	134-9519
5/16	4	6-3/8	134-8920	134-8520	134-9520
21/64	4-1/8	6-1/2	134-8921	134-8521	134-9521
11/32	4-1/8	6-1/2	134-8922	134-8522	134-9522
23/64	4-1/4	6-3/4	134-8923	134-8523	134-9523
3/8	4-1/4	6-3/4	134-8924	134-8524	134-9524
25/64	4-3/8	7	134-8925	134-8525	134-9525
13/32	4-3/8	7	134-8926	134-8526	134-9526
27/64	4-5/8	7-1/4	134-8927	134-8527	134-9527
7/16	4-5/8	7-1/4	134-8928	134-8528	134-9528
29/64	4-3/4	7-1/2	134-8929	134-8529	134-9529
15/32	4-3/4	7-1/2	134-8930	134-8530	134-9530
31/64	4-3/4	7-3/4	134-8931	134-8531	134-9531
1/2	4-3/4	7-3/4	134-8932	134-8532	134-9532
33/64	4-3/4	8	134-8933	134-8533	134-9533
17/32	4-3/4	8	134-8934	134-8534	134-9534
35/64	4-7/8	8-1/4	134-8935	134-8535	134-9535
9/16	4-7/8	8-1/4	134-8936	134-8536	134-9536
37/64	4-7/8	8-3/4	134-8937	134-8537	134-9537
19/32	4-7/8	8-3/4	134-8938	134-8538	134-9538
39/64	4-7/8	8-3/4	134-8939	134-8539	134-9539
5/8	4-7/8	8-3/4	134-8940	134-8540	134-9540
41/64	5-1/8	9	134-8941	134-8541	134-9541
21/32	5-1/8	9	134-8942	134-8542	134-9542
43/64	5-3/8	9-1/4	134-8943	134-8543	134-9543
11/16	5-3/8	9-1/4	134-8944	134-8544	134-9544
45/64	5-5/8	9-1/2	134-8945	134-8545	134-9545
23/32	5-5/8	9-1/2	134-8946	134-8546	134-9546
47/64	5-7/8	9-3/4	134-8947	134-8547	134-9547
3/4	5-7/8	9-3/4	134-8948	134-8548	134-9548
49/64	6	9-7/8	134-8949	134-8549	134-9549
25/32	6	9-7/8	134-8950	134-8550	134-9550
51/64	6-1/8"	10	134-8951	134-8551	134-9551
13/16	6-1/8	10	134-8952	134-8552	134-9552
53/64	6-1/8	10	134-8953	134-8553	134-9553
27/32	6-1/8	10	134-8954	134-8554	134-9554
55/64	6-1/8	10	134-8955	134-8555	134-9555
7/8	6-1/8	10	134-8956	134-8556	134-9556
57/64	6-1/8	10	134-8957	134-8557	134-9557
29/32	6-1/8	10	134-8958	134-8558	134-9558
59/64	6-1/8	10-3/4	134-8959	134-8559	134-9559
15/16	6-1/8	10-3/4	134-8960	134-8560	134-9560
61/64	6-3/8	11	134-8961	134-8561	134-9561
31/32	6-3/8	11	134-8962	134-8562	134-9562
63/64	6-3/8	11	134-8963	134-8563	134-9563
1	6-3/8	11	134-8964	134-8564	134-9564

Number Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
#1	3-3/4"	6-1/8"	134-9301	134-8601	134-9601
#2	3-3/4	6-1/8	134-9302	134-8602	134-9602
#3	3-5/8	6	134-9303	134-8603	134-9603
#4	3-5/8	6	134-9304	134-8604	134-9604
#5	3-5/8	6	134-9305	134-8605	134-9605
#6	3-5/8	6	134-9306	134-8606	134-9606
#7	3-5/8	6	134-9307	134-8607	134-9607
#8	3-5/8	6	134-9308	134-8608	134-9608
#9	3-5/8	6	134-9309	134-8609	134-9609
#10	3-5/8	6	134-9310	134-8610	134-9610
#11	3-5/8	6	134-9311	134-8611	134-9611
#12	3-5/8	6	134-9312	134-8612	134-9612
#13	3-3/8	5-3/4	134-9313	134-8613	134-9613
#14	3-3/8	5-3/4	134-9314	134-8614	134-9614
#15	3-3/8	5-3/4	134-9315	134-8615	134-9615
#16	3-3/8	5-3/4	134-9316	134-8616	134-9616
#17	3-3/8	5-3/4	134-9317	134-8617	134-9617
#18	3-3/8	5-3/4	134-9318	134-8618	134-9618
#19	3-3/8	5-3/4	134-9319	134-8619	134-9619
#20	3-3/8	5-3/4	134-9320	134-8620	134-9620
#21	3-3/8	5-3/4	134-9321	134-8621	134-9621
#22	3-3/8	5-3/4	134-9322	134-8622	134-9622
#23	3	5-3/8	134-9323	134-8623	134-9623
#24	3	5-3/8	134-9324	134-8624	134-9624
#25	3	5-3/8	134-9325	134-8625	134-9625
#26	3	5-3/8	134-9326	134-8626	134-9626
#27	3	5-3/8	134-9327	134-8627	134-9627
#28	3	5-3/8	134-9328	134-8628	134-9628
#29	3	5-3/8	134-9329	134-8629	134-9629
#30	3	5-3/8	134-9330	134-8630	134-9630
#31	2-3/4	5-1/8	134-9331	134-8631	134-9631
#32	2-3/4	5-1/8	134-9332	134-8632	134-9632
#33	2-3/4	5-1/8	134-9333	134-8633	134-9633
#34	2-3/4	5-1/8	134-9334	134-8634	134-9634
#35	2-3/4	5-1/8	134-9335	134-8635	134-9635
#36	2-1/2	4-5/8	134-9336	134-8636	134-9636
#37	2-1/2	4-5/8	134-9337	134-8637	134-9637
#38	2-1/2	4-5/8	134-9338	134-8638	134-9638
#39	2-1/2	4-5/8	134-9339	134-8639	134-9639
#40	2-1/2	4-5/8	134-9340	134-8640	134-9640
#41	2-1/2	4-5/8	134-9341	134-8641	134-9641
#42	2-1/4	4-1/4	134-9342	134-8642	134-9642
#43	2-1/4	4-1/4	134-9343	134-8643	134-9643
#44	2-1/4	4-1/4	134-9344	134-8644	134-9644
#45	2-1/4	4-1/4	134-9345	134-8645	134-9645
#46	2-1/4	4-1/4	134-9346	134-8646	134-9646
#47	2-1/4	4-1/4	134-9347	134-8647	134-9647
#48	2	3-3/4	134-9348	134-8648	134-9648
#49	2	3-3/4	134-9349	134-8649	134-9649
#50	2	3-3/4	134-9350	134-8650	134-9650
#51	2	3-3/4	134-9351	134-8651	134-9651
#52	2	3-3/4	134-9352	134-8652	134-9652
#53	1-3/4	3	134-9353	134-8653	134-9653
#54	1-3/4	3	134-9354	134-8654	134-9654
#55	1-3/4	3	134-9355	134-8655	134-9655
#56	1-1/8	2-1/4	134-9356	134-8656	134-9656
#57	1-1/8	2-1/4	134-9357	134-8657	134-9657
#58	1-1/8	2-1/4	134-9358	134-8658	134-9658
#59	1-1/8	2-1/4	134-9359	134-8659	134-9659
#60	1-1/8	2-1/4	134-9360	134-8660	134-9660

Letter Sizes

Size	Flute Length	OAL	Bright Order No.	Black Oxide Order No.	TiN-Coated Order No.
A	3-3/4"	6-1/8"	134-8831	134-8701	134-9701
B	3-3/4	6-1/8	134-8832	134-8702	134-9702
C	3-3/4	6-1/8	134-8833	134-8703	134-9703
D	3-3/4	6-1/8	134-8834	134-8704	134-9704
E	3-3/4	6-1/8	134-8835	134-8705	134-9705
F	3-7/8	6-1/4	134-8836	134-8706	134-9706
G	3-7/8	6-1/4	134-8837	134-8707	134-9707
H	3-7/8	6-1/4	134-8838	134-8708	134-9708
I	3-7/8	6-1/4	134-8839	134-8709	134-9709
J	3-7/8	6-1/4	134-8840	134-8710	134-9710
K	3-7/8	6-1/4	134-8841	134-8711	134-9711
L	4	6-3/8	134-8842	134-8712	134-9712
M	4	6-3/8	134-8843	134-8713	134-9713
N	4	6-3/8	134-8844	134-8714	134-9714
O	4-1/8	6-1/2	134-8845	134-8715	134-9715
P	4-1/8	6-1/2	134-8846	134-8716	134-9716
Q	4-1/8	6-1/2	134-8847	134-8717	134-9717
R	4-1/8	6-1/2	134-8848	134-8718	134-9718
S	4-1/4	6-3/4	134-8849	134-8719	134-9719
T	4-1/4	6-3/4	134-8830	134-8720	134-9720
U	4-1/4	6-3/4	134-8831	134-8721	134-9721
V	4-3/8	7	134-8832	134-8722	134-9722
W	4-3/8	7	134-8833	134-8723	134-9723
X	4-3/8	7	134-8834	134-8724	134-9724
Y	4-3/8	7	134-8835	134-8725	134-9725
Z	4-5/8	7-1/4	134-8836	134-8726	134-9726

HSS Ground Drill Blanks 全磨高速钢钻胚

- Used for punches, gages, pins or special tools.
- Made of hardened high speed steel and ground.

- Fully hardened to HRC 63-65.



Tolerance limits

0" - .2500"	+ .0000" - .0005"
.251" - .3906"	+ .0000" - .0009"
.391" - 1.0000"	+ .0000" - .0010"

Fractional Sizes

Size	OAL	Order No.	Size	OAL	Order No.	Size	OAL	Order No.
1/64"	3/4"	305-8101	23/64	4-7/8	305-8123	45/64	6	305-8145
1/32	1-3/8	305-8102	3/8	5	305-8124	23/32	6	305-8146
3/64	1-3/4	305-8103	25/64	5-1/8	305-8125	47/64	6	305-8147
1/16	1-7/8	305-8104	13/32	5-1/4	305-8126	3/4	6	305-8148
5/64	2	305-8105	27/64	5-3/8	305-8127	49/64	6	305-8149
3/32	2-1/4	305-8106	7/16	5-1/2	305-8128	25/32	6	305-8150
7/64	2-5/8	305-8107	29/64	5-5/8	305-8129	51/64	6	305-8151
1/8	2-3/4	305-8108	15/32	5-3/4	305-8130	13/16	6	305-8152
9/64	2-7/8	305-8109	31/64	5-7/8	305-8131	53/64	6	305-8153
5/32	3-1/8	305-8110	1/2	6	305-8132	27/32	6	305-8154
11/64	3-1/4	305-8111	3/64	6	305-8133	55/64	6	305-8155
3/16	3-1/2	305-8112	17/32	6	305-8134	7/8	6	305-8156
13/64	3-5/8	305-8113	35/64	6	305-8135	57/64	6	305-8157
7/32	3-3/4	305-8114	9/16	6	305-8136	29/32	6	305-8158
15/64	3-7/8	305-8115	37/64	6	305-8137	59/64	6	305-8159
1/4	4	305-8116	19/32	6	305-8138	15/16	6	305-8160
17/64	4-1/8	305-8117	39/64	6	305-8139	61/64	6	305-8161
9/32	4-1/4	305-8118	5/8	6	305-8140	31/32	6	305-8162
19/64	4-3/8	305-8119	41/64	6	305-8141	63/64	6	305-8163
5/16	4-1/2	305-8120	21/32	6	305-8142	1	6	305-8164
21/64	4-5/8	305-8121	43/64	6	305-8143			
11/32	4-3/4	305-8122	11/16	6	305-8144			

Number Sizes

Size	OAL	Order No.	Size	OAL	Order No.	Size	OAL	Order No.
#1	3-7/8"	305-8001	#28	2-7/8	305-8028	#55	1-7/8	305-8055
#2	3-7/8	305-8002	#29	2-7/8	305-8029	#56	1-3/4	305-8056
#3	3-3/4	305-8003	#30	2-3/4	305-8030	#57	1-3/4	305-8057
#4	3-3/4	305-8004	#31	2-3/4	305-8031	#58	1-5/8	305-8058
#5	3-3/4	305-8005	#32	2-3/4	305-8032	#59	1-5/8	305-8059
#6	3-3/4	305-8006	#33	2-5/8	305-8033	#60	1-5/8	305-8060
#7	3-5/8	305-8007	#34	2-5/8	305-8034	#61	1-5/8	305-8061
#8	3-5/8	305-8008	#35	2-5/8	305-8035	#62	1-1/2	305-8062
#9	3-5/8	305-8009	#36	2-1/2	305-8036	#63	1-1/2	305-8063
#10	3-5/8	305-8010	#37	2-1/2	305-8037	#64	1-1/2	305-8064
#11	3-1/2	305-8011	#38	2-1/2	305-8038	#65	1-1/2	305-8065
#12	3-1/2	305-8012	#39	2-3/8	305-8039	#66	1-3/8	305-8066
#13	3-1/2	305-8013	#40	2-3/8	305-8040	#67	1-3/8	305-8067
#14	3-3/8	305-8014	#41	2-3/8"	305-8041	#68	1-3/8	305-8068
#15	3-3/8	305-8015	#42	2-1/4	305-8042	#69	1-3/8	305-8069
#16	3-3/8	305-8016	#43	2-1/4	305-8043	#70	1-1/4	305-8070
#17	3-3/8	305-8017	#44	2-1/8	305-8044	#71	1-1/4	305-8071
#18	3-1/4	305-8018	#45	2-1/8	305-8045	#72	1-1/8	305-8072
#19	3-1/4	305-8019	#46	2-1/8	305-8046	#73	1-1/8	305-8073
#20	3-1/4	305-8020	#47	2	305-8047	#74	1	305-8074
#21	3-1/4	305-8021	#48	2	305-8048	#75	1	305-8075
#22	3-1/8	305-8022	#49	2	305-8049	#76	7/8	305-8076
#23	3-1/8	305-8023	#50	2	305-8050	#77	7/8	305-8077
#24	3-1/8	305-8024	#51	2	305-8051	#78	7/8	305-8078
#25	3	305-8025	#52	1-7/8	305-8052	#79	3/4	305-8079
#26	3	305-8026	#53	1-7/8	305-8053	#80	3/4	305-8080
#27	3	305-8027	#54	1-7/8	305-8054			

Letter Sizes

Size	OAL	Order No.	Size	OAL	Order No.	Size	OAL	Order No.
A	3-7/8"	305-8201	J	4-1/8	305-8210	S	4-7/8	305-8219
B	4	305-8202	K	4-1/4	305-8211	T	4-7/8	305-8220
C	4	305-8203	L	4-1/4	305-8212	U	5	305-8221
D	4	305-8204	M	4-3/8	305-8213	V	5	305-8222
E	4	305-8205	N	4-3/8	305-8214	W	5-1/8	305-8223
F	4-1/8	305-8206	O	4-1/2	305-8215	X	5-1/8	305-8224
G	4-1/8	305-8207	P	4-5/8	305-8216	Y	5-1/4	305-8225
H	4-1/8	305-8208	Q	4-3/4	305-8217	Z	5-1/4	305-8226
I	4-1/8	305-8209	R	4-3/4	305-8218			

Drill Blank Sets 套装全磨高速钢钻胚

High Speed Steel, Ground

Pieces	Specification	Order No.	Pieces	Specification	Order No.
115	(1/16-1/2" by 1/64ths, A-Z, # 1-#60) with metal index	305-8315	13	with metal box 1.5-6.5mmx0.5mm, 3.2mm, 4.8mm	305-8302
20	wire size blanks #61-80	305-8320	19	with metal box, 1.0-10.0mmx0.5mm	305-8305
26	letter size blanks A to Z	305-8326	25	with metal box, 1.0-13.0mmx0.5mm	305-8307
29	blanks 1/16" to 1/2" by 64ths	305-8329	41	6-10mm by 0.1mm with metal box	305-8341
60	wire size blanks #1 to #60	305-8360	51	1-6mm by 0.1mm with metal box	305-8351



Metric Ground HSS Drill Blanks

全磨公制尺寸钻胚

- Used for punches, gages, pins or special tools.
- Made of hardened high speed steel and ground.
- Fully hardened to HRC63-65.

Tolerance limits

0" - .2500"	+ .0000" - .0005"
.251"- .3906"	+ .0000" - .0009"
.391" - 1.0000"	+ .0000" - .0010"



Metric

Size	Decimal Equivalent	OAL	Order No.	Size	Decimal Equivalent	OAL	Order No.	Size	Decimal Equivalent	OAL	Order No.
0.35mm	0.0138(in)	19mm	305-6035	3.25	0.1280	65	305-6325	7.60	0.2992	117	305-6760
0.40	0.0157	20	305-6040	3.30	0.1299	65	305-6330	7.70	0.3031	117	305-6770
0.45	0.0177	20	305-6045	3.40	0.1339	70	305-6340	7.75	0.3051	117	305-6775
0.50	0.0197	22	305-6050	3.50	0.1378	70	305-6350	7.80	0.3071	117	305-6780
0.55	0.0217	24	305-6055	3.60	0.1417	70	305-6360	7.90	0.3110	117	305-6790
0.60	0.0236	24	305-6060	3.70	0.1457	70	305-6370	8.00	0.3150	117	305-6800
0.65	0.0256	26	305-6065	3.75	0.1476	70	305-6375	8.10	0.3189	117	305-6810
0.70	0.0276	28	305-6070	3.80	0.1496	75	305-6380	8.20	0.3228	117	305-6820
0.75	0.0295	28	305-6075	3.90	0.1535	75	305-6390	8.25	0.3248	117	305-6825
0.80	0.0315	30	305-6080	4.00	0.1575	75	305-6400	8.30	0.3268	117	305-6830
0.85	0.0335	30	305-6085	4.10	0.1614	75	305-6410	8.40	0.3307	117	305-6840
0.90	0.0354	32	305-6090	4.20	0.1654	75	305-6420	8.50	0.3346	117	305-6850
0.95	0.0374	32	305-6095	4.25	0.1673	75	305-6425	8.60	0.3386	125	305-6860
1.00	0.0394	34	305-6100	4.30	0.1693	80	305-6430	8.70	0.3425	125	305-6870
1.05	0.0413	34	305-6105	4.40	0.1732	80	305-6440	8.75	0.3445	125	305-6875
1.10	0.0433	36	305-6110	4.50	0.1772	80	305-6450	8.80	0.3465	125	305-6880
1.15	0.0453	36	305-6115	4.60	0.1811	80	305-6460	8.90	0.3504	125	305-6890
1.20	0.0472	38	305-6120	4.70	0.1850	80	305-6470	9.00	0.3543	125	305-6900
1.25	0.0492	38	305-6125	4.75	0.1870	80	305-6475	9.10	0.3583	125	305-6910
1.30	0.0512	38	305-6130	4.80	0.1890	86	305-6480	9.20	0.3622	125	305-6920
1.35	0.0531	40	305-6135	4.90	0.1929	86	305-6490	9.25	0.3642	125	305-6925
1.40	0.0551	40	305-6140	5.00	0.1969	86	305-6500	9.30	0.3661	125	305-6930
1.45	0.0571	40	305-6145	5.10	0.2008	86	305-6510	9.40	0.3701	125	305-6940
1.50	0.0591	40	305-6150	5.20	0.2047	86	305-6520	9.50	0.3740	125	305-6950
1.55	0.0610	43	305-6155	5.25	0.2067	86	305-6525	9.60	0.3780	133	305-6960
1.60	0.0630	43	305-6160	5.30	0.2087	86	305-6530	9.70	0.3819	133	305-6970
1.65	0.0650	43	305-6165	5.40	0.2126	93	305-6540	9.75	0.3839	133	305-6975
1.70	0.0669	43	305-6170	5.50	0.2165	93	305-6555	9.80	0.3858	133	305-6980
1.75	0.0689	46	305-6175	5.60	0.2205	93	305-6560	9.90	0.3898	133	305-6990
1.80	0.0709	46	305-6180	5.70	0.2244	93	305-6570	10.00	0.3937	133	305-7010
1.85	0.0728	46	305-6185	5.75	0.2264	93	305-6575	10.00	0.3937	133	305-7000
1.90	0.0748	46	305-6190	5.80	0.2283	93	305-6580	10.50	0.4134	136	305-7050
1.95	0.0768	49	305-6195	5.90	0.2323	93	305-6590	10.80	0.4134	136	305-7080
2.00	0.0787	49	305-6200	6.00	0.2362	93	305-6600	10.90	0.4252	140	305-7090
2.05	0.0807	49	305-6205	6.10	0.2402	101	305-6610	11.00	0.4331	140	305-7100
2.10	0.0827	49	305-6210	6.20	0.2441	101	305-6620	11.50	0.4528	142	305-7150
2.15	0.0846	53	305-6215	6.25	0.2461	101	305-6625	12.00	0.4724	149	305-7200
2.20	0.0866	53	305-6220	6.30	0.2480	101	305-6630	12.20	0.4842	150	305-7220
2.25	0.0886	53	305-6225	6.40	0.2520	101	305-6640	12.30	0.4921	152	305-7230
2.30	0.0906	53	305-6230	6.50	0.2559	101	305-6650	12.50	0.4921	152	305-7250
2.35	0.0925	53	305-6235	6.60	0.2598	101	305-6660	12.60	0.4921	152	305-7260
2.40	0.0945	57	305-6240	6.70	0.2638	101	305-6670	13.00		152	305-7300
2.45	0.0965	57	305-6245	6.75	0.2657	109	305-6675	13.50		168	305-7350
2.50	0.0984	57	305-6250	6.80	0.2677	109	305-6680	14.00		168	305-7400
2.60	0.1024	57	305-6260	6.90	0.2717	109	305-6690	14.50		168	305-7450
2.70	0.1063	61	305-6270	7.00	0.2756	109	305-6700	15.00		181	305-7500
2.75	0.1083	61	305-6275	7.10	0.2795	109	305-6710	15.50		181	305-7550
2.80	0.1102	61	305-6280	7.20	0.2835	109	305-6720	16.00		181	305-7600
2.90	0.1142	61	305-6290	7.25	0.2854	109	305-6725	16.50		181	305-7650
3.00	0.1181	61	305-6300	7.30	0.2874	109	305-6730	17.00		194	305-7700
3.10	0.1220	65	305-6310	7.40	0.2913	109	305-6740	17.50		194	305-7750
3.20	0.1260	65	305-6320	7.50	0.2953	109	305-6750				

Aircraft Extension Drills

美标航空钻

Ground, 135° Split point, 6" & 12" Length

- Standard two flute design.

- Straight shanks correspond to the drill diameter.

Used to drill normal depth holes in hard to reach places, such as in airframe work, pulley hubs, etc.



Fractional Sizes

Size	Flute Length	HSS Black		HSS Bright		M35 Cobalt	
		6"	12"	6"	12"	6"	12"
3/64"	3/4"	434-5003	434-9003	434-0003	434-1003	434-7003	434-8003
1/16	7/8	434-5004	434-9004	434-0004	434-1004	434-7004	434-8004
5/64	1	434-5005	434-9005	434-0005	434-1005	434-7005	434-8005
3/32	1-1/4	434-5006	434-9006	434-0006	434-1006	434-7006	434-8006
7/64	1-1/2	434-5007	434-9007	434-0007	434-1007	434-7007	434-8007
1/8	1-5/8	434-5008	434-9008	434-0008	434-1008	434-7008	434-8008
9/64	1-3/4	434-5009	434-9009	434-0009	434-1009	434-7009	434-8009
5/32	2	434-5010	434-9010	434-0010	434-1010	434-7010	434-8010
11/64	2-1/8	434-5011	434-9011	434-0011	434-1011	434-7011	434-8011
3/16	2-5/16	434-5012	434-9012	434-0012	434-1012	434-7012	434-8012
13/64	2-7/16	434-5013	434-9013	434-0013	434-1013	434-7013	434-8013
7/32	2-1/2	434-5014	434-9014	434-0014	434-1014	434-7014	434-8014
15/32	2-5/8	434-5015	434-9015	434-0015	434-1015	434-7015	434-8015
1/4	2-3/4	434-5016	434-9016	434-0016	434-1016	434-7016	434-8016
17/64	2-7/8	434-5017	434-9017	434-0017	434-1017	434-7017	434-8017
9/32	2-15/16	434-5018	434-9018	434-0018	434-1018	434-7018	434-8018
19/64	3-1/16	434-5019	434-9019	434-0019	434-1019	434-7019	434-8019
5/16	3-3/16	434-5020	434-9020	434-0020	434-1020	434-7020	434-8020
21/64	3-5/16	434-5021	434-9021	434-0021	434-1021	434-7021	434-8021
11/32	3-7/16	434-5022	434-9022	434-0022	434-1022	434-7022	434-8022
23/64	3-1/2	434-5023	434-9023	434-0023	434-1023	434-7023	434-8023
3/8	3-5/8	434-5024	434-9024	434-0024	434-1024	434-7024	434-8024
25/64	3-3/4	434-5025	434-9025	434-0025	434-1025	434-7025	434-8025
13/32	3-7/8	434-5026	434-9026	434-0026	434-1026	434-7026	434-8026
27/64	3-15/16	434-5027	434-9027	434-0027	434-1027	434-7027	434-8027
7/16	4-1/16	434-5028	434-9028	434-0028	434-1028	434-7028	434-8028
29/64	4-3/16	434-5029	434-9029	434-0029	434-1029	434-7029	434-8029
15/62	4-5/16	434-5030	434-9030	434-0030	434-1030	434-7030	434-8030
31/64	4-3/8	434-5031	434-9031	434-0031	434-1031	434-7031	434-8031
1/2	4-1/2	434-5032	434-9032	434-0032	434-1032	434-7032	434-8032

Letter Sizes

Size	Flute Length	HSS Black		HSS Bright		M35 Cobalt	
		6"	12"	6"	12"	6"	12"
A	2-5/8"	434-5201	434-9201	434-0201	434-1201	434-7201	434-8201
B	2-3/4	434-5202	434-9202	434-0202	434-1202	434-7202	434-8202
C	2-3/4	434-5203	434-9203	434-0203	434-1203	434-7203	434-8203
D	2-3/4	434-5204	434-9204	434-0204	434-1204	434-7204	434-8204
E	2-3/4	434-5205	434-9205	434-0205	434-1205	434-7205	434-8205
F	2-3/4	434-5206	434-9206	434-0206	434-1206	434-7206	434-8206
G	2-7/8	434-5207	434-9207	434-0207	434-1207	434-7207	434-8207
H	2-7/8	434-5208	434-9208	434-0208	434-1208	434-7208	434-8208
I	2-7/8	434-5209	434-9209	434-0209	434-1209	434-7209	434-8209
J	2-7/8	434-5210	434-9210	434-0210	434-1210	434-7210	434-8210
K	2-15/16	434-5211	434-9211	434-0211	434-1211	434-7211	434-8211
L	2-15/16	434-5212	434-9212	434-0212	434-1212	434-7212	434-8212
M	3-1/16	434-5213	434-9213	434-0213	434-1213	434-7213	434-8213
N	3-1/16	434-5214	434-9214	434-0214	434-1214	434-7214	434-8214
O	3-3/16	434-5215	434-9215	434-0215	434-1215	434-7215	434-8215
P	3-5/16	434-5216	434-9216	434-0216	434-1216	434-7216	434-8216
Q	3-7/16	434-5217	434-9217	434-0217	434-1217	434-7217	434-8217
R	3-7/16	434-5218	434-9218	434-0218	434-1218	434-7218	434-8218
S	3-1/2	434-5219	434-9219	434-0219	434-1219	434-7219	434-8219
T	3-1/2	434-5220	434-9220	434-0220	434-1220	434-7220	434-8220
U	3-5/8	434-5221	434-9221	434-0221	434-1221	434-7221	434-8221
V	3-5/8	434-5222	434-9222	434-0222	434-1222	434-7222	434-8222
W	3-3/4	434-5223	434-9223	434-0223	434-1223	434-7223	434-8223
X	3-3/4	434-5224	434-9224	434-0224	434-1224	434-7224	434-8224
Y	3-7/8	434-5225	434-9225	434-0225	434-1225	434-7225	434-8225
Z	3-7/8	434-5226	434-9226	434-0226	434-1226	434-7226	434-8226

Number Sizes

	HSS Black				HSS Bright		M35 Cobalt	
	Flute	6"	12"	6"	12"	6"	12"	
	Size Length	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	
#1	2-5/8	434-5101	434-9101	434-0101	434-1101	434-7101	434-8101	
#2	2-5/8	434-5102	434-9102	434-0102	434-1102	434-7102	434-8102	
#3	2-1/2	434-5103	434-9103	434-0103	434-1103	434-7103	434-8103	
#4	2-1/2	434-5104	434-9104	434-0104	434-1104	434-7104	434-8104	
#5	2-1/2	434-5105	434-9105	434-0105	434-1105	434-7105	434-8105	
#6	2-1/2	434-5106	434-9106	434-0106	434-1106	434-7105	434-8105	
#7	2-7/16	434-5107	434-9107	434-0107	434-1107	434-7106	434-8106	
#8	2-7/16	434-5108	434-9108	434-0108	434-1108	434-7107	434-8107	
#9	2-7/16	434-5109	434-9109	434-0109	434-1109	434-7108	434-8108	
#10	2-7/16	434-5110	434-9110	434-0110	434-1110	434-7109	434-8109	
#11	2-5/16	434-5111	434-9111	434-0111	434-1111	434-7111	434-8111	
#12	2-5/16	434-5112	434-9112	434-0112	434-1112	434-7112	434-8112	
#13	2-5/16	434-5113	434-9113	434-0113	434-1113	434-7113	434-8113	
#14	2-3/16	434-5114	434-9114	434-0114	434-1114	434-7114	434-8114	
#15	2-3/16	434-5115	434-9115	434-0115	434-1115	434-7115	434-8115	
#16	2-3/16	434-5116	434-9116	434-0116	434-1116	434-7116	434-8116	
#17	2-3/16	434-5117	434-9117	434-0117	434-1117	434-7117	434-8117	
#18	2-1/8	434-5118	434-9118	434-0118	434-1118	434-7118	434-8118	
#19	2-1/8	434-5119	434-9119	434-0119	434-1119	434-7119	434-8119	
#20	2-1/8	434-5120	434-9120	434-0120	434-1120	434-7120	434-8120	
#21	2-1/8	434-5121	434-9121	434-0121	434-1121	434-7121	434-8121	
#22	2	434-5122	434-9122	434-0122	434-1122	434-7122	434-8122	
#23	2	434-5123	434-9123	434-0123	434-1123	434-7123	434-8123	
#24	2	434-5124	434-9124	434-0124	434-1124	434-7124	434-8124	
#25	1-7/8	434-5125	434-9125	434-0125	434-1125	434-7125	434-8125	
#26	1-7/8	434-5126	434-9126	434-0126	434-1126	434-7126	434-8126	
#27	1-7/8	434-5127	434-9127	434-0127	434-1127	434-7127	434-8127	
#28	1-3/4	434-5128	434-9128	434-0128	434-1128	434-7128	434-8128	
#29	1-3/4	434-5129	434-9129	434-0129	434-1129	434-7129	434-8129	
#30	1-5/8	434-5130	434-9130	434-0130	434-1130	434-7130	434-8130	
#31	1-5/8	434-5131	434-9131	434-0131	434-1131	434-7131	434-8131	
#32	1-5/8	434-5132	434-9132	434-0132	434-1132	434-7132	434-8132	
#33	1-1/2	434-5133	434-9133	434-0133	434-1133	434-7133	434-8133	
#34	1-1/2	434-5134	434-9134	434-0134	434-1134	434-7134	434-8134	
#35	1-1/2	434-5135	434-9135	434-0135	434-1135	434-7135	434-8135	
#36	1-7/16	434-5136	434-9136	434-0136	434-1136	434-7136	434-8136	
#37	1-7/16	434-5137	434-9137	434-0137	434-1137	434-7137	434-8137	
#38	1-7/16	434-5138	434-9138	434-0138	434-1138	434-7138	434-8138	
#39	1-3/8	434-5139	434-9139	434-0139	434-1139	434-7139	434-8139	
#40	1-3/8	434-5140	434-9140	434-0140	434-1140	434-7140	434-8140	
#41	1-3/8	434-5141	434-9141	434-0141	434-1141	434-7141	434-8141	
#42	1-1/4	434-5142	434-9142	434-0142	434-1142	434-7142	434-8142	
#43	1-1/4	434-5143	434-9143	434-0143	434-1143	434-7143	434-8143	
#44	1-1/8	434-5144	434-9144	434-0144	434-1144	434-7144	434-8144	
#45	1-1/8	434-5145	434-9145	434-0145	434-1145	434-7145	434-8145	
#46	1-1/8	434-5146	434-9146	434-0146	434-1146	434-7146	434-8146	
#47	1	434-5147	434-9147	434-0147	434-1147	434-7147	434-8147	
#48	1	434-5148	434-9148	434-0148	434-1148	434-7148	434-8148	
#49	1	434-5149	434-9149	434-0149	434-1149	434-7149	434-8149	
#50	1	434-5150	434-9150	434-0150	434-1150	434-7150	434-8150	
#51	1	434-5151	434-9151	434-0151	434-1151	434-7151	434-8151	
#52	7/8	434-5152	434-9152	434-0152	434-1152	434-7152	434-8152	
#53	7/8	434-5153	434-9153	434-0153	434-1153	434-7153	434-8153	
#54	7/8	434-5154	434-9154	434-0154	434-1154	434-7154	434-8154	
#55	7/8	434-5155	434-9155	434-0155	434-1155	434-7155	434-8155	
#56	3/4	434-5156	434-9156	434-0156	434-1156	434-7156	434-8156	
#57	3/4	434-5157	434-9157	434-0157	434-1157	434-7157	434-8157	
#58	11/16	434-5158	434-9158	434-0158	434-1158	434-7158	434-8158	
#59	11/16	434-5159	434-9159	434-0159	434-1159	434-7159	434-8159	
#60	11/16	434-5160	434-9160	434-0160	434-1160	434-7160	434-8160	

Extra Long Drills

高速钢直柄加长发黑钻头

High Speed Steel, 118° Point



Dia.	Flute Length	OAL	Order No.	Dia.	Flute Length	OAL	Order No.	Dia.	Flute Length	OAL	Order No.
1/8"	5"	8"	300-1008	15/64	9	12	300-1215	29/64	14	18	300-1829
9/64	5	8	300-1009	1/4	9	12	300-1216	15/32	14	18	300-1830
5/32	5	8	300-1010	17/64	9	12	300-1217	31/64	14	18	300-1831
11/64	5	8	300-1011	9/32	9	12	300-1218	1/2	14	18	300-1832
3/16	5	8	300-1012	19/64	9	12	300-1219	33/64	14	18	300-1833
13/64	5	8	300-1013	5/16	9	12	300-1220	17/32	14	18	300-1834
7/32	5	8	300-1014	21/64	9	12	300-1221	35/64	14	18	300-1835
15/64	5	8	300-1015	11/32	9	12	300-1222	9/16	14	18	300-1836
1/4	5	8	300-1016	23/64	9	12	300-1223	37/64	14	18	300-1837
17/64	5	8	300-1017	3/8	9	12	300-1224	19/32	14	18	300-1838
9/32	5	8	300-1018	25/64	9	12	300-1225	39/64	14	18	300-1839
19/64	5	8	300-1019	13/32	9	12	300-1226	5/8	14	18	300-1840
5/16	5	8	300-1020	27/64	9	12	300-1227	21/32	14	18	300-1842
21/64	5	8	300-1021	7/16	9	12	300-1228	43/64	14	18	300-1843
11/32	5	8	300-1022	29/64	9	12	300-1229	11/16	14	18	300-1844
23/64	5	8	300-1023	15/32	9	12	300-1230	45/64	14	18	300-1845
3/8	5	8	300-1024	31/64	9	12	300-1231	23/32	14	18	300-1846
25/64	5	8	300-1025	1/2	9	12	300-1232	47/64	14	18	300-1847
13/32	5	8	300-1026	33/64	9	12	300-1233	3/4	14	18	300-1848
27/64	5	8	300-1027	17/32	9	12	300-1234	49/64	14	18	300-1849
7/16	5	8	300-1028	35/64	9	12	300-1235	25/32	14	18	300-1850
29/64	5	8	300-1029	9/16	9	12	300-1236	51/64	14	18	300-1851
15/32	5	8	300-1030	37/64	9	12	300-1237	13/16	14	18	300-1852
31/64	5	8	300-1031	19/32	9	12	300-1238	53/64	14	18	300-1853
1/2	5	8	300-1032	39/64	9	12	300-1239	27/32	14	18	300-1854
9/16	8	10	300-1136	5/8	9	12	300-1240	55/64	14	18	300-1855
1/8	8	10	300-1138	41/64	9	12	300-1241	7/8	14	18	300-1856
9/64	8	10	300-1139	21/32	9	12	300-1242	57/64	14	18	300-1857
5/32	8	10	300-1140	43/64	9	12	300-1243	29/32	14	18	300-1858
11/64	8	10	300-1141	11/16	9	12	300-1244	59/64	14	18	300-1859
3/16	8	10	300-1142	23/32	9	12	300-1246	15/16	14	18	300-1860
13/64	8	10	300-1143	3/4	9	12	300-1248	61/64	14	18	300-1861
7/32	8	10	300-1144	49/64	9	12	300-1249	31/32	14	18	300-1862
15/64	8	10	300-1145	25/32	9	12	300-1250	63/64	14	18	300-1863
1/4	8	10	300-1146	13/16	9	12	300-1252	1	14	18	300-1864
17/64	8	10	300-1147	27/32	9	12	300-1254	1-1/8	14	18	300-1872
9/32	8	10	300-1148	7/8	9	12	300-1256	1-3/16	14	18	300-1876
19/64	8	10	300-1149	29/32	9	12	300-1258	1-1/4	14	18	300-1880
5/16	8	10	300-1150	15/16	9	12	300-1260	3/8	18	24	300-2424
21/64	8	10	300-1151	31/32	9	12	300-1262	7/16	18	24	300-2428
11/32	8	10	300-1152	63/64	9	12	300-1263	1/2	18	24	300-2432
23/64	8	10	300-1153	1	9	12	300-1264	5/8	18	24	300-2440
3/8	8	10	300-1154	3/16	14	18	300-1812	11/16	18	24	300-2444
25/64	8	10	300-1155	13/64	14	18	300-1813	3/4	18	24	300-2448
13/32	8	10	300-1156	7/32	14	18	300-1814	13/16	18	24	300-2452
27/64	8	10	300-1157	15/64	14	18	300-1815	7/8	18	24	300-2456
7/16	8	10	300-1158	1/4	14	18	300-1816	15/16	18	24	300-2460
29/64	8	10	300-1159	17/64	14	18	300-1817	1	18	24	300-2464
15/32	8	10	300-1160	9/32	14	18	300-1818	1-1/8	18	24	300-2472
31/64	8	10	300-1161	19/64	14	18	300-1819	1-3/16	18	24	300-2476
1/2	8	10	300-1162	5/16	14	18	300-1820	1-1/4	18	24	300-2480
3/64	9	12	300-1203	21/64	14	18	300-1821	7/16	24	30	300-3028
1/8	9	12	300-1208	11/32	14	18	300-1822	1/2	24	30	300-3032
9/64	9	12	300-1209	23/64	14	18	300-1823	9/16	24	30	300-3036
5/32	9	12	300-1210	3/8	14	18	300-1824	11/16	24	30	300-3044
11/64	9	12	300-1211	25/64	14	18	300-1825	1/2	28	36	300-3232
3/16	9	12	300-1212	13/32	14	18	300-1826	11/16	28	36	300-3244
13/64	9	12	300-1213	27/64	14	18	300-1827				
7/32	9	12	300-1214	7/16	14	18	300-1828				

Solid Carbide Jobber Length Twist Drills

整体硬质合金美标钻

118° Point, Right Hand

- Precision ground to close diameter tolerances.
- Recommended for general purpose drilling in Cast Iron, Aluminum, Magnesium, Bronze, Masonite and Resin-Fiberglass Laminates.



Fractional Sizes

Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.
1/32"	3/8"	1-1/8"	342-0002	13/64"	1-3/4"	3"	342-0013	23/64"	2-1/2"	4"	342-0023
3/64	3/4	1-1/2	342-0003	7/32	1-3/4	3	342-0014	3/8	2-3/4	4-1/4	342-0024
1/16	3/4	1-1/2	342-0004	15/64	2	3-1/4	342-0015	25/64	2-7/8	4-1/2	342-0025
5/64	7/8	1-3/4	342-0005	1/4	2	3-1/4	342-0016	13/32	2-7/8	4-1/2	342-0026
3/32	1	2	342-0006	17/64	2-1/8	3-1/2	342-0017	27/64	2-7/8	4-1/2	342-0027
7/64	1-1/4	2-1/4	342-0007	9/32	2-1/8	3-1/2	342-0018	7/16	2-7/8	4-1/2	342-0028
1/8	1-1/4	2-1/4	342-0008	19/64	2-3/8	3-3/4	342-0019	29/64	3	4-3/4	342-0029
9/64	1-3/8	2-1/2	342-0009	5/16	2-3/8	3-3/4	342-0020	15/32	3	4-3/4	342-0030
5/32	1-3/8	2-1/2	342-0010	21/64	2-1/2	4	342-0021	31/64	3	4-3/4	342-0031
11/64	1-5/8	2-3/4	342-0011	11/32	2-1/2	4	342-0022	1/2	3	4-3/4	342-0032
3/16	1-5/8	2-3/4	342-0012								

Number Sizes

Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.
#1	1-3/4"	3"	342-0101	#28	1-3/8"	2-1/2"	342-0128	#55	3/4"	1-1/2"	342-0155
#2	1-3/4	3	342-0102	#29	1-3/8	2-1/2	342-0129	#56	3/4	1-1/2	342-0156
#3	1-3/4	3	342-0103	#30	1-1/4	2-1/4	342-0130	#57	3/4	1-1/2	342-0157
#4	1-3/4	3	342-0104	#31	1-1/4	2-1/4	342-0131	#58	3/4	1-1/2	342-0158
#5	1-3/4	3	342-0105	#32	1-1/4	2-1/4	342-0132	#59	3/4	1-1/2	342-0159
#6	1-3/4	3	342-0106	#33	1-1/4	2-1/4	342-0133	#60	3/4	1-1/2	342-0160
#7	1-3/4	3	342-0107	#34	1-1/4	2-1/4	342-0134	#61	1/2	1-1/4	342-0161
#8	1-3/4	3	342-0108	#35	1-1/4	2-1/4	342-0135	#62	1/2	1-1/4	342-0162
#9	1-3/4	3	342-0109	#36	1-1/4	2-1/4	342-0136	#63	1/2	1-1/4	342-0163
#10	1-5/8	2-3/4	342-0110	#37	1-1/4	2-1/4	342-0137	#64	1/2	1-1/4	342-0164
#11	1-5/8	2-3/4	342-0111	#38	1-1/4	2-1/4	342-0138	#65	3/8	1-1/8	342-0165
#12	1-5/8	2-3/4	342-0112	#39	1-1/4	2-1/4	342-0139	#66	3/8	1-1/8	342-0166
#13	1-5/8	2-3/4	342-0113	#40	1	2	342-0140	#67	3/8	1-1/8	342-0167
#14	1-5/8	2-3/4	342-0114	#41	1	2	342-0141	#68	3/8	1-1/8	342-0168
#15	1-5/8	2-3/4	342-0115	#42	1	2	342-0142	#69	5/16	1	342-0169
#16	1-5/8	2-3/4	342-0116	#43	1	2	342-0143	#70	5/16	1	342-0170
#17	1-5/8	2-3/4	342-0117	#44	1	2	342-0144	#71	5/16	1	342-0171
#18	1-5/8	2-3/4	342-0118	#45	7/8	1-3/4	342-0145	#72	5/16	1	342-0172
#19	1-5/8	2-3/4	342-0119	#46	7/8	1-3/4	342-0146	#73	1/4	7/8	342-0173
#20	1-3/8	2-1/2	342-0120	#47	7/8	1-3/4	342-0147	#74	1/4	7/8	342-0174
#21	1-3/8	2-1/2	342-0121	#48	7/8	1-3/4	342-0148	#75	1/4	7/8	342-0175
#22	1-3/8	2-1/2	342-0122	#49	7/8	1-3/4	342-0149	#76	1/4	7/8	342-0176
#23	1-3/8	2-1/2	342-0123	#50	7/8	1-3/4	342-0150	#77	3/16	3/4	342-0177
#24	1-3/8	2-1/2	342-0124	#51	3/4	1-1/2	342-0151	#78	3/16	3/4	342-0178
#25	1-3/8	2-1/2	342-0125	#52	3/4	1-1/2	342-0152	#79	3/16	3/4	342-0179
#26	1-3/8	2-1/2	342-0126	#53	3/4	1-1/2	342-0153	#80	3/16	3/4	342-0180
#27	1-3/8	2-1/2	342-0127	#54	3/4	1-1/2	342-0154				

Letter Sizes

Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.	Size	Flute Length	OAL	Order No.
A	2"	3-1/4"	342-0201	J	2-1/8"	3-1/2"	342-0210	S	2-1/2"	4"	342-0219
B	2	3-1/4	342-0202	K	2-1/8	3-1/2	342-0211	T	2-1/2	4	342-0220
C	2	3-1/4	342-0203	L	2-1/8	3-1/2	342-0212	U	2-3/4	4-1/4	342-0221
D	2	3-1/4	342-0204	M	2-3/8	3-3/4	342-0213	V	2-3/4	4-1/4	342-0222
E	2	3-1/4	342-0205	N	2-3/8	3-3/4	342-0214	W	2-7/8	4-1/2	342-0223
F	2	3-1/4	342-0206	O	2-3/8	3-3/4	342-0215	X	2-7/8	4-1/2	342-0224
G	2-1/8	3-1/2	342-0207	P	2-3/8	3-3/4	342-0216	Y	2-7/8	4-1/2	342-0225
H	2-1/8	3-1/2	342-0208	Q	2-1/2	4	342-0217	Z	2-7/8	4-1/2	342-0226
I	2-1/8	3-1/2	342-0209	R	2-1/2	4	342-0218				

Metric Sizes

Size (mm)	Flute Length (mm)	OAL (mm)	Order No.	Size (mm)	Flute Length (mm)	OAL (mm)	Order No.	Size (mm)	Flute Length (mm)	OAL (mm)	Order No.
2	22	44	342-0301	5.5	44	75	342-0308	9	70	100	342-0315
2.5	25	50	342-0302	6	50	82	342-0309	9.5	70	108	342-0316
3	32	57	342-0303	6.5	50	82	342-0310	10	73	114	342-0317
3.5	35	63	342-0304	7	54	89	342-0311	10.5	73	114	342-0318
4	35	63	342-0305	7.5	60	95	342-0312	11	73	114	342-0319
4.5	41	70	342-0306	8	60	95	342-0313	11.5	76	120	342-0320
5	44	75	342-0307	8.5	63	100	342-0314	12	76	120	342-0321

Inch Masonry Drills

Carbide Tipped

镀锌建工钻头(带合金头)



Inch

Overall				Overall			
Size	Shank	Length	Order No.	Size	Shank	Length	Order No.
1/8"	1/8	3"	340-3080	1/2	3/8	13	340-3326
5/32	5/32	3	340-3100	9/16	3/8	6	340-3358
11/64	1/8	3-1/4	340-3105	9/16	1/2	6	340-3360
3/16	3/16	3	340-3118	9/16	1/2	8	340-3361
3/16	3/16	3.5	340-3120	9/16	1/2	12	340-3362
3/16	3/16	6	340-3121	9/16	1/2	16	340-3363
3/16	3/16	4	340-3124	9/16	1/2	18	340-3364
3/16	5/32	6	340-3126	9/16	3/8	12	380-3465
7/32	7/32	3.5	340-3140	9/16	1/2	13	380-3467
7/32	7/32	4	340-3142	19/32	1/2	6	340-3380
15/64	3/16	4	340-3150	5/8	3/8	6	340-3495
1/4	1/4	4	340-3160	5/8	3/8	13	340-3497
1/4	1/4	6	340-3161	5/8	1/2	6	340-3400
1/4	1/4	8	340-3162	5/8	1/2	8	340-3401
1/4	1/4	12	340-3163	5/8	1/2	12	340-3402
1/4	1/4	16	340-3164	5/8	1/2	16	340-3403
1/4	1/4	18	340-3465	5/8	1/2	18	340-3404
17/64	1/4	4	340-3170	21/32	1/2	6	340-3420
9/32	1/4	4	340-3180	11/16	1/2	6	340-3430
9/32	9/32	4	340-3182	23/32	1/2	6	340-3460
5/16	1/4	4	340-3195	23/32	1/2	8	340-3461
5/16	1/4	6	340-3197	23/32	1/2	12	340-3462
5/16	5/16	4	340-3198	23/32	1/2	16	340-3463
5/16	5/16	5	340-3200	23/32	1/2	18	340-3464
5/16	5/16	6	340-3201	3/4	1/2	6	340-3480
5/16	5/16	8	340-3202	3/4	1/2	8	340-3481
5/16	5/16	12	340-3203	3/4	1/2	12	340-3482
5/16	5/16	16	340-3204	3/4	1/2	16	340-3483
5/16	5/16	18	340-3205	3/4	1/2	18	340-3484
11/32	5/16	5	340-3220	3/4	1/2	13	340-3488
3/8	3/8	3	340-3234	25/32	1/2	6	340-3500
3/8	1/4	4	340-3236	25/32	1/2	8	340-3501
3/8	1/4	13	340-3237	25/32	1/2	12	340-3502
3/8	1/4	6	340-3238	25/32	1/2	16	340-3503
3/8	3/8	4	340-3239	25/32	1/2	18	340-3504
3/8	3/8	5	340-3240	27/32	1/2	6	340-3540
3/8	3/8	6	340-3241	7/8	1/2	6	340-3560
3/8	3/8	8	340-3242	1	1/2	12	340-3561
3/8"	3/8	12	340-3243	1	1/2	18	340-3562
3/8	3/8	16	340-3244	7/8	1/2	16	340-3563
3/8	3/8	18	340-3245	7/8	1/2	18	340-3564
7/16	1/4	4	340-3276	7/8	1/2	12	340-3565
7/16	3/8	6	340-3280	29/32	1/2	6	340-3580
7/16	3/8	12	340-3282	15/16	1/2	6	340-3600
7/16	3/8	18	340-3284	15/16	1/2	8	340-3601
15/32	3/8	6	340-3300	15/16	1/2	12	340-3602
15/32	3/8	8	340-3301	15/16	1/2	16	340-3603
15/32	3/8	12	340-3302	15/16	1/2	18	340-3604
15/32	3/8	16	340-3303	1	1/2	6	340-3640
15/32	3/8	18	340-3304	1	1/2	8	340-3641
1/2	1/4	4	340-3318	1	1/2	12	340-3642
1/2	1/4	6	340-3319	1	1/2	16	340-3643
1/2	1/2	6	340-3320	1	1/2	18	340-3644
1/2	1/2	8	340-3321	1-1/32	1/2	6	340-3660
1/2	1/2	12	340-3322	1-1/32	1/2	8	340-3661
1/2	1/2	16	340-3323	1-1/32	1/2	12	340-3662
1/2	1/2	18	340-3324	1-1/32	1/2	16	340-3663
1/2	1/2	13	340-3325	1-1/32	1/2	18	340-3664

Metric

Size (mm)	OAL (mm)	Order No.	Size (mm)	OAL (mm)	Order No.
3.0	60	340-0030	14.0	150	340-0150
3.0	65	340-0031	15.0	150	340-0160
4.0	75	340-0040	16.0	200	340-0161
4.5	85	340-0045	16.0	300	340-0162
5.0	85	340-0050	16.0	400	340-0163
5.5	85	340-0055	16.0	600	340-0164
5.5	150	340-0056	17.0	160	340-0170
6.0	100	340-0060	18.0	160	340-0180
6.0	150	340-0061	18.0	200	340-0181
6.0	200	340-0062	18.0	300	340-0182
6.0	300	340-0063	18.0	400	340-0183
6.0	400	340-0064	18.0	600	340-0184
6.5	100	340-0065	19.0	160	340-0190
7.0	100	340-0070	19.0	200	340-0191
7.0	300	340-0073	19.0	300	340-0192
8.0	120	340-0080	19.0	400	340-0193
8.0	150	340-0081	19.0	600	340-0194
8.0	200	340-0082	20.0	160	340-0200
8.0	300	340-0083	20.0	200	340-0201
8.0	400	340-0084	20.0	300	340-0202
8.0	600	340-0085	20.0	400	340-0203
9.0	120	340-0090	20.0	600	340-0204
10.0	120	340-0100	21.0	600	340-0210
10.0	150	340-0101	22.0	160	340-0220
10.0	200	340-0102	22.0	200	340-0221
10.0	300	340-0103	22.0	300	340-0222
10.0	400	340-0104	22.0	400	340-0223
10.0	600	340-0105	22.0	600	340-0224
11.0	150	340-0110	23.0	160	340-0230
12.0	150	340-0120	24.0	160	340-0240
12.0	200	340-0121	24.0	200	340-0241
12.0	300	340-0122	24.0	300	340-0242
12.0	400	340-0123	24.0	400	340-0243
12.0	600	340-0124	24.0	600	340-0244
13.0	150	340-0130	25.0	160	340-0250
13.0	200	340-0131	25.0	200	340-0251
13.0	300	340-0132	25.0	300	340-0252
13.0	400	340-0133	25.0	400	340-0253
13.0	600	340-0134	25.0	600	340-0254
14.0	150	340-0140	26.0	160	340-0260
14.0	200	340-0141	26.0	200	340-0261
14.0	300	340-0142	26.0	300	340-0262
14.0	400	340-0143	26.0	400	340-0263
14.0	600	340-0144	26.0	600	340-0264

Saw Drills

HSS, 135° Split Point, Spiral Point

- Used with your power drill to saw, ream, drill and cut through wood, metal and plastic.



Size	Flute Length	OAL	Order No.	Tin coated Order No.
1/8"	1-1/4"	2-1/2"	334-0008	334-0108
3/16	2	3-1/4	334-0012	334-0112
1/4	2-1/2	3-11/16	334-0016	334-0116

HSS Taper Shank Core Drills 锥柄扩孔钻

- Designed for both portable and stationary machines.
- Shank sizes correspond to the drill size.
- For use in both ferrous and non-ferrous metal, enlarging punched or drilled holes.



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
13/32	3-5/8	7	MT1	218-1026	61/64	6-3/8	11	MT3	218-1061	1-39/64	10	17	MT5	218-1103
7/16	3-7/8	7-1/4	MT1	218-1028	31/32	6-3/8	11	MT3	218-1062	1-5/8	10	17	MT5	218-1104
15/32	4-1/8	7-1/2	MT1	218-1030	63/64	6-3/8	11	MT3	218-1063	1-21/32	10-1/8	17-1/8	MT5	218-1106
31/64	4-3/8	8-1/4	MT2	218-1031	1	6-3/8	11	MT3	218-1064	1-11/16	10-1/8	17-1/8	MT5	218-1108
1/2	4-3/8	8-1/4	MT2	218-1032	1-1/32	6-1/2	11-1/8	MT3	218-1066	1-23/32	10-1/8	17-1/8	MT5	218-1110
33/64	4-5/8	8-1/2	MT2	218-1033	1-3/64	6-5/8	11-1/4	MT3	218-1067	1-3/4	10-1/8	17-1/8	MT5	218-1112
17/32	4-5/8	8-1/2	MT2	218-1034	1-1/16	6-5/8	11-1/4	MT3	218-1068	1-25/32	10-1/8	17-1/8	MT5	218-1114
9/16	4-7/8	8-3/4	MT2	218-1036	1-5/64	6-7/8	12-1/2	MT4	218-1069	1-13/16	10-1/8	17-1/8	MT5	218-1116
37/64	4-7/8	8-3/4	MT2	218-1037	1-3/32	6-7/8	12-1/2	MT4	218-1070	1-27/32	10-1/8	17-1/8	MT5	218-1118
19/32	4-7/8	8-3/4	MT2	218-1038	1-1/8	7-1/8	12-3/4	MT4	218-1072	1-7/8	10-3/8	17-3/8	MT5	218-1120
39/64	4-7/8	8-3/4	MT2	218-1039	1-5/32	7-1/4	12-7/8	MT4	218-1074	1-29/32	10-3/8	17-3/8	MT5	218-1122
5/8	4-7/8	8-3/4	MT2	218-1040	1-11/64	7-3/8	13	MT4	218-1075	1-15/16	10-3/8	17-3/8	MT5	218-1124
41/64	5-1/8	9	MT2	218-1041	1-3/16	7-3/8	13	MT4	218-1076	1-31/32	10-3/8	17-3/8	MT5	218-1126
21/32	5-1/8	9	MT2	218-1042	1-13/64	7-1/2	13-1/8	MT4	218-1077	2	10-3/8	17-3/8	MT5	218-1128
43/64	5-1/8	9	MT2	218-1043	1-7/32	7-1/2	13-1/8	MT4	218-1078	2-1/32	10-3/8	17-3/8	MT5	218-1130
11/16	5-3/8	9-1/4	MT2	218-1044	1-15/64	7-7/8	13-1/2	MT4	218-1079	2-1/16	10-1/4	17-3/8	MT5	218-1132
45/64	5-5/8	9-1/2	MT2	218-1045	1-1/4	7-7/8	13-1/2	MT4	218-1080	2-1/8	10-1/4	17-3/8	MT5	218-1136
23/32	5-5/8	9-1/2	MT2	218-1046	1-17/64	8-1/2	14-1/8	MT4	218-1081	2-3/16	10-1/4	17-3/8	MT5	218-1140
47/64	5-5/8	9-1/2	MT2	218-1047	1-9/32	8-1/2	14-1/8	MT4	218-1082	2-1/4	10-1/8	17-3/8	MT5	218-1144
3/4	5-7/8	9-3/4	MT2	218-1048	1-5/16	8-5/8	14-1/4	MT4	218-1084	2-5/16	10-1/8	17-3/8	MT5	218-1148
49/64	6	9-7/8	MT2	218-1049	1-11/32	8-3/4	14-3/8	MT4	218-1086	2-3/8	10-1/8	17-3/8	MT5	218-1152
25/32	6	9-7/8	MT2	218-1050	1-3/8	8-7/8	14-1/2	MT4	218-1088	2-7/16	10-1/8	17-3/8	MT5	218-1156
51/64	6-1/8	10-3/4	MT3	218-1051	1-13/32	9	14-5/8	MT4	218-1090	2-1/2	11-1/4	18-3/4	MT5	218-1160
13/16	6-1/8	10-3/4	MT3	218-1052	1-7/16	9-1/8	14-3/4	MT4	218-1092	2-9/16	11-7/8	19-1/2	MT5	218-1164
27/32	6-1/8	10-3/4	MT3	218-1054	1-15/32	9-1/4	14-7/8	MT4	218-1094	2-5/8	11-7/8	19-1/2	MT5	218-1168
55/64	6-1/8	10-3/4	MT3	218-1055	1-1/2	9-3/8	15	MT4	218-1096	2-11/16	12-3/4	20-3/8	MT5	218-1172
7/8	6-1/8	10-3/4	MT3	218-1056	1-17/32	9-3/8	16-3/8	MT5	218-1098	2-3/4	12-3/4	20-3/8	MT5	218-1176
57/64	6-1/8	10-3/4	MT3	218-1057	1-35/64	9-5/8	16-5/8	MT5	218-1099	2-13/16	13-3/8	21-1/8	MT5	218-1180
29/32	6-1/8	10-3/4	MT3	218-1058	1-9/16	9-5/8	16-5/8	MT5	218-1100	2-7/8	13-3/8	21-1/8	MT5	218-1184
59/64	6-1/8	10-3/4	MT3	218-1059	1-37/64	9-7/8	16-7/8	MT5	218-1101	2-15/16	14	21-3/4	MT5	218-1188
15/16	6-1/8	10-3/4	MT3	218-1060	1-19/32	9-7/8	16-7/8	MT5	218-1102	3	14	21-3/4	MT5	218-1192

Core Drills 直柄扩孔钻

Straight Shank, 4 Flute, High Speed Steel



Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.
1/4"	3-1/2"	6-1/8"	218-5016	15/16"	6-1/8"	10-3/4"	218-5060
17/64	3-3/4	6-1/8	218-5017	31/32	6-3/8	11	218-5062
9/32	3-7/8	6-1/4	218-5018	1	6-3/8	11	218-5064
5/16	4	6-3/8	218-5020	1-1/32	6-1/2	11-1/8	218-5066
21/64	4-1/8	6-1/2	218-5021	1-1/16	6-5/8	11-1/4	218-5068
11/32	4-1/8	6-1/2	218-5022	1-3/32	6-7/8	11-1/2	218-5070
3/8	4-1/4	6-3/4	218-5024	1-1/8	7-1/8	11-3/4	218-5072
13/32	4-3/8	7	218-5026	1-5/32	7-1/4	11-7/8	218-5074
27/64	4-5/8	7-1/4	218-5027	1-3/16	7-3/8	12	218-5076
7/16	4-5/8	7-1/4	218-5028	1-7/32	7-1/2	12-1/8	218-5078
15/32	4-3/4	7-1/2	218-5030	1-1/4	7-7/8	12-1/2	218-5080
1/2	4-3/4	7-3/4	218-5032	1-9/32	8-1/2	14-1/8	218-5082
33/64	4-3/4	8	218-5033	1-5/16	8-5/8	14-1/4	218-5084
17/32	4-3/4	8	218-5034	1-11/32	8-3/4	14-3/8	218-5086
9/16	4-7/8	8-1/4	218-5036	1-3/8	8-7/8	14-1/2	218-5088
9/32	4-7/8	8-3/4	218-5038	1-13/32	9	14-5/8	218-5090
5/8	4-7/8	8-3/4	218-5040	1-7/16	9-1/8	14-3/4	218-5092
41/64	5	9	218-5041	1-15/32	9-1/4	14-7/8	218-5094
21/32	5-1/8	9	218-5042	1-1/2	9-3/8	15	218-5096
11/16	5-3/8	9-1/4	218-5044	1-9/16	9-5/8	15-1/4	218-5100
23/32	5-5/8	9-1/2	218-5046	1-5/8	9-7/8	15-5/8	218-5104
3/4	5-7/8	9-3/4	218-5048	1-11/16	10	15-3/4	218-5108
49/64	6	9-7/8	218-5049	1-3/4	10-1/2	16-1/4	218-5112
25/32	6	9-7/8	218-5050	1-13/16	10-1/2	16-1/4	218-5116
13/16	6-1/8	10	218-5052	1-7/8	10-3/4	16-1/2	218-5120
27/32	6-1/8	10	218-5054	1-15/16	10-3/4	16-5/8	218-5124
7/8	6-1/8	10	218-5056	2	10-3/4	16-5/8	218-5128
29/32	6-1/8	10	218-5058				

Spade Wood Bit Set

套装扁钻

Spade Wood Bits in Plastic Pouch.

Pieces	Specification	Order No.
6	3/8", 1/2", 5/8", 3/4", 7/8", 1"	331-2060



Spade Wood Bits 木工扁钻



Size (mm)	Order No.
6.0	331-3060
8.0	331-3080
10.0	331-3100
12.0	331-3120
14.0	331-3140
16.0	331-3160
18.0	331-3180
20.0	331-3200
22.0	331-3220
24.0	331-3240

Size	Order No.
3/8"	331-3002
1/2	331-3004
5/8	331-3006
3/4	331-3008
7/8	331-3012
1	331-3014
1-3/32	331-3016
1-3/16	331-3018
1-1/4	331-3020
1-3/8	331-3022

Forstner Wood Bit Set

木工平翼钻

Pieces	Specification	Order No.
7	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1"	331-2070



2"-4" Stub Length Taper Shank Drills

High Speed Steel, 118° Point

NEW

2-4" 美标锥柄短钻 118 度



Flute					Flute					Flute					Flute				
Size	Len.	OAL	Shank	Order No.	Size	Len.	OAL	Shank	Order No.	Size	Len.	OAL	Shank	Order No.	Size	Len.	OAL	Shank	Order No.
2"	5"	11"	MT4	302-0501	2-1/4	5	12	MT5	302-0519	2-9/16	5	11	MT4	302-0536	3	5	12	MT5	302-0553
2	5	12	MT5	302-0503	2-5/16	5	11	MT4	302-0521	2-9/16	5	12	MT5	302-0537	3-1/8	5	12	MT5	302-0555
2-1/16	5	11	MT4	302-0505	2-5/16	5	12	MT5	302-0523	2-5/8	5	11	MT4	302-0539	3-1/4	5	12	MT5	302-0557
2-1/16	5	12	MT5	302-0507	2-3/8	5	11	MT4	302-0525	2-5/8	5	12	MT5	302-0541	3-3/8	5	12	MT5	302-0559
2-1/8	5	11	MT4	302-0509	2-3/8	5	12	MT5	302-0527	2-3/4	5	11	MT4	302-0543	3-1/2	5	12	MT5	302-0561
2-1/8	5	12	MT5	302-0511	2-7/16	5	11	MT4	302-0529	2-3/4	5	12	MT5	302-0545	3-5/8	5	12	MT5	302-0563
2-3/16	5	11	MT4	302-0513	2-7/16	5	12	MT5	302-0531	2-7/8	5	11	MT4	302-0547	3-3/4	5	12	MT5	302-0565
2-3/16	5	12	MT5	302-0515	2-1/2	5	11	MT4	302-0533	2-7/8	5	12	MT5	302-0549	3-7/8	5	12	MT5	302-0567
2-1/4	5	11	MT4	302-0517	2-1/2	5	12	MT5	302-0535	3	5	11	MT4	302-0551	4	5	12	MT5	302-0569

Cobalt Inch Taper Shank Drills

M35 美标锥柄麻花钻, 135 度分割刃



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1/4"		6-1/8"	MT1	300-1615	3/4"	5-7/8"	9-3/4"	MT2	300-2648	1-1/8"	7-1/8"	12-7/8"	MT4	300-4708
1/4	2-7/8"	5-3/8	MT1	300-1616	25/32	6	9-7/8	MT2	300-2650	1-9/64	7-1/4	12-7/8	MT4	300-4709
17/64	3	5-7/8	MT1	300-1617	13/16	6-1/8	10	MT2	300-2652	1-5/32	7-1/4	12-7/8	MT4	300-4710
9/32	3	5-7/8	MT1	300-1618	41/64	5-1/8	9-3/4	MT3	300-3641	1-11/64	7-3/8	13	MT4	300-4711
19/64	3-1/8	6-3/8	MT1	300-1619	21/32	5-1/8	9-3/4	MT3	300-3642	1-3/16	7-3/8	13	MT4	300-4712
5/16	3-1/8	6-3/8	MT1	300-1620	43/64	5-3/8	10	MT3	300-3643	1-13/64	7-1/2	13-1/8	MT4	300-4713
21/64	3-1/4	6-1/2	MT1	300-1621	11/16	5-3/8	10	MT3	300-3644	1-7/32	7-1/2	13-1/8	MT4	300-4714
11/32	3-1/4	6-1/2	MT1	300-1622	45/64	5-5/8	10-1/4	MT3	300-3645	1-15/64	7-7/8	13-1/2	MT4	300-4715
23/64	3-1/2	6-3/4	MT1	300-1623	23/64	5-5/8	10-1/4	MT3	300-3646	1-1/4	7-7/8	13-1/2	MT4	300-4716
3/8	3-1/2	6-3/8	MT1	300-1624	47/64	5-7/8	10-1/2	MT3	300-3647	1-17/64	8-1/2	14-1/8	MT4	300-4717
3/8	7			300-1625	3/4	5-7/8	10-1/2	MT3	300-3648	1-9/32	8-1/2	14-1/8	MT4	300-4718
13/32	3-5/8	6-5/8	MT1	300-1626	49/64	6	10-5/8	MT3	300-3649	1-19/64	8-5/8	14-1/4	MT4	300-4719
7/16	3-7/8	6-5/8	MT1	300-1628	25/32	6	10-7/8	MT3	300-3650	1-5/6	8-5/8	14-1/4	MT4	300-4720
15/32	4-1/8	6-7/8	MT1	300-1630	51/64	6-1/8	10-3/4	MT3	300-3651	1-21/64	8-3/4	14-3/8	MT4	300-4721
3/8	3-1/2	7-3/8	MT2	300-2624	13/16	6-1/8	10-3/4	MT3	300-3652	1-11/32	8-3/4	14-3/8	MT4	300-4722
25/64	3-5/8	7-1/2	MT2	300-2625	53/64	6-1/8	10-3/4	MT3	300-3653	1-23/64	8-7/8	14-1/2	MT4	300-4723
13/32	3-5/8	7-1/2	MT2	300-2626	27/32	6-1/8	10-3/4	MT3	300-3654	1-3/8	8-7/8	14-1/2	MT4	300-4724
27/64	3-7/8	7-3/4	MT2	300-2627	55/64	6-1/8	10-3/4	MT3	300-3655	1-25/64	9	14-5/8	MT4	300-4725
7/16	3-5/8	7-3/4	MT2	300-2628	7/8	6-1/8	10-3/4	MT3	300-3656	1-13/32	9	14-5/8	MT4	300-4726
29/64	4-1/8	8	MT2	300-2629	57/64	6-1/8	10-3/4	MT3	300-3657	1-27/64	9-1/8	14-3/4	MT4	300-4727
15/32	4-1/8	8	MT2	300-2630	29/32	6-1/8	10-3/4	MT3	300-3658	1-7/16	9-1/8	14-3/4	MT4	300-4728
31/64	4-3/8	8-1/4	MT2	300-2631	59/64	6-1/8	10-3/4	MT3	300-3659	1-29/64	9-1/4	14-7/8	MT4	300-4729
1/2	4-3/8	8-1/4	MT2	300-2632	15/16	6-1/8	10-3/4	MT3	300-3660	1-15/32	9-1/4	14-7/8	MT4	300-4730
33/64	4-5/8	8-1/2	MT2	300-2633	61/64	6-3/8	11	MT3	300-3661	1-31/64	9-3/8	15	MT4	300-4731
17/32	4-5/8	8-1/2	MT2	300-2634	31/32	6-3/8	11	MT3	300-3662	1-1/2	9-3/8	15	MT4	300-4732
35/64	4-7/8	8-3/4	MT2	300-2635	63/64	6-3/8	11	MT3	300-3663	1-5/16	8-5/8	15-7/8	MT5	300-5720
9/16"	4-7/8"	8-3/4"	MT2	300-2636	1	6-3/8	11	MT3	300-3664	1-3/8	8-7/8	14-1/2	MT5	300-5724
37/64	4-7/8	8-3/4	MT2	300-2637	1-1/64	6-1/2	12-1/8	MT4	300-4701	1-7/16	9-1/8	14-1/8	MT5	300-5728
19/32	4-7/8	8-3/4	MT2	300-2638	1-1/32	6-1/2	12-1/8	MT4	300-4702	1-1/2	9-3/8	16-3/8	MT5	300-5732
39/64	4-7/8	8-3/4	MT2	300-2639	1-3/64	6-5/8	12-1/4	MT4	300-4703	1-5/8	10	17	MT5	300-5740
5/8	4-7/8	8-3/4	MT2	300-2640	1-1/16	6-5/8	12-1/4	MT4	300-4704	1-3/4	10-1/8	17-1/8	MT5	300-5748
21/32	5-1/8	9-3/4	MT2	300-2642	1-5/64	6-7/8	12-1/2	MT4	300-4705	1-13/16	10-1/8	17-1/8	MT5	300-5752
11/16	5-3/8	9-1/4	MT2	300-2644	1-3/32	6-7/8	12-1/2	MT4	300-4706	1-7/8	10-3/4	17-3/8	MT5	300-5756
23/32	5-5/8	9-1/2	MT2	300-2646	1-7/64	7-1/8	12-3/4	MT4	300-4707	2	10-3/8	17-3/8	MT5	300-5764

Cobalt Metric Taper Shank Drills

M35 公制锥柄钻

DIN 345



Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.	Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.	Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.
10.00	MT1	87	168	345-1000	19.00	MT2	135	223	345-1900	28.00	MT3	170	291	345-2800
10.50	MT1	87	168	345-1050	19.50	MT2	140	238	345-1950	28.50	MT3	175	296	345-2850
11.00	MT1	94	175	345-1100	20.00	MT2	140	238	345-2000	29.00	MT3	175	296	345-2900
12.00	MT1	101	182	345-1200	20.50	MT2	145	243	345-2050	30.00	MT3	175	296	345-3000
12.50	MT1	101	182	345-1250	21.00	MT2	145	243	345-2100	30.50	MT3	180	301	345-3050
12.75	MT1	101	182	345-1275	21.50	MT2	150	248	345-2150	31.00	MT3	180	301	345-3100
13.00	MT1	101	182	345-1300	22.00	MT2	150	248	345-2200	31.50	MT3	180	301	345-3150
13.50	MT1	108	189	345-1350	22.50	MT2	155	253	345-2250	32.00	MT4	185	334	345-3200
14.00	MT2	108	189	345-1400	23.00	MT2	155	253	345-2300	33.00	MT4	185	334	345-3300
14.50	MT2	114	212	345-1450	23.50	MT3	155	276	345-2350	33.50	MT4	185	334	345-3350
15.00	MT2	114	212	345-1500	24.00	MT3	160	281	345-2400	34.00	MT4	190	339	345-3400
15.50	MT2	120	218	345-1550	24.50	MT3	160	281	345-2450	34.50	MT4	190	339	345-3450
16.00	MT2	120	218	345-1600	25.00	MT3	160	281	345-2500	35.00	MT4	190	339	345-3500
16.50	MT2	125	223	345-1650	25.50	MT3	165	286	345-2550	38.00	MT4	200	349	345-3800
17.00	MT2	125	223	345-1700	26.00	MT3	165	286	345-2600	43.00	MT4	210	359	345-4300
17.50	MT2	130	228	345-1750	26.50	MT3	165	286	345-2650	44.50	MT4	210	359	345-4450
18.00	MT2	130	228	345-1800	27.00	MT3	170	291	345-2700	45.00	MT4	210	359	345-4500
18.50	MT2	135	223	345-1850	27.50	MT3	170	291	345-2750	50.00	MT4	220	369	345-5000

Taper Shank Drills

Taper Shank Drills

High Speed Steel, Right Hand, 118°, Black Oxide

美标锥柄麻花钻

Designed to perform in a wide range of steel, ferrous and non-ferrous materials.



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1/16"	1-1/4"	4-5/8"	MT1	302-1004	5/16"	6-1/8"	10-3/4"	MT3	302-3057
5/64	1-3/8	4-3/4	MT1	302-1005	29/32	6-1/8	10	MT2*	302-2058
3/32	1-1/2	4-7/8	MT1	302-1006	29/32	6-1/8	10-3/4	MT3	302-3058
7/64	1-5/8	5	MT1	302-1007	59/64	6-1/8	10-1/4	MT2	302-2059
1/8	1-7/8	5-1/8	MT1	302-1008	59/64	6-1/8	10-3/4	MT3	302-3059
9/64	2-1/8	5-3/8	MT1	302-1009	15/16	6-1/8	10-1/4	MT2	302-2060
5/32	2-1/8	5-3/8	MT1	302-1010	15/16	6-1/8	10-3/4	MT3	302-3060
11/64	2-1/2	5-3/4	MT1	302-1011	61/64	6-3/8	11	MT3	302-3061
3/16	2-1/2	5-3/4	MT1	302-1012	31/32	6-3/8	11	MT3	302-3062
13/64	2-3/4	6	MT1	302-1013	63/64	6-3/8	11	MT3	302-3063
7/32	2-3/4	6	MT1	302-1014	1	6	10-3/4	MT2	302-2100
15/64	2-7/8	6-1/8	MT1	302-1015	1	6-3/8	11	MT3	302-3100
1/4	2-7/8	6-1/8	MT1	302-1016	1	6-3/8	12	MT4*	302-4100
17/64	3	6-1/4	MT1	302-1017	1-1/64	6-1/2	11-1/8	MT3	302-3101
9/32	3	6-1/4	MT1	302-1018	1-1/32	6-1/2	11-1/8	MT3	302-3102
19/64	3-1/8	6-3/8	MT1	302-1019	1-1/32	6-1/2	12-1/8	MT4	302-4102
5/16	3-1/8	6-3/8	MT1	302-1020	1-3/64	6-5/8	11-1/4	MT3	302-3103
21/64	3-1/4	6-1/2	MT1	302-1021	1-3/64	6	11"	MT4	302-4103
11/32	3-1/4	6-1/2	MT1	302-1022	1-1/16	6-5/8	11-1/4	MT3	302-3104
23/64	3-1/2	6-3/4	MT1	302-1023	1-1/16	6-5/8	12-1/4	MT4*	302-4104
3/8	3-1/2	6-3/4	MT1	302-1024	1-5/64	6-7/8	11-1/2	MT3*	302-3105
3/8	3-1/2	7-3/8	MT2*	302-2024	1-5/64	6-7/8	12-1/2	MT4	302-4105
25/64	3-5/8	7	MT1	302-1025	1-3/32	6-7/8	11-1/2	MT3*	302-3106
25/64	3-5/8	7-1/2	MT2*	302-2025	1-3/32	6-7/8	12-1/2	MT4	302-4106
13/32	3-5/8	7	MT1	302-1026	1-7/64	7-1/8	11-3/4	MT3*	302-3107
13/32	3-5/8	7-1/2	MT2*	302-2026	1-7/64	7-1/8	12-3/4	MT4	302-4107
27/64	3-7/8	7-1/4	MT1	302-1027	1-1/8	7-1/8	11-3/4	MT3*	302-3108
27/64	3-7/8	7-3/4	MT2*	302-2027	1-1/8	7-1/8	12-3/4	MT4	302-4108
7/16	3-7/8	7-1/4	MT1	302-1028	1-9/64	7-1/4	11-7/8	MT3*	302-3109
7/16	3-7/8	7-3/4	MT2*	302-2028	1-9/64	7-1/4	12-7/8	MT4	302-4109
29/64	4-1/8	7-1/2	MT1	302-1029	1-5/32	7-1/4	11-7/8	MT3	302-3110
29/64	4-1/8	8	MT2	302-2029	1-5/32	7-1/4	12-7/8	MT4	302-4110
15/32	4-1/8	7-1/2	MT1	302-1030	1-11/64	7-3/8	12	MT3*	302-3111
15/32	4-1/8	8	MT2*	302-2030	1-11/64	7-3/8	13	MT4	302-4111
31/64	4-3/8	7-3/4	MT1	302-1031	1-3/16	7-3/8	12	MT3*	302-3112
31/64	4-3/8	8-1/4	MT2	302-2031	1-3/16	7-3/8	13	MT4	302-4112
1/2	4-3/8	7-3/4	MT1*	302-1032	1-13/64	7-1/2	12-1/8	MT3	302-3113
1/2	4-3/8	8-1/4	MT2	302-2032	1-13/64	7-1/2	13-1/8	MT4	302-4113
33/64	4-5/8	8	MT1*	302-1033	1-7/32	7-1/2	12-1/8	MT3*	302-3114
33/64	4-5/8	8-1/2	MT2	302-2033	1-7/32	7-1/2	13-1/8	MT4	302-4114
17/32	4-5/8	8	MT1*	302-1034	1-15/64	7-7/8	12-1/2	MT3*	302-3115
17/32	4-5/8	8-1/2	MT2	302-2034	1-15/64	7-7/8	13-1/2	MT4	302-4115
35/64	4-7/8	8-1/4	MT1*	302-1035	1-1/4	7-7/8	12-1/2	MT3*	302-3116
35/64	4-7/8	8-3/4	MT2	302-2035	1-1/4	7-7/8	13-1/2	MT4	302-4116
9/16	4-7/8	8-1/2	MT1*	302-1036	1-17/64	8-1/2	14-1/8	MT4	302-4117
9/16	4-7/8	8-3/4	MT2	302-2036	1-9/32	8-1/2	14-1/8	MT4	302-4118
37/64	4-7/8	8-3/4	MT2	302-2037	1-19/64	8-5/8	14-1/4	MT4	302-4119
19/32	4-7/8	8-3/4	MT2	302-2038	1-5/16	8-5/8	14	MT3	302-3120
39/64	4-7/8	8-3/4	MT2	302-2039	1-5/16	8-5/8	14-1/2	MT4	302-4120
5/8	4-7/8	8-3/4	MT2	302-2040	1-21/64	8-3/4	14-3/8	MT4	302-4121
41/64	5-1/8	9	MT2	302-2041	1-11/32	8-3/4	13-3/8	MT4	302-3122
41/64	5-1/8	9-3/4	MT3*	302-3041	1-11/32	8-3/4	14-1/2	MT4	302-4122
21/32	5-1/8	9	MT2	302-2042	1-23/64	8-7/8	14-1/2	MT4	302-4123
21/32	5-1/8	9-3/4	MT3*	302-3042	1-3/8	8-7/8	14	MT3	302-3124
43/64	5-3/8	9-1/4	MT2	302-2043	1-3/8	8-7/8	14-1/2	MT4	302-4124
43/64	5-3/8	10	MT3*	302-3043	1-25/64	9	14-5/8	MT4	302-4125
11/16	5-3/8	9-1/4	MT2	302-2044	1-13/32	9	14-5/8	MT4	302-4126
11/16	5-3/8	10	MT3*	302-3044	1-27/64	9-1/8	14-3/4	MT4	302-4127
45/64	5-5/8	9-1/2	MT2	302-2045	1-7/16	9-1/8	14-1/4	MT3	302-3128
45/64	5-5/8	10-1/4	MT3*	302-3045	1-7/16	9-1/8	14-1/2	MT4	302-4128
23/32	5-5/8	9-1/2	MT2	302-2046	1-7/16	9-1/8	14-3/4	MT4	302-4129
23/32	5-5/8	10-1/4	MT3*	302-3046	1-29/64	9-1/4	14-7/8	MT4	302-4130
47/64	5-7/8	9-3/4	MT2	302-2047	1-15/32	9-1/4	14-7/8	MT4	302-4131
47/64	5-7/8	10-1/2	MT3*	302-3047	1-31/64	9-3/8	15	MT4	302-4132
3/4	5-7/8	9-3/4	MT2	302-2048	1-1/2	9-3/8	15-3/8	MT2	302-2132
3/4	5-7/8	10-1/2	MT3*	302-3048	1-1/2	9-3/8	14-3/8	MT3	302-3132
49/64	6	9-7/8	MT2	302-2049	1-1/2	9-3/8	15	MT4	302-4132
49/64	6	10-5/8	MT3*	302-3049	1-33/64	9-3/8	15	MT4*	302-4133
25/32	6	9-7/8	MT2	302-2050	1-33/64	9-3/8	16-3/8	MT5	302-5133
25/32	6	10-7/8	MT3*	302-3050	1-17/32	9-3/8	15	MT4	302-4134
51/64	6-1/8	10	MT2*	302-2051	1-17/32	9-3/8	16-3/8	MT5	302-5134
51/64	6-1/8	10-3/4	MT3	302-3051	1-35/64	9-5/8	15-1/4	MT4*	302-4135
13/16	6-1/8	10	MT2*	302-2052	1-35/64	9-5/8	16-5/8	MT5	302-5135
13/16	6-1/8	10-3/4	MT3	302-3052	1-9/16	9-5/8	15-1/4	MT4*	302-4136
53/64	6-1/8	10	MT2	302-2053	1-9/16	9-5/8	16-5/8	MT5	302-5136
53/64	6-1/8	10-3/4	MT3	302-3053	1-37/64	9-7/8	15-1/2	MT4*	302-4137
27/32	6-1/8	10	MT2*	302-2054	1-37/64	9-7/8	16-7/8	MT5	302-5137
27/32	6-1/8	10-3/4	MT3	302-3054	1-19/32	9-7/8	15-1/2	MT4*	302-4138
55/64	6-1/8	10	MT2*	302-2055	1-19/32	9-7/8	16-7/8	MT5	302-5138
55/64	6-1/8	10-3/4	MT3	302-3055	1-39/64	10	15-5/8	MT4*	302-4139
7/8	6-1/8	10	MT2*	302-2056	1-39/64	10	17	MT5	302-5139
7/8	6-1/8	10-3/4	MT3	302-3056	1-5/8	10	15-5/8	MT4	302-4140
57/64	6-1/8	10	MT2*	302-2057					

*Indicates smaller or larger shank than standard.

Taper Shank Drills Continued

High Speed Steel, Right Hand, 118°, Black Oxide

美标锥柄麻花钻

Designed to perform in a wide range of steel, ferrous and non-ferrous materials.



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1-5/8"	10"	17"	MT5	302-5140	2-19/64"	9-1/4"	16-5/8"	MT4	302-4219
1-41/64	10-1/8	15-3/4	MT4*	302-4141	2-5/16	10-1/8	16-5/8	MT4	302-4220
1-41/64	10-1/8	17-1/8	MT5	302-5141	2-5/16	10-1/8	17-3/8	MT5	302-5220
1-21/32	10-1/8	15-3/4	MT4	302-4142	2-11/32	10-1/8	16-5/8	MT4	302-4222
1-21/32	10-1/8	17-1/8	MT5	302-5142	2-11/32	10-1/8	17-3/8	MT5	302-5222
1-43/64	10-1/8	15-3/4	MT4*	302-4143	2-3/8	10-1/8	16-5/8	MT4	302-4224
1-43/64	10-1/8	17-1/8	MT5	302-5143	2-3/8	10-1/8	17-3/8	MT5	302-5224
1-11/16	10-1/8	15-3/4	MT4*	302-4144	2-25/64	10-1/8	17-3/8	MT5	302-5215
1-11/16	10-1/8	17-1/8	MT5	302-5144	2-13/32	11-1/4	18-3/4	MT5	302-5226
1-45/64	10-1/8	15-3/4	MT4*	302-4145	2-7/16	11-1/4	17-3/8	MT4	302-4228
1-45/64	10-1/8	17-1/8	MT5	302-5145	2-7/16	10-1/4	18-1/4	MT4	302-4229
1-23/32	10-1/8	15-3/4	MT4*	302-4146	2-7/16	11-1/4	18-3/4	MT5	302-5228
1-23/32	10-1/8	17-1/8	MT5	302-5146	2-15/32	11-1/4	18-3/4	MT5	302-5230
1-47/64	10-3/8	16-1/4	MT4*	302-4147	2-1/2	11-1/4	17-3/8	MT4	302-4232
1-47/64	10-1/8	17-1/8	MT5	302-5147	2-1/2	10-1/4	18-1/4	MT4	302-4233
1-3/4	10-3/8	16-1/4	MT4*	302-4148	2-1/2	11-1/4	18-3/4	MT5	302-5232
1-3/4	10-1/8	17-1/8	MT5	302-5148	2-17/32	11-7/8	19-1/4	MT5	302-5234
1-49/64	10-3/8	16-1/4	MT4	302-4149	2-9/16	11-1/2	17-1/2	MT4	302-4236
1-49/64	10-1/8	17-1/8	MT5	302-5149	2-9/16	11-7/8	19-1/2	MT5	302-5236
1-25/32	10-3/8	16-1/4	MT4*	302-4150	2-19/32	11-7/8	19-1/2	MT5	302-5238
1-25/32	10-1/8	17-1/8	MT5	302-5150	2-5/8	11-7/8	18	MT4	302-4240
1-51/64	10-3/8	16-1/4	MT4	302-4151	2-5/8	11-7/8	19-1/2	MT5	302-5240
1-51/64	10-1/8	17-1/8	MT5	302-5151	2-21/32	12-1/2	20	MT5	302-5242
1-13/16	10-3/8	16-1/4	MT4	302-4152	2-11/16	12-1/4	18-1/2	MT4	302-4244
1-13/16	10-1/8	17-1/8	MT5	302-5152	2-11/16	12-3/4	20-3/8	MT5	302-5244
1-53/64	10-3/8	16-1/4	MT4	302-4153	2-23/32	13	20-1/2	MT5	302-5246
1-53/64	10-1/8	16-1/2	MT4	302-4173	2-47/64	13	20-1/4	MT5	302-5247
1-53/64	10-1/8	17-1/8	MT5	302-5153	2-3/4	12-3/4	20-3/8	MT5	302-5248
1-27/32	10-3/8	16-1/4	MT4*	302-4154	2-3/4	12-1/4	18-1/2	MT4	302-4248
1-27/32	10-1/8	17-1/8	MT5	302-5154	2-3/4	12-3/4	20-3/8	MT5	302-5248
1-55/64	10-3/8	16-1/2	MT4	302-4155	2-3/4	10-1/2	20	MT6	302-6301
1-55/64	10-1/8	17-3/8	MT5	302-5155	2-25/32	13	20-1/2	MT5	302-5250
1-7/8	10-1/2	16-1/2	MT4*	302-4156	2-13/16	12-3/4	19-1/8	MT4	302-4252
1-7/8	10-3/4	17-3/8	MT5	302-5156	2-13/16	13-3/8	21-1/8	MT5	302-5252
1-57/64	10-1/2	16-1/2	MT4	302-4157	2-27/32	13-1/2	21	MT5	302-5254
1-57/64	10-3/8	17-3/8	MT5	302-5157	2-55/64	13-1/2	21	MT5	302-5255
1-29/32	10-1/2	16-1/2	MT4*	302-4158	2-7/8	13-3/8	21-1/8	MT5	302-5256
1-29/32	10-3/8	17-3/8	MT5	302-5158	2-57/64	9	16-1/2	MT5	302-5257
1-59/64	10-1/2	16-1/2	MT4	302-4159	2-29/32	13-1/2	21	MT5	302-5258
1-59/64	10-3/8	16-5/8	MT4	302-4179	2-29/32	13-1/2	21-1/8	MT5	302-5259
1-59/64	10-3/8	17-3/8	MT5	302-5159	2-15/16	14	21-3/4	MT5	302-5260
1-15/16	10-5/8	16-5/8	MT4	302-4160	2-31/32	14-1/2	22	MT5	302-5262
1-15/16	10-3/8	17-3/8	MT5	302-5160	3	14	20-1/4	MT4	302-4300
1-61/64	10-5/8	16-5/8	MT4	302-4161	3	14	21-3/4	MT5	302-5300
1-61/64	10-3/8	16-3/4	MT4	302-4181	3-1/32	14-1/8	21-3/4	MT5	302-5302
1-61/64	10-3/8	17-3/8	MT5	302-5161	3-1/16	14-1/8	22	MT5	302-5304
1-31/32	10-5/8	16-5/8	MT4	302-4162	3-1/16	14-1/2	24-1/2	MT6	302-6304
1-31/32	10-3/8	17-3/8	MT5	302-5162	3-1/16	14-5/8	24-1/2	MT6	302-6305
1-63/64	10-5/8	16-5/8	MT4	302-4163	3-1/8	14-1/4	22	MT5	302-5308
1-63/64	10-3/8	17-3/8	MT5	302-5163	3-1/8	14-5/8	22-1/2	MT5	302-5309
2	10-5/8	16-5/8	MT4*	302-4200	3-1/8	14-5/8	24-1/2	MT6	302-6308
2	10-3/8	17-3/8	MT5	302-5200	3-3/16	14-1/4	23	MT5	302-5312
2-1/64	9-3/4	17-3/8	MT4	302-4201	3-3/16	14-5/8	23	MT5	302-5313
2-1/64	10-3/8	17-3/8	MT5	302-5201	3-3/16	14-5/8	25-1/2	MT6	302-6312
2-1/32	10-3/8	17-3/8	MT5	302-5202	3-1/4	14-1/4	23	MT5	302-5316
2-3/64	10-1/4	17-3/8	MT5	302-5203	3-1/4	15-1/2	25-1/2	MT6	302-6316
2-1/16	9	16-5/8	MT4	302-4204	3-5/16	15-1/4	23	MT5	302-5320
2-1/16	10-3/8	16-5/8	MT4	302-4205	3-5/16	15-1/2	23-1/2	MT5	302-5321
2-1/16	10-1/4	17-3/8	MT5	302-5204	3-5/16	15-1/2	25-1/2	MT6	302-6320
2-1/16	10-3/8	17-3/8	MT5	302-5474	3-3/8	15-1/4	23	MT5	302-5324
2-3/32	10-1/4	16-1/4	MT4	302-4206	3-3/8	15-1/2	23	MT5	302-5325
2-5/64	10-1/4	17-3/8	MT5	302-5205	3-3/8	15-1/2	25-1/2	MT6	302-6324
2-3/32	10-1/4	17-3/8	MT5	302-5206	3-13/32	15-1/4	23	MT6	302-6326
2-7/64	10-1/4	17-3/8	MT5	302-5207	3-7/16	15-1/4	23	MT5	302-5328
2-1/8	9	16-5/8	MT4	302-4208	3-7/16	15-1/2	25-1/2	MT6	302-6328
2-1/8	10-1/4	16-5/8	MT4	302-4209	3-1/2	16-1/4	24	MT5	302-5332
2-1/8	10-1/4	17-3/8	MT5	302-5208	3-1/2	16-1/4	26-1/2	MT6	302-6332
2-9/64	10-1/4	17-3/8	MT5	302-5209	3-9/16	16-1/4	25-7/8	MT5	302-5336
2-5/32	9-1/4	16-5/8	MT4	302-4210	3-5/8	16-1/4	25-7/8	MT6	302-6340
2-5/32	10-1/4	17-3/8	MT5	302-5210	3-11/16	16-1/4	26	MT6	302-6344
2-11/64	10-1/4	17-3/8	MT5	302-5211	3-3/4	16-1/4	25-7/8	MT5	302-5348
2-3/16	10-1/4	16-5/8	MT4	302-4212	3-3/4	16-1/2	29	MT6	302-6348
2-3/16	10-1/4	17-3/8	MT5	302-5212	3-3/4	16-1/2	25-7/8	MT6	302-6349
2-13/64	10-3/4	17-1/4	MT4	302-4213	3-13/16	16-1/4	26	MT6	302-6352
2-13/64	10-1/8	17-3/8	MT5	302-5213	3-7/8	16-1/2	29	MT5	302-5356
2-7/32	10-1/4	16-5/8	MT4	302-4214	3-7/8	16-1/2	23-1/2	MT5	302-5357
2-7/32	10-1/8	17-3/8	MT5	302-5214	3-7/8	16-1/2	23-1/2	MT5	302-5359
2-1/4	10-1/8	16-5/8	MT4	302-4216	3-7/8	16-1/2	29	MT6	302-6356
2-1/4	10-1/8	17-3/8	MT5	302-5216	3-7/8	16-1/2	25-7/8	MT6	302-6357
2-17/64	9-1/4	17-1/4	MT4	302-4217	3-15/16	16	27	MT5	302-5360
2-9/32	9-1/4	16-5/8	MT4	302-4218	4	16-1/2	29	MT5	302-5400
2-9/32	10-1/8	17-3/8	MT5	302-5218	4	16-1/2	29	MT6	302-6400

*Indicates smaller or larger shank than standard.

Extra Long Taper Shank Drills 超长锥柄钻

High Speed Steel, Right Hand, 118°, Black Oxide

Designed to perform in a wide range of steel, ferrous and non-ferrous materials, where extra length is required.



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1/8"	7"	10"	MT1	502-1008	3/4"	8"	12"	MT2	502-1268	1-1/32"	10"	15"	MT3	502-1552
9/64	7	10	MT1	502-1009	49/64	8	12	MT2	502-1270	1-3/64	10	15	MT3	502-1553
5/32	7	10	MT1	502-1010	25/32	8	12	MT2	502-1272	1-1/16	10	15	MT3	502-1554
11/64	7	10	MT1	502-1011	51/64	8	12	MT2	502-1251	1-5/64	10	15	MT3	502-1555
3/16	7	10	MT1	502-1012	13/16	8	12	MT3	502-1274	1-3/32	10	15	MT4	502-1556
13/64	7	10	MT1	502-1013	53/64	8	12	MT3	502-1276	1-7/64	10	15	MT4	502-1557
7/32	7	10	MT1	502-1014	27/32	8	12	MT3	502-1278	1-1/8	10	15	MT4	502-1558
15/64	7	10	MT1	502-1015	55/64	8	12	MT3	502-1255	1-9/64	10	15	MT4	502-1560
1/4	7	10	MT1	502-1016	7/8	8	12	MT3	502-1280	1-5/32	10	15	MT4	502-1561
17/64	7	10	MT1	502-1017	57/64	8	12	MT1	502-1257	1-11/64	10	15	MT4	502-1562
9/32	7	10	MT1	502-1018	29/32	8	12	MT1	502-1259	1-3/16	10	15	MT4	502-1563
19/64	7	10	MT1	502-1019	59/64	8	12	MT1	502-1261	1-13/64	10	15	MT4	502-1564
5/16	7	10	MT1	502-1020	15/16	8	12	MT3	502-1282	1-7/32	10	15	MT4	502-1565
21/64	7	10	MT1	502-1021	31/32	8	12	MT1	502-1263	1-15/64	10	15	MT4	502-1566
11/32	7	10	MT1	502-1022	13/64	10	15	MT1	502-1573	1-1/4	10	15	MT4	502-1567
23/64	7	10	MT1	502-1023	7/32	10	15	MT1	502-1499	1-1/4	10	15	MT3	502-1568
3/8	7	10	MT1	502-1024	3/16	10	15	MT1	502-1500	1-9/32	10	15	MT3	502-1578
25/64	7	10	MT1	502-1025	15/64	10	15	MT1	502-1501	3/16	12	18	MT1	502-1892
13/32	7	10	MT1	502-1026	1/4	10	15	MT1	502-1502	13/64	12	18	MT1	502-1890
27/64	7	10	MT1	502-1027	17/64	10	15	MT1	502-1503	7/32	12	18	MT1	502-1894
7/16	7	10	MT1	502-1028	9/32	10	15	MT1	502-1504	15/64	12	18	MT1	502-1888
29/64	7	10	MT1	502-1029	19/64	10	15	MT1	502-1505	1/4	12	18	MT1	502-1800
15/32	7	10	MT1	502-1030	5/16	10	15	MT1	502-1506	17/64	12	18	MT1	502-1801
31/64	7	10	MT1	502-1031	21/64	10	15	MT1	502-1507	9/32	12	18	MT1	502-1802
1/2	7	10	MT1	502-1032	11/32	10	15	MT1	502-1508	19/64	12	18	MT1	502-1803
33/64	7	10	MT2	502-1033	23/64	10	15	MT1	502-1509	5/16	12	18	MT1	502-1804
17/32	7	10	MT2	502-1034	3/8	10	15	MT1	502-1510	21/64	12	18	MT1	502-1886
35/64	7	10	MT2	502-1035	25/64	10	15	MT1	502-1511	11/32	12	18	MT1	502-1805
21/32	7	10	MT1	502-1042	13/32	10	15	MT1	502-1512	23/64	12	18	MT1	502-1806
1/8	8	12	MT1	502-1200	27/64	10	15	MT1	502-1513	3/8	12	18	MT1	502-1807
9/64	8	12	MT1	502-1209	7/16	10	15	MT1	502-1514	25/64	12	18	MT1	502-1808
5/32	8	12	MT1	502-1211	29/64	10	15	MT1	502-1515	13/32	12	18	MT1	502-1809
11/64	8	12	MT1	502-1207	15/32	10	15	MT1	502-1516	27/64	12	18	MT1	502-1810
3/16	8	12	MT1	502-1202	31/64	10	15	MT1	502-1517	7/16	12	18	MT1	502-1811
13/64	8	12	MT1	502-1213	31/64	10	15	MT2	502-1590	7/16	12	18	MT2	502-1900
7/32	8	12	MT1	502-1203	1/2	10	15	MT2	502-1518	29/64	12	18	MT1	502-1812
15/64	8	12	MT1	502-1215	33/64	10	15	MT2	502-1519	15/32	12	18	MT1	502-1813
1/4	8	12	MT1	502-1204	17/32	10	15	MT2	502-1520	31/64	12	18	MT1	502-1814
17/64	8	12	MT1	502-1206	35/64	10	15	MT2	502-1521	1/2	12	18	MT2	502-1815
9/32	8	12	MT1	502-1208	9/16	10	15	MT2	502-1522	33/64	12	18	MT2	502-1816
19/64	8	12	MT1	502-1210	37/64	10	15	MT2	502-1523	17/32	12	18	MT2	502-1817
5/16	8	12	MT1	502-1212	19/32	10	15	MT2	502-1524	35/64	12	18	MT2	502-1818
21/64	8	12	MT1	502-1214	39/64"	10"	15"	MT2	502-1525	9/16	12	18	MT2	502-1819
11/32	8	12	MT1	502-1216	5/8	10	15	MT2	502-1526	37/64	12	18	MT2	502-1820
23/64	8	12	MT1	502-1218	41/64	10	15	MT2	502-1527	19/32	12	18	MT2	502-1821
3/8	8	12	MT1	502-1220	21/32	10	15	MT2	502-1528	39/64	12	18	MT2	502-1822
25/64	8	12	MT1	502-1222	43/64	10	15	MT2	502-1529	5/8	12	18	MT2	502-1823
13/32	8	12	MT1	502-1224	11/16	10	15	MT2	502-1530	41/64	12	18	MT2	502-1824
27/64	8	12	MT1	502-1226	45/64	10	15	MT2	502-1531	21/32	12	18	MT2	502-1825
7/16	8	12	MT1	502-1228	23/32	10	15	MT2	502-1532	43/64	12	18	MT2	502-1826
29/64	8	12	MT1	502-1230	47/64	10	15	MT2	502-1533	11/16	12	18	MT2	502-1827
15/32	8	12	MT1	502-1232	3/4	10	15	MT2	502-1534	45/64	12	18	MT2	502-1828
31/64	8	12	MT2	502-1234	49/64	10	15	MT2	502-1535	23/32	12	18	MT2	502-1829
1/2	8	12	MT1	502-1235	25/32	10	15	MT2	502-1536	47/64	12	18	MT2	502-1830
1/2	8	12	MT2	502-1236	51/64	10	15	MT2	502-1537	3/4	12	18	MT2	502-1831
33/64	8	12	MT2	502-1238	13/16	10	15	MT3	502-1538	49/64	12	18	MT2	502-1832
17/32	8	12	MT2	502-1240	53/64	10	15	MT3	502-1539	25/32	12	18	MT2	502-1833
35/64	8	12	MT2	502-1242	53/64	10	15	MT2	502-1596	51/64	12	18	MT2	502-1834
9/16	8	12	MT2	502-1244	27/32	10	15	MT3	502-1540	13/16	12	18	MT3	502-1835
37/64	8	12	MT2	502-1246	55/64	10	15	MT3	502-1541	53/64	12	18	MT2	502-1896
19/32	8	12	MT2	502-1248	7/8	10	15	MT3	502-1542	53/64	12	18	MT3	502-1836
39/64	8	12	MT2	502-1250	57/64	10	15	MT3	502-1543	27/32	12	18	MT3	502-1837
5/8	8	12	MT2	502-1252	29/32	10	15	MT3	502-1544	55/64	12	18	MT3	502-1838
41/64	8	12	MT2	502-1254	59/64	10	15	MT3	502-1545	7/8	12	18	MT3	502-1839
21/32	8	12	MT2	502-1256	15/16	10	15	MT3	502-1546	7/8	12	18	MT2	502-1902
43/64	8	12	MT2	502-1258	61/64	10	15	MT3	502-1547	57/64	12	18	MT3	502-1840
11/16	8	12	MT2	502-1260	31/32	10	15	MT3	502-1548	29/32	12	18	MT3	502-1841
45/64	8	12	MT2	502-1262	63/64	10	15	MT3	502-1549	59/64	12	18	MT3	502-1842
23/32	8	12	MT2	502-1264	1	10	15	MT3	502-1550	15/16	12	18	MT3	502-1843
47/64	8	12	MT2	502-1266	1-1/64	10	15	MT3	502-1551					

Extra Long Taper Shank Drills Continued 超长锥柄钻

High Speed Steel, Right Hand, 118°, Black Oxide



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
61/64	12	18	MT3	502-1844	39/64	17	24	MT2	502-2314	3/4	24	30	MT2	502-3010
31/32	12	18	MT3	502-1845	5/8	17	24	MT2	502-2315	13/16	24	30	MT3	502-3012
63/64	12	18	MT3	502-1846	41/64	17	24	MT2	502-2416	7/8	24	30	MT3	502-3015
1	12	18	MT3	502-1847	21/32	17	24	MT2	502-2317	15/16	24	30	MT3	502-3017
1-1/64	12	18	MT3	502-1848	43/64	17	24	MT2	502-2318	1	24	30	MT3	502-3020
1-1/32	12	18	MT3	502-1849	11/16	17	24	MT2	502-2319	1-1/16	24	30	MT3	502-3021
1-3/64	12	18	MT3	502-1850	45/64	17	24	MT2	502-2320	1-1/8	24	30	MT4	502-3022
1-1/16	12	18	MT3	502-1851	23/32	17	24	MT2	502-2321	1-5/16	24	30	MT4	502-3023
1-5/64	12	18	MT3	502-1852	47/64	17	24	MT2	502-2322	1-3/16	24	30	MT4	502-3024
1-3/32	12	18	MT4	502-1853	3/4	17	24	MT2	502-2323	1-1/4	24	30	MT4	502-3025
1-7/64	12	18	MT4	502-1854	49/64	17	24	MT3	502-2324	1-3/8	24	30	MT4	502-3026
1-1/8	12	18	MT4	502-1855	25/32	17	24	MT3	502-2325	1-7/16	24	30	MT4	502-3027
1-9/64	12	18	MT4	502-1856	51/64	17	24	MT3	502-2326	1-1/2	24	30	MT4	502-3030
1-5/32	12	18	MT4	502-1857	13/16	17	24	MT3	502-2327	1-9/16	24	30	MT5	502-3031
1-11/64	12	18	MT4	502-1858	53/64	17	24	MT3	502-2328	1-5/8	24	30	MT5	502-3032
1-3/16	12	18	MT4	502-1859	27/32	17	24	MT3	502-2329	1-11/16	24	30	MT5	502-3033
1-17/64	12	18	MT4	502-1860	55/64	17	24	MT3	502-2330	1-3/4	24	30	MT5	502-3034
1-7/32	12	18	MT4	502-1861	7/8	17	24	MT3	502-2331	1-7/8	24	30	MT5	502-3036
1-15/64	12	18	MT4	502-1862	57/64	17	24	MT3	502-2332	2	24	30	MT4	502-3040
1-1/4	12	18	MT4	502-1863	29/32	17	24	MT3	502-2333	2-1/16	24	30	MT5	502-3041
1-17/64	12	18	MT4	502-1864	59/64	17	24	MT3	502-2334	2-1/8	24	30	MT5	502-3042
1-9/32	12	18	MT4	502-1865	15/16	17	24	MT3	502-2335	2-1/4	24	30	MT5	502-3043
1-19/64	12	18	MT4	502-1866	61/64	17	24	MT3	502-2336	2-3/8	24	30	MT5	502-3045
1-5/16	12	18	MT4	502-1867	31/32	17	24	MT3	502-2337	2-7/16	24	30	MT5	502-3046
1-21/64	12	18	MT4	502-1868	63/64	17	24	MT3	502-2338	2-1/2	24	30	MT5	502-3047
1-11/32	12	18	MT4	502-1869	1	17	24	MT3	502-2339	2-5/8	24	30	MT5	502-3048
1-23/64	12	18	MT4	502-1870	1-1/64	17	24	MT3	502-2340	2-3/4	24	30	MT5	502-3049
1-3/8	12	18	MT4	502-1871	1-1/32	17	24	MT3	502-2341	3	24	30	MT5	502-3050
1-25/64	12	18	MT4	502-1872	1-3/64	17	24	MT3	502-2342	3-1/8	24	30	MT5	502-3051
1-13/32	12	18	MT4	502-1873	1-1/16	17	24	MT3	502-2343	3-1/4	24	30	MT5	502-3052
1-27/64	12	18	MT4	502-1874	1-5/64	17	24	MT3	502-2344	3-3/8	24	30	MT5	502-3053
1-7/16	12	18	MT4	502-1875	1-3/32	17	24	MT3	502-2345	3-1/2	24	30	MT5	502-3054
1-29/64	12	18	MT4	502-1876	1-7/64	17	24	MT3	502-2346	1-1/2	24	36	MT4	502-3130
1-15/32	12	18	MT4	502-1877	1-1/8	17	24	MT4	502-2347	17/32	24	36	MT2	502-3134
1-31/64	12	18	MT4	502-1878	1-9/64	17	24	MT4	502-2348	5/8	24	36	MT2	502-3140
1-1/2	12	18	MT4	502-1879	1-5/32	17	24	MT4	502-2349	21/32	24	36	MT2	502-3142
1-9/16	12	18	MT5	502-1880	1-11/64	17	24	MT4	502-2350	11/16	24	36	MT2	502-3144
1-5/8	12	18	MT4	502-1897	1-3/16	17	24	MT4	502-2351	3/4	24	36	MT2	502-3148
1-5/8	12	18	MT5	502-1881	1-13/64	17	24	MT4	502-2352	13/16	24	36	MT3	502-3152
1-11/16	12	18	MT4	502-1898	1-7/32	17	24	MT4	502-2353	7/8	24	36	MT3	502-3156
1-11/16	12	18	MT5	502-1882	1-15/64	17	24	MT4	502-2354	15/16	24	36	MT3	502-3160
1-3/4	12	18	MT5	502-1883	1-1/4	17	24	MT4	502-2355	1	24	36	MT3	502-3164
1-19/32	12	18	MT5	502-1885	1-17/64	17	24	MT4	502-2356	1-1/16	24	36	MT3	502-3204
1-25/32	12	18	MT4	502-1884	1-9/32	17	24	MT4	502-2357	1-1/8	24	36	MT4	502-3208
1-25/32	12	18	MT5	502-1887	1-19/64	17	24	MT4	502-2358	1-3/16	24	36	MT4	502-3212
1-13/16	12	18	MT5	502-1889	1-5/16	17	24	MT4	502-2359	1-1/4	24	36	MT4	502-3216
1-7/8	12	18	MT5	502-1891	1-21/64	17	24	MT4	502-2360	1-5/16	24	36	MT4	502-3220
1-15/16	12	18	MT5	502-1893	1-11/32	17	24	MT4	502-2361	1-3/8	24	36	MT4	502-3224
2	12	18	MT5	502-1895	1-23/64	17	24	MT4	502-2362	1-7/16	24	36	MT4	502-3228
2-1/4	12	18	MT4	502-1910	1-3/8	17	24	MT4	502-2363	1-9/16	24	36	MT5	502-3236
2-5/16	12	18	MT4	502-1912	1-25/64	17	24	MT4	502-2364	1-5/8	24	36	MT5	502-3240
2-3/8	12	18	MT4	502-1914	1-13/32	17	24	MT4	502-2365	1-11/16	24	36	MT5	502-3244
2-1/2	12	18	MT4	502-1920	1-27/64	17	24	MT4	502-2366	1-3/4	24	36	MT5	502-3248
3/8	17	24	MT1	502-2300	1-7/16	17	24	MT4	502-2367	1-7/8	24	36	MT5	502-3256
25/64	17	24	MT1	502-2301	1-29/64	17	24	MT4	502-2368	2	24	36	MT5	502-3264
13/32	17	24	MT1	502-2302	1-15/32	17	24	MT4	502-2369	2-1/8	24	36	MT5	502-3308
27/64	17	24	MT1	502-2303	1-31/64	17	24	MT4	502-2370	2-1/4	24	36	MT5	502-3316
7/16	17	24	MT1	502-2304	1-1/2	17	24	MT4	502-2371	2-3/8	24	36	MT5	502-3324
15/32	17	24	MT1	502-2305	1-9/16	17	24	MT5	502-2372	2-1/2	24	36	MT5	502-3332
31/64	17	24	MT1	502-2306	1-11/16	17	24	MT5	502-2373	2-5/8	24	36	MT5	502-3340
1/2	17	24	MT2	502-2307	1-3/4	17	24	MT5	502-2374	2-3/4	24	36	MT5	502-3348
33/64	17	24	MT2	502-2308	1-13/16	17	24	MT5	502-2375	3	24	36	MT5	502-3400
17/32	17	24	MT2	502-2309	1-7/8	17	24	MT5	502-2376	3-1/8	24	36	MT5	502-3408
35/64	17	24	MT2	502-2310	2	17	24	MT5	502-2377	3-1/4	24	36	MT5	502-3416
9/16	17	24	MT2	502-2311	5/8	24	30	MT2	502-3006	3-3/8	24	36	MT5	502-3424
37/64	17	24	MT2	502-2312	21/32	24	30	MT2	502-3007	3-1/2	24	36	MT5	502-3432
19/32	17	24	MT2	502-2313	11/16	24	30	MT2	502-3008					

Metric Taper Shank Drills

公制锥柄钻, DIN345

DIN 345, High Speed Steel,
Right Hand, Black Oxide



Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.	Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.	Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.
5.00	MT1	52	133	308-0500	18.50	MT2	135	233	308-1850	34.00	MT4	190	339	308-3400
5.25	MT1	52	133	308-0525	18.75	MT2	135	233	308-1875	34.50	MT4	190	339	308-3450
5.50	MT1	57	138	308-0550	19.00	MT2	135	233	308-1900	35.00	MT4	190	339	308-3500
5.75	MT1	57	138	308-0575	19.25	MT2	140	238	303-1925	35.50	MT4	190	339	308-3550
6.00	MT1	57	138	308-0600	19.50	MT2	140	238	308-1950	36.00	MT4	195	344	308-3600
6.25	MT1	63	144	308-0625	19.75	MT2	140	238	308-1975	36.50	MT4	195	344	308-3650
6.50	MT1	63	144	308-0650	20.00	MT2	140	238	308-2000	37.00	MT4	195	344	308-3700
6.75	MT1	69	150	308-0675	20.25	MT2	145	243	308-2025	37.50	MT4	195	344	308-3750
7.00	MT1	69	150	308-0700	20.50	MT2	145	243	308-2050	38.00	MT4	200	349	308-3800
7.25	MT1	69	150	308-0725	20.75	MT2	145	243	308-2075	38.50	MT4	200	349	308-3850
7.50	MT1	69	150	308-0750	21.00	MT2	145	243	308-2100	39.00	MT4	200	349	308-3900
7.75	MT1	75	156	308-0775	21.25	MT2	150	248	308-2125	39.50	MT4	200	349	308-3950
8.00	MT1	75	156	308-0800	21.50	MT2	150	248	308-2150	40.00	MT4	200	349	308-4000
8.20		75	156	308-0820	21.75	MT2	150	248	308-2175	40.50	MT4	205	354	308-4050
8.25	MT1	75	156	308-0825	22.00	MT2	150	248	308-2200	41.00	MT4	205	354	308-4100
8.50	MT1	75	156	308-0850	22.00	MT3	150	248	308-2201	41.50	MT4	205	354	308-4150
8.75	MT1	81	162	308-0875	22.25	MT2	150	248	308-2225	42.00	MT4	205	354	308-4200
8.80				308-0880	22.50	MT2	155	253	308-2250	42.50	MT4	205	354	308-4250
9.00	MT1	81	162	308-0900	22.50	MT3	155	253	308-2251	43.00	MT4	210	359	308-4300
9.25	MT1	81	162	308-0925	22.75	MT2	155	253	308-2275	43.50	MT4	210	359	308-4350
9.50	MT1	81	162	308-0950	23.00	MT2	155	253	308-2300	44.00	MT4	210	359	308-4400
9.75	MT1	87	168	308-0975	23.00	MT3	155	253	308-2301	44.50	MT4	210	359	308-4450
10.00	MT1	87	168	308-1000	23.25	MT3	155	276	308-2325	45.00	MT4	210	359	308-4500
10.20	MT1	87	168	308-1020	23.50	MT3	155	276	308-2350	45.50	MT4	215	364	308-4550
10.25	MT1	87	168	308-1025	23.75	MT3	160	281	308-2375	46.00	MT4	215	364	308-4600
10.50	MT1	87	168	308-1050	24.00	MT3	160	281	308-2400	46.50	MT4	215	364	308-4650
10.75	MT1	94	175	308-1075	24.25	MT3	160	281	308-2425	47.00	MT4	215	364	308-4700
11.00	MT1	94	175	308-1100	24.50	MT3	160	281	308-2450	47.50	MT4	215	364	308-4750
11.25	MT1	94	175	308-1125	24.75	MT3	160	281	308-2475	48.00	MT4	220	369	308-4800
11.50	MT1	94	175	308-1150	25.00	MT3	160	281	308-2500	48.50	MT4	220	369	308-4850
11.75	MT1	94	175	308-1175	25.25	MT3	165	286	308-2525	49.00	MT4	220	369	308-4900
12.00	MT1	101	182	308-1200	25.50	MT3	165	286	308-2550	49.50	MT4	220	369	308-4950
12.25	MT1	101	182	308-1225	25.75	MT3	165	286	308-2575	50.00	MT4	220	369	308-5000
12.50	MT1	101	182	308-1250	26.00	MT3	165	286	308-2600	50.50	MT4	225	374	308-5050
12.75	MT1	101	182	308-1275	26.25	MT3	165	286	308-2625	51.00	MT5	225	412	308-5100
12.80	MT1	101	182	308-1280	26.50	MT3	165	286	308-2650	52.00	MT5	225	412	308-5200
12.90	MT1	101	182	308-1290	26.75	MT3	170	291	308-2675	53.00	MT5	225	412	308-5300
13.00	MT1	101	182	308-1300	27.00	MT3	170	291	308-2700	54.00	MT5	230	417	308-5400
13.25	MT1	101	182	308-1325	27.25	MT3	170	291	308-2725	55.00	MT5	230	417	308-5500
13.50	MT1	108	189	308-1350	27.50	MT3	170	291	308-2750	56.00	MT5	230	417	308-5600
13.75	MT1	108	189	308-1375	27.75	MT3	170	291	308-2775	57.00	MT5	235	422	308-5700
14.00	MT2	108	189	308-1400	28.00	MT3	170	291	308-2800	58.00	MT5	235	422	308-5800
14.00	MT1	108	189	308-1401	28.25	MT3	175	296	308-2825	59.00	MT5	235	422	308-5900
14.25	MT2	114	212	308-1425	28.50	MT3	175	296	308-2850	60.00	MT5	235	422	308-6000
14.50	MT2	114	212	308-1450	28.75	MT3	175	296	308-2875	61.00	MT5	240	427	308-6100
14.75	MT2	114	212	308-1475	29.00	MT3	175	296	308-2900	62.00	MT5	240	427	308-6200
15.00	MT2	114	212	308-1500	29.25	MT3	175	296	308-2925	63.00	MT5	240	427	308-6300
15.25	MT2	120	218	308-1525	29.50	MT3	175	296	308-2950	64.00	MT5	245	432	308-6400
15.50	MT2	120	218	308-1550	29.75	MT3	175	296	308-2975	65.00	MT5	245	432	308-6500
15.75	MT2	120	218	308-1575	30.00	MT3	175	296	308-3000	66.00	MT5	245	432	308-6600
16.00	MT2	120	218	308-1600	30.25	MT3	180	301	308-3025	67.00	MT5	245	432	308-6700
16.25	MT2	125	223	308-1625	30.50	MT3	180	301	308-3050	68.00	MT5	250	437	308-6800
16.50	MT2	125	223	308-1650	30.75	MT3	180	301	308-3075	69.00	MT5	250	437	308-6900
16.75	MT2	125	223	308-1675	31.00	MT3	180	301	308-3100	70.00	MT5	250	437	308-7000
17.00	MT2	125	223	308-1700	31.25	MT3	180	301	308-3125	71.00	MT5	250	437	308-7100
17.25	MT2	130	228	308-1725	31.50	MT3	180	301	308-3150	72.00	MT5	255	442	308-7200
17.40	MT2	130	228	308-1740	31.75	MT3	185	306	308-3175	73.00	MT5	255	442	308-7300
17.50	MT2	130	228	308-1750	32.00	MT4	185	334	308-3200	74.00	MT5	255	442	308-7400
17.75	MT2	130	228	308-1775	32.50	MT4	185	334	308-3250	75.00	MT5	255	442	308-7500
18.00	MT2	130	228	308-1800	33.00	MT4	185	334	308-3300	76.00	MT5	260	447	308-7600
18.25	MT2	135	233	308-1825	33.50	MT4	185	334	308-3350					

Metric Taper Shank Drills 公制锥柄钻, DIN346

DIN 346, High Speed Steel, Right Hand, Black Oxide



Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.	Size (mm)	Shank Taper	Flute Length (mm)	Overall Length (mm)	Order No.
12.00	MT2	101	199	346-1200	28.50	MT4	175	324	346-2850
12.25	MT2	101	199	346-1225	28.75	MT4	175	324	346-2875
12.50	MT2	101	199	346-1250	29.00	MT4	175	324	346-2900
12.75	MT2	101	199	346-1275	29.25	MT4	175	324	346-2925
13.00	MT2	101	199	346-1300	29.50	MT4	175	324	346-2950
13.25	MT2	101	199	346-1325	29.75	MT4	175	324	346-2975
13.50	MT2	108	206	346-1350	30.00	MT4	175	324	346-3000
13.75	MT2	108	206	346-1375	30.25	MT4	180	329	346-3025
14.00	MT2	108	206	346-1400	30.50	MT4	180	329	346-3050
18.25	MT3	135	256	346-1825	30.75	MT4	180	329	346-3075
18.50	MT3	135	256	346-1850	31.00	MT4	180	329	346-3100
18.75	MT3	135	256	346-1875	31.25	MT4	180	329	346-3125
19.00	MT3	135	256	346-1900	31.50	MT4	180	329	346-3150
19.25	MT3	140	261	346-1925	31.75	MT4	185	334	346-3175
19.50	MT3	140	261	346-1950	40.50	MT5	205	392	346-4050
20.00	MT3	140	261	346-2000	41.00	MT5	205	392	346-4100
20.25	MT3	145	266	346-2025	41.50	MT5	205	392	346-4150
20.50	MT3	145	266	346-2050	42.00	MT5	205	392	346-4200
20.75	MT3	145	266	346-2075	42.50	MT5	205	392	346-4250
21.00	MT3	145	266	346-2100	43.00	MT5	210	397	346-4300
21.25	MT3	150	271	346-2125	43.50	MT5	210	397	346-4350
21.50	MT3	150	271	346-2150	44.00	MT5	210	397	346-4400
21.75	MT3	150	271	346-2175	44.50	MT5	210	397	346-4450
22.00	MT3	150	271	346-2200	45.00	MT5	210	397	346-4500
22.25	MT3	150	271	346-2225	45.50	MT5	215	402	346-4550
22.50	MT3	155	276	346-2250	46.00	MT5	215	402	346-4600
22.75	MT3	155	276	346-2275	46.50	MT5	215	402	346-4650
23.00	MT3	155	276	346-2300	47.00	MT5	215	402	346-4700
26.75	MT4	170	319	346-2675	47.50	MT5	215	402	346-4750
27.00	MT4	170	319	346-2700	48.00	MT5	220	407	346-4800
27.25	MT4	170	319	346-2725	48.50	MT5	220	407	346-4850
27.50	MT4	170	319	346-2750	49.00	MT5	220	407	346-4900
27.75	MT4	170	319	346-2775	49.50	MT5	220	407	346-4950
28.00	MT4	170	319	346-2800	50.00	MT5	220	407	346-5000
28.25	MT4	175	324	346-2825	50.50	MT5	225	412	346-5050

NAS 965 Threaded Shank Drill

螺纹柄钻



Fully Ground .Black finished 135degree Split Point Thread: 1/4-28UNF HSS product with thread Hexagonal shank. M35 product with thread Square shank

HSS				M35			HSS				M35		
Size	Stub	Short	Long	Stub	Short	Long	Size	Stub	Short	Long	Stub	Short	Long
1/16	218-2004	218-2304	218-2604	218-3004	218-3304	218-3604	#22	218-2122	218-2422	218-2722	218-3122	218-3422	218-3722
5/16	218-2005	218-2305	218-2605	218-3005	218-3305	218-3605	#23	218-2123	218-2423	218-2723	218-3123	218-3423	218-3723
3/32	218-2006	218-2306	218-2606	218-3006	218-3306	218-3606	#24	218-2124	218-2424	218-2724	218-3124	218-3424	218-3724
7/64	218-2007	218-2307	218-2607	218-3007	218-3307	218-3607	#25	218-2125	218-2425	218-2725	218-3125	218-3425	218-3725
1/8	218-2008	218-2308	218-2608	218-3008	218-3308	218-3608	#26	218-2126	218-2426	218-2726	218-3126	218-3426	218-3726
9/64	218-2009	218-2309	218-2609	218-3009	218-3309	218-3609	#27	218-2127	218-2427	218-2727	218-3127	218-3427	218-3727
5/32	218-2010	218-2310	218-2610	218-3010	218-3310	218-3610	#28	218-2128	218-2428	218-2728	218-3128	218-3428	218-3728
11/64	218-2011	218-2311	218-2611	218-3011	218-3311	218-3611	#29	218-2129	218-2429	218-2729	218-3129	218-3429	218-3729
3/16	218-2012	218-2312	218-2612	218-3012	218-3312	218-3612	#30	218-2130	218-2430	218-2730	218-3130	218-3430	218-3730
13/64	218-2013	218-2313	218-2613	218-3013	218-3313	218-3613	#31	218-2131	218-2431	218-2731	218-3131	218-3431	218-3731
7/32	218-2014	218-2314	218-2614	218-3014	218-3314	218-3614	#32	218-2132	218-2432	218-2732	218-3132	218-3432	218-3732
15/64	218-2015	218-2315	218-2615	218-3015	218-3315	218-3615	#33	218-2133	218-2433	218-2733	218-3133	218-3433	218-3733
1/4	218-2016	218-2316	218-2616	218-3016	218-3316	218-3616	#34	218-2134	218-2434	218-2734	218-3134	218-3434	218-3734
5/16	218-2020	218-2320	218-2620	218-3020	218-3320	218-3620	#35	218-2135	218-2435	218-2735	218-3135	218-3435	218-3735
3/8	218-2024	218-2324	218-2624	218-3024	218-3324	218-3624	#36	218-2136	218-2436	218-2736	218-3136	218-3436	218-3736
#1	218-2101	218-2401	218-2701	218-3101	218-3401	218-3701	#37	218-2137	218-2437	218-2737	218-3137	218-3437	218-3737
#2	218-2102	218-2402	218-2702	218-3102	218-3402	218-3702	#38	218-2138	218-2438	218-2738	218-3138	218-3438	218-3738
#3	218-2103	218-2403	218-2703	218-3103	218-3403	218-3703	#39	218-2139	218-2439	218-2739	218-3139	218-3439	218-3739
#4	218-2104	218-2404	218-2704	218-3104	218-3404	218-3704	#40	218-2140	218-2440	218-2740	218-3140	218-3440	218-3740
#5	218-2105	218-2405	218-2705	218-3105	218-3405	218-3705	#41	218-2141	218-2441	218-2741	218-3141	218-3441	218-3741
#6	218-2106	218-2406	218-2706	218-3106	218-3406	218-3706	#42	218-2142	218-2442	218-2742	218-3142	218-3442	218-3742
#7	218-2107	218-2407	218-2707	218-3107	218-3407	218-3707	#43	218-2143	218-2443	218-2743	218-3143	218-3443	218-3743
#8	218-2108	218-2408	218-2708	218-3108	218-3408	218-3708	#44	218-2144	218-2444	218-2744	218-3144	218-3444	218-3744
#9	218-2109	218-2409	218-2709	218-3109	218-3409	218-3709	#45	218-2145	218-2445	218-2745	218-3145	218-3445	218-3745
#10	218-2110	218-2410	218-2710	218-3110	218-3410	218-3710	#46	218-2146	218-2446	218-2746	218-3146	218-3446	218-3746
#11	218-2111	218-2411	218-2711	218-3111	218-3411	218-3711	#47	218-2147	218-2447	218-2747	218-3147	218-3447	218-3747
#12	218-2112	218-2412	218-2712	218-3112	218-3412	218-3712	#48	218-2148	218-2448	218-2748	218-3148	218-3448	218-3748
#13	218-2113	218-2413	218-2713	218-3113	218-3413	218-3713	#49	218-2149	218-2449	218-2749	218-3149	218-3449	218-3749
#14	218-2114	218-2414	218-2714	218-3114	218-3414	218-3714	#50	218-2150	218-2450	218-2750	218-3150	218-3450	218-3750
#15	218-2115	218-2415	218-2715	218-3115	218-3415	218-3715	#51	218-2151	218-2451	218-2751	218-3151	218-3451	218-3751
#16	218-2116	218-2416	218-2716	218-3116	218-3416	218-3716	#52	218-2152	218-2452	218-2752	218-3152	218-3452	218-3752
#17	218-2117	218-2417	218-2717	218-3117	218-3417	218-3717	A	218-2201	218-2501	218-2801	218-3201	218-3501	218-3801
#18	218-2118	218-2418	218-2718	218-3118	218-3418	218-3718	B	218-2202	218-2502	218-2802	218-3202	218-3502	218-3802
#19	218-2119	218-2419	218-2719	218-3119	218-3419	218-3719	C	218-2203	218-2503	218-2803	218-3203	218-3503	218-3803
#20	218-2120	218-2420	218-2720	218-3120	218-3420	218-3720	D	218-2204	218-2504	218-2804	218-3204	218-3504	218-3804
#21	218-2121	218-2421	218-2721	218-3121	218-3421	218-3721	F	218-2206	218-2506	218-2806	218-3206	218-3506	218-3806

Silver & Deming Drills

等柄钻头 HSS

High Speed Steel, Black Oxide

Also called reduced shank drills, with 3/8", 1/4" shank, drilling large hole sizes than each drill chuck capacity

6" Overall Length, 3" Flute Length

3/8" shank



Size	Order No.	Size	Order No.	Size	Order No.
25/64"	301-0325	1/2"	301-0332	11/16"	301-0344
13/32	301-0326	17/32	301-0334	23/32	301-0346
27/64	301-0327	9/16	301-0336	3/4	301-0348
7/16	301-0328	19/32	301-0338	13/16	301-0350
29/64	301-0329	5/8	301-0340	7/8	301-0352
15/32	301-0330	21/32	301-0342	15/32	301-0354
31/64	301-0331				

1/4" Shank



Size	Order No.	Size	Order No.	Size	Order No.
17/64"	301-0017	23/64"	301-0023	7/16"	301-0028
9/32	301-0018	3/8	301-0024	29/64	301-0029
19/64	301-0019	25/64	301-0025	15/32	301-0030
5/16	301-0020	13/32	301-0026	31/64	301-0031
21/64	301-0021	27/64	301-0027	1/2	301-0032
11/32	301-0022				

Silver & Deming Drills

等柄钻头

Also called reduced shank drills, with 1/2", 3/4", 1/4", 3/8" shank, drilling large hole sizes than each drill chuck capacity

High Speed Steel, Black Oxide 6" Overall Length, 3" Flute Length

1/2" Shank



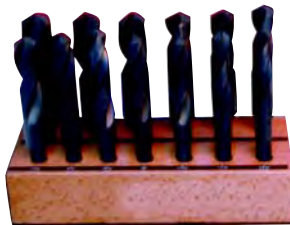
Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
1/2"	301-1032	25/32"	301-1050	1-1/16"	301-1104	1-21/64"	301-1121
33/64	301-1033	51/64	301-1051	1-5/64	301-1105	1-11/32	301-1122
17/32	301-1034	13/16	301-1052	1-3/32	301-1106	1-23/64	301-1123
35/64	301-1035	53/64	301-1053	1-7/64	301-1107	1-3/8	301-1124
9/16	301-1036	27/32	301-1054	1-1/8	301-1108	1-25/64	301-1125
37/64	301-1037	55/64	301-1055	1-9/64	301-1109	1-13/32	301-1126
19/32	301-1038	7/8	301-1056	1-5/32	301-1110	1-27/64	301-1127
39/64	301-1039	57/64	301-1057	1-11/64	301-1111	1-7/16	301-1128
5/8	301-1040	29/32	301-1058	1-3/16	301-1112	1-29/64	301-1129
41/64	301-1041	59/64	301-1059	1-13/64	301-1113	1-15/32	301-1130
21/32	301-1042	15/16	301-1060	1-7/32	301-1114	1-31/64	301-1131
43/64	301-1043	61/64	301-1061	1-15/64	301-1115	1-1/2	301-1132
11/16	301-1044	31/32	301-1062	1-1/4	301-1116	1-9/16	301-1133
45/64	301-1045	63/64	301-1063	1-17/64	301-1117	1-5/8	301-1134
23/32	301-1046	1	301-1064	1-9/32	301-1118	1-3/4	301-1137
47/64	301-1047	1-1/64	301-1101	1-19/64	301-1119	1-25/32	301-1151
3/4	301-1048	1-1/32	301-1102	1-5/16	301-1120	1-15/16	301-1161
49/64	301-1049	1-3/64	301-1103				

Size (mm)	Order No.	Size (mm)	Order No.	Size (mm)	Order No.	Size (mm)	Order No.
12.50	301-1025	17.10	301-1171	23.50	301-1235	31.00	301-1310
13.00	301-1030	17.50	301-1175	23.75	301-1237	31.25	301-1312
13.30	301-1136	17.75	301-1177	24.00	301-1240	31.50	301-1315
13.50	301-1135	17.80	301-1178	24.50	301-1245	32.00	301-1320
13.80	301-1138	18.00	301-1180	25.00	301-1250	32.50	301-1325
13.90	301-1139	18.50	301-1185	25.50	301-1255	33.00	301-1330
14.00	301-1140	18.75	301-1187	26.00	301-1260	33.50	301-1335
14.25	301-1142	19.00	301-1190	26.50	301-1265	34.00	301-1340
14.40	301-1144	19.50	301-1195	26.75	301-1267	34.50	301-1345
14.50	301-1145	19.75	301-1197	27.00	301-1270	35.00	301-1350
14.70	301-1147	20.00	301-1200	27.50	301-1275	35.50	301-1355
15.00	301-1150	20.50	301-1205	28.00	301-1280	36.00	301-1360
15.50	301-1155	21.00	301-1210	28.50	301-1285	36.50	301-1365
16.00	301-1160	21.50	301-1215	29.00	301-1290	37.00	301-1370
16.50	301-1165	22.00	301-1220	29.50	301-1295	37.50	301-1375
16.75	301-1167	22.50	301-1225	30.00	301-1300	38.00	301-1380
16.80	301-1168	23.00	301-1230	30.50	301-1305	41.00	301-1410
17.00	301-1170						

3/4" Shank



Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
25/32"	301-1950	1	301-2000	1-5/32	301-2010	1-11/32	301-2022	1-1/2	301-2032	1-21/32	301-2042	1-27/32	301-2054
13/16	301-1952	1-1/64	301-2001	1-3/16	301-2012	1-23/64	301-2023	1-17/32	301-2034	1-11/16	301-2044	1-7/8	301-2056
27/32	301-1954	1-1/32	301-2002	1-7/32	301-2014	1-3/8	301-2024	1-9/16	301-2036	1-23/32"	301-2046	1-29/32	301-2058
7/8	301-1956	1-1/16	301-2004	1-1/4	301-2016	1-13/32"	301-2026	1-19/32	301-2038	1-3/4	301-2048	1-15/16	301-2060
29/32	301-1958	1-3/32"	301-2006	1-9/32	301-2018	1-7/16	301-2028	1-39/64	301-2039	1-25/32	301-2050	1-31/32	301-2062
15/16	301-1960	1-1/8	301-2008	1-5/16	301-2020	1-15/32	301-2030	1-5/8	301-2040	1-13/16	301-2052	2	301-2064
31/32	301-1962	1-9/64	301-2009	1-21/64	301-2021	1-31/64	301-2031						



Silver & Deming Drill Sets

Shank	Pieces of Drills	Specification	Wooden Stand Order No.	Plastic Case Order No.
1/4"	16	17/64 to 1/2" by 64ths	301-0096	
3/8	8	25/64 to 1/2" by 64ths	301-0398	
1/2	5	17/32", 9/16", 5/8", 3/4", 1"	301-0204	
1/2	5	9/16", 5/8", 3/4", 7/8", 1"	301-0215	301-0205
1/2	6	1-1/8" to 1-3/8" by 16ths and 1-1/2"	301-0206	
1/2	8	9/16-1" by 16ths	301-0218	301-0208
1/2	8	1-1/16 to 1-1/2" by 16ths	301-0288	301-0298
1/2	10	9/16 to 1" by 16ths, 1-1/8", 1-1/4"	301-0210	
1/2	12	9/16 to 1-1/4" by 16ths	301-0212	
1/2	13	17/32 to 1" by 16ths & 32nds	301-0213	
1/2	16	17/32 to 1" by 32nds	301-0216	
1/2	17	17/32 to 1-1/32" by 32nds	301-0217	
1/2	32	33/64 to 1" by 64ths	301-0232	
1/2	40	33/64" to 1" by 64ths & 1-1/16" to 1-1/2" by 16ths	301-0240	
3/4	5	1, 1-1/8, 1-1/4, 1-3/8, 1-1/2"	301-0225	301-0235

Fully Ground Silver & Deming Drills

1/2" 等柄钻头

HSS, 1/2" Shank



Inch

Size (In.)	Order No.	Size (In.)	Order No.	Size (In.)	Order No.
33/64	301-1833	11/16	301-1844	55/64	301-1855
17/32	301-1834	45/64	301-1845	7/8	301-1856
35/64	301-1835	23/32	301-1846	57/64	301-1857
9/16	301-1836	47/64	301-1847	29/32	301-1858
37/64	301-1837	3/4	301-1848	59/64	301-1859
19/32	301-1838	49/64	301-1849	15/16	301-1560
39/64	301-1839	25/32	301-1850	61/64	301-1861
5/8	301-1840	51/64	301-1851	31/32	301-1862
41/64	301-1841	13/16	301-1852	63/64	301-1863
21/32	301-1842	53/64	301-1853	1	301-1864
43/64	301-1843	27/32	301-1854		

Metric

Size (mm)	Order No.	Size (mm)	Order No.	Size (mm)	Order No.
14	301-1814	18	301-1818	22	301-1822
15	301-1815	19	301-1819	23	301-1823
16	301-1816	20	301-1820	24	301-1824
17	301-1817	21	301-1821	25	301-1825

M35 Cobalt Silver & Deming Drills



1/2" Shank, 135° Split Point 钴高速钢 1/2" 柄钻头 135 度



Size	Order No.	Size	Order No.	Size	Order No.
33/64"	301-0833	55/64"	301-0855	1-3/16"	301-0912
17/32"	301-0834	7/8"	301-0856	1-13/64"	301-0913
35/64"	301-0835	57/64"	301-0857	1-7/32"	301-0914
9/16"	301-0836	29/32"	301-0858	1-15/64"	301-0915
37/64"	301-0837	59/64"	301-0859	1-1/4"	301-0916
19/32"	301-0838	15/16"	301-0860	1-17/64"	301-0917
39/64"	301-0839	61/64"	301-0861	1-9/32"	301-0918
5/8"	301-0840	31/32"	301-0862	1-19/64"	301-0919
41/64"	301-0841	63/64"	301-0863	1-5/16"	301-0920
21/32"	301-0842	1"	301-0864	1-21/64"	301-0921
43/64"	301-0843	1-1/64"	301-0901	1-11/32"	301-0922
11/16"	301-0844	1-1/32"	301-0902	1-23/64"	301-0923
45/64"	301-0845	1-3/64"	301-0903	1-3/8"	301-0924
23/32"	301-0846	1-1/16"	301-0904	1-25/64"	301-0925
47/64"	301-0847	1-5/64"	301-0905	1-13/32"	301-0926
3/4"	301-0848	1-3/32"	301-0906	1-27/64"	301-0927
49/64"	301-0849	1-7/64"	301-0907	1-7/16"	301-0928
25/32"	301-0850	1-1/8"	301-0908	1-29/64"	301-0929
51/64"	301-0851	1-9/64"	301-0909	1-15/32"	301-0930
13/16"	301-0852	1-5/32"	301-0910	1-31/64"	301-0931
53/64"	301-0853	1-11/64"	301-0911	1-1/2"	301-0932
27/32"	301-0854				

Cobalt Set

Pieces of Drills	Shank	Specification	Wooden Stand Order No.	Plastic Case Order No.
32	1/2	9/16" to 1" by 164ths.	301-0990	
13	1/2	17/32"-3/4" by 32nds, 13/16-1" by 16ths,	301-0993	
5	1/2	9/16 - 1" by 8ths	301-0995	
8	1/2	9/16" to 1" by 16ths	301-0998	301-1000
6	1/2	7/8 to 1-1/2" by 8ths		301-1002
16	1/2	9/16 to 1-1/2" by 16th		301-1004

Center Drills

60° Angle, Plain Style, Ground

美标磨制中心钻



Size	Body Dia.	Drill Dia.	Overall Length	HSS Ground Order No.	M42 Ground Order No.
1	1/8"	3/64"	1-1/4"	217-9001	217-9201
2	3/16	5/64	1-7/8	217-9002	217-9202
3	1/4	7/64	2	217-9003	217-9203
4	5/16	1/8	2-1/8	217-9004	217-9204
5	7/16	3/16	2-3/4	217-9005	217-9205
6	1/2	7/32	3	217-9006	217-9206
7	5/8	1/4	3-1/4	217-9007	217-9207
8	3/4	5/16	3-1/2	217-9008	217-9208
9	7/8	11/32	3-5/8	217-9009	
10	1	3/8	3-3/4	217-9010	

Bell Type Center Drills

60/120° Angle, HSS, Ground

复合带护锥中心钻



Size	Body Dia.	Drill Dia.	Bell Dia.	Overall Length	Order No.
#11	1/8"	3/64"	.1"	1-1/4"	217-2011
#12	3/16	1/16	.15	1-7/8	217-2012
#13	1/4	3/32	.2	2	217-2013
#14	5/16	7/64	.25	2-1/8	217-2014
#15	7/16	5/32	.35	2-3/4	217-2015
#16	1/2	3/16	.4	3	217-2016
#17	5/8	7/32	.5	3-1/4	217-2017
#18	3/4	1/4	.6	3-1/2	217-2018
#19	7/8	5/16	.7	3-5/8	217-2019
#20	1	3/8	.8	3-3/4	217-2020

Missile & Aircraft Mini Center Drills

60° Angle, HSS Ground

高速钢航空中心钻



Size	Body Dia.	Drill Dia.	Overall Length	HSS Order No.	M42 Order No.
000	1/8"	.020"	1-1/4"	217-5000	217-9100
00	1/8	.025	1-1/4	217-5001	217-9101
0	1/8	1/32	1-1/4	217-5002	217-9102

Plain Center Drills

82° & 90° Angle, HSS Ground

美标磨制复合中心钻



Size	Body Dia.	Drill Dia.	Overall Length	82° Order No.	90° Order No.
1	1/8	3/64	1-1/4	217-2001	217-0001
2	3/16	5/64	1-7/8	217-2002	217-0002
3	1/4	7/64	2	217-2003	217-0003
4	5/16	1/8	2-1/8	217-2004	217-0004
5	7/16	3/16	2-3/4	217-2005	217-0005
6	1/2	7/32	3	217-2006	217-0006
7	5/8	1/4	3-1/4	217-2007	217-0007
8	3/4	5/16	3-1/2	217-2008	217-0008

5Pcs, Plain Center Drill

Sets

套装中心钻



	60° Order No.	82° Order No.	90° Order No.	M42 Order No.
5pcs: 1-5#	217-9012	217-9082	217-0015	217-9212

Long Series Center Drills

加长复合中心钻



Size	Body Dia.	Drill Dia.	Overall Length	Ground Order No.
1#	1/8"	3/64"	3"	217-7103
1#	1/8	3/64	4	217-7104
1#	1/8	3/64	5	217-7105
1#	1/8	3/64	6	217-7106
2#	3/16	5/64	3	217-7203
2#	3/16	5/64	4	217-7204
2#	3/16	5/64	5	217-7205
2#	3/16	5/64	6	217-7206
3#	1/4	7/64	4	217-7304
3#	1/4	7/64	5	217-7305
3#	1/4	7/64	6	217-7306
4#	5/16	1/8	4	217-7404
4#	5/16	1/8	5	217-7405
4#	5/16	1/8	6	217-7406
5#	7/16	3/16	4	217-7504
5#	7/16	3/16	5	217-7505
5#	7/16	3/16	6	217-7506
6#	1/2	7/32	4	217-7604
6#	1/2	7/32	5	217-7605
6#	1/2	7/32	6	217-7606
7#	5/8	1/4	6	217-7706
8#	3/4	5/16	6	217-7806
5pc set #1x4", #2x4", #3x4", #4x5", #5x6"				217-7905
8pc set #1 through 8# 60deg.				217-9015

Metric Center Drills

DIN333A, Right Hand, HSS

公制右旋中心钻



Size	Shank Dia.	OAL	Order No.
.5mm	3.15mm	20mm	212-0050
.63	3.15	31.5	212-0063
.8	3.15	20	212-0080
1	3.15	31.5	212-0100
1.25	3.15	31.5	212-0125
1.6	4	35.5	212-0160
2	5	40	212-0200
2.5	6.3	45	212-0250
3	8	50	212-0300
3.15	8	50	212-0315
3.5	10	56	212-0350
4	10	59	212-0400
5	12.5	63	212-0500
6.3	16	71	212-0630
8	20	80	212-0800
10	25	100	212-1000
12.5	31.5	125	212-1500

Metric Center Drills

DIN333B, 120° Bell Type, HSS

中心钻带 120° 护锥



Dia	Shank Dia	Overall Length	Ground Order No.
1.0mm	4mm	35.5mm	217-4010
1.25	5	40	217-4013
1.6	6.3	45	217-4016
2.0	8	50	217-4020
2.5	10	56	217-4025
3.15	11.2	60	217-4032
4.0	14	67	217-4040
5.0	18	75	217-4050
6.3	20	80	217-4060
8	25	100	217-4080
10	31.5	125	217-4100

Spotting & Centering Drills 高速钢定心 / 中心钻, 右旋

High Speed Steel , Right Hand & Left Hand

Prevent misalignment frequently caused by using regular drills for centering.

These short drills can be chucked close to the point ensuring accuracy and true starts.



Size	Flute Length	OAL	90°	
			Right Hand Order No.	Left Hand Order No.
1/8"	3/8"	1-1/4"	216-1108	216-1308
3/16	1/2	1-3/8	216-1112	216-1312
1/4	5/8	1-1/2	216-1116	216-1316
5/16	5/8	1-1/2	216-1120	216-1320
3/8	1	2	216-1124	216-1324
7/16	1	2	216-1128	216-1328
1/2	1	2	216-1132	216-1332
9/16	1	2	216-1136	216-1336
5/8	1-1/8	2-1/4	216-1140	216-1340
3/4	1-1/8	2-1/4	216-1148	216-1348
7/8	1-1/4	2-1/2	216-1156	216-1356
1	1-1/4	2-1/2	216-1164	216-1364
1-1/4	2	4	216-1178	216-1378
1-1/2	1-1/2	5	216-1194	216-1394
1-3/4	2-3/4	5-1/2	216-1210	216-1410

Size	Flute Length	OAL	118°	
			Right Hand Order No.	Left Hand Order No.
1/8"	3/8"	1-1/4"	216-1508	216-1708
3/16	1/2	1-3/8	216-1512	216-1712
1/4	5/8	1-1/2	216-1516	216-1716
5/16	5/8	1-1/2	216-1520	216-1720
3/8	1	2	216-1524	216-1724
7/16	1	2	216-1528	216-1728
1/2	1	2	216-1532	216-1732
9/16	1	2	216-1536	216-1736
5/8	1-1/8	2-1/4	216-1540	216-1740
3/4	1-1/8	2-1/4	216-1548	216-1748
7/8	1-1/4	2-1/2	216-1556	216-1756
1	1-1/4	2-1/2	216-1564	216-1764
1-1/4	2	4	216-1578	216-1778
1-1/2	1-1/2	5	216-1594	216-1794
1-3/4	2-3/4	5-1/2	216-1610	216-1810

M35 Cobalt Spotting Drills M35 定心钻



NEW



Size	Flute Length	OAL	90°	
			Order No.	Order No.
0.118"	0.47"	2"	216-4101	216-4151
0.157	0.47	2-3/16	216-4102	216-4152
0.197	0.55	2-3/8	216-4104	216-4154
0.236	0.63	2-3/4	216-4106	216-4156
1/4	0.67	2-3/4	216-4108	216-4158
0.315	0.83	3-1/8	216-4110	216-4160
3/8	0.98	3-1/2	216-4112	216-4162
0.394	1.1	3-1/2	216-4114	216-4164
0.472	1.18	4	216-4116	216-4166
1/2	1.18	4	216-4118	216-4168
5/8	1.48	4-1/2	216-4120	216-4170
0.63	1.48	4-1/2	216-4122	216-4172
3/4	1.77	5-1/8	216-4124	216-4174
0.787	1.77	5-1/8	216-4126	216-4176
0.984	2.09	6	216-4128	216-4178
1	2.09	6-1/8	216-4130	216-4180

NC Spotting Drills 数控机床用定心钻

90° & 120° ,High Speed Steel

Designed with a narrow chisel edge for quick starting and a constant web to allow for resharpening without the need for web thinning.



Size	Flute Length	OAL	HSS		Tin Coated	
			90° Order No.	120° Order No.	90° Order No.	120° Order No.
1/4"	3/4"	2-1/2"	216-2163	216-3163	216-6163	216-5163
		4	216-2164	216-3164	216-6164	216-5164
		6	216-2166	216-3166	216-6166	216-5166
3/8	1-1/8	3-1/8	216-2244	216-3244	216-6244	216-5244
		5	216-2245	216-3245	216-6245	216-5245
		7	216-2247	216-3247	216-6247	216-5247
1/2	1-3/8	3-3/4	216-2324	216-3324	216-6324	216-5324
		6	216-2326	216-3326	216-6326	216-5326
		8	216-2328	216-3328	216-6328	216-5328
5/8"	1-5/8"	4-3/8"	216-2405	216-3405	216-6405	216-5405
		7	216-2407	216-3407	216-6407	216-5407
		9	216-2409	216-3409	216-6409	216-5409
3/4	1-7/8	5	216-2485	216-3485	216-6485	216-5485
		8	216-2488	216-3488	216-6488	216-5488
		10	216-2489	216-3489	216-6489	216-5489
1	2-1/4	6	216-2646	216-3646	216-6646	216-5646
		8	216-2648	216-3648	216-6648	216-5648
		10	216-2649	216-3649	216-6649	216-5649

HSS Double End Sheet Metal Drills

135° Split Point

高速钢双头短钻



Size (in)	Flute Length (in)	Overall Length (in)	Order No.	Size	Flute Length	Overall Length	Order No.
7/64"	1/2"	1-7/8"	216-4407	3/16"	5/8"	2-5/16"	216-4412
1/8	1/2	2	216-4408	7/32	5/8	2-5/8	216-4414
5/32	5/8	2-3/16	216-4410	1/4	3/4	2-7/8	216-4416
#30	21/32	2	216-4630				

Saw Drills



HSS, 135° Split Point, Spiral Point

- Used with your power drill to saw, ream, drill and cut through wood, metal and plastic.

Size	Flute Length	OAL	Order No.	Tin coated Order No.
1/8"	1-1/4"	2-1/2"	334-0008	334-0108
3/16	2	3-1/4	334-0012	334-0112
1/4	2-1/2	3-11/16	334-0016	334-0116

Double Spiral Fluters Step Drills 高速钢螺旋刃台阶钻

DIN Standard Step Drill

Point cut: split point DIN1412C

Point angle: 118 Degree

Step angle: 90 Degree

Surface: bright/titanium-nitride coated/black finished

Cutting Direction: right-hand cutting



NEW



Metal Case Sets

Drilling range mm	Steps	Shank Dia.	Straight Shank		Hexagon Shank	
			HSS Order No.	TiN Coated Order No.	HSS Order No.	TiN Coated Order No.
4-12	5	6	331-3301	331-3331	331-3801	331-3831
4-12	9	6	331-3302	331-3332	331-3802	331-3832
3-12	10	6	331-3303	331-3333	331-3803	331-3833
3-14	13	6	331-3304	331-3334	331-3804	331-3834
4-20	9	8	331-3305	331-3335	331-3805	331-3835
4-22	10	8	331-3306	331-3336	331-3806	331-3836
4-24	11	8	331-3307	331-3337	331-3807	331-3837
4-30	14	10	331-3308	331-3338	331-3808	331-3838
4-32	15	10	331-3309	331-3339	331-3809	331-3839
4-39	13	12	331-3310	331-3340	331-3810	331-3840
5-28	7	10	331-3311	331-3341	331-3811	331-3841
5-35	13	12	331-3312	331-3342	331-3812	331-3842
6-18	7	8	331-3313	331-3343	331-3813	331-3843
6-20	8	8	331-3314	331-3344	331-3814	331-3844
6-30	13	10	331-3315	331-3345	331-3815	331-3845
6-35	13	12	331-3316	331-3346	331-3816	331-3846
6-37	11	12	331-3317	331-3347	331-3817	331-3847
6-38	12	12	331-3318	331-3348	331-3818	331-3848
9-36	10	12	331-3319	331-3349	331-3819	331-3849
10-20	11	8	331-3320	331-3350	331-3820	331-3850
14-24	6	8	331-3321	331-3351	331-3821	331-3851
20-30	11	10	331-3322	331-3352	331-3822	331-3852
20-34	14	10	331-3323	331-3353	331-3823	331-3853

Specification	HSS Order No.	TiN Coated Order No.
4-12, 4-20, 6-30	331-3325	331-3355
4-12, 6-20, 6-30	331-3326	331-3356
4-12, 4-20, 4-32	331-3327	331-3357
4-12, 4-20, 4-30	331-3328	331-3358
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3652	331-3752



Plastic Case Sets

Specification	HSS Order No.	TiN Coated Order No.
4-12, 4-20, 6-30	331-3361	331-3365
4-12, 6-20, 6-30	331-3362	331-3366
4-12, 4-20, 4-32	331-3363	331-3367
4-12, 4-20, 4-30	331-3364	331-3368
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3653	331-3753



ANSI Standard

Drilling range	Steps	Shank Dia.	Straight Shank		Hexagon Shank	
			HSS Order No.	TiN Coated Order No.	HSS Order No.	TiN Coated Order No.
1/8-1/2"	7	1/4	331-3641	331-3661	331-3741	331-3761
1/8-1/2"	13	1/4	331-3642	331-3662	331-3742	331-3762
1/8-3/8	5	1/4	331-3643	331-3663	331-3743	331-3763
1/4-3/4	9	3/8	331-3644	331-3664	331-3744	331-3764
1/4-7/8	11	3/8	331-3645	331-3665	331-3745	331-3765
1/4-1-3/8	10	3/8	331-3646	331-3666	331-3746	331-3766
3/16-1/2	6	1/4	331-3647	331-3667	331-3747	331-3767
3/16-9/16	7	1/4	331-3648	331-3668	331-3748	331-3768
3/16-7/8	12	3/8	331-3649	331-3669	331-3749	331-3769
9/16-1	8	3/8	331-3650	331-3670	331-3750	331-3770
13/16-1-3/8	10	1/2	331-3651	331-3671	331-3751	331-3771

Wooden Case Sets

Specification	HSS Order No.	TiN Coated Order No.
3-12, 4-12, 6-20	331-3371	331-3381
4-12, 4-20, 4-30	331-3372	331-3382
4-12, 4-20, 6-30	331-3373	331-3383
4-12, 4-20, 4-32	331-3374	331-3384
4-12, 4-22, 4-32	331-3375	331-3385
4-12, 6-20, 4-30	331-3376	331-3386
4-12, 6-20, 6-30	331-3377	331-3387
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3654	331-3754
1/8-1/2", 3/16-1/2", 1/4-3/4"	331-3655	331-3755



Double Straight Fluters Step Drills 高速钢直刃台阶钻

DIN Standard Step Drill



Point cut: split point DIN1412C

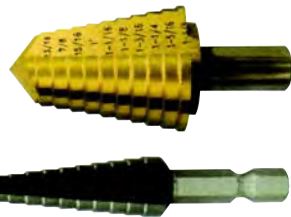
Point angle: 118 Degree

Step angle: 90 Degree

Surface: bright/titanium-nitride coated/black finished

Cutting Direction: right-hand cutting

Drilling range mm	Steps	Shank Dia.	Round Shank		Hexagon Shank	
			HSS Order No.	TiN Coated Order No.	HSS Order No.	TiN Coated Order No.
4-12	5	6	331-3404	331-3444	331-3504	331-3544
4-12	9	6	331-3401	331-3441	331-3501	331-3541
4-12	9	6.5	331-3402	331-3442		
3-12	10	6	331-3403	331-3443		
4-12	5	6.5	331-3405	331-3445		
3-14	13	6	331-3406	331-3446		
6-18	7	10	331-3407	331-3447		
4-20	9	8	331-3408	331-3448		
4-22	10	8	331-3409	331-3449		
4-24	11	8	331-3412	331-3452		
6-30	12	10	331-3413	331-3453		
4-30	14	10	331-3414	331-3454		
4-32	15	10	331-3415	331-3455		
4-20	9	10	331-3416	331-3456		
4-39	13	12	331-3417	331-3457		
5-28	7	10	331-3418	331-3458		
4-22	10	10	331-3419	331-3459		
5-35	13	12	331-3422	331-3462	331-3522	331-3562
6-18	7	8	331-3420	331-3460		
6-20	8	8	331-3410	331-3450	331-3510	331-3550
6-30	13	10	331-3421	331-3461		
6-35	13	12	331-3423	331-3463		
6-37	11	12	331-3424	331-3464		
6-38	12	12	331-3425	331-3465		
9-36	10	12	331-3426	331-3466		
10-20	11	8	331-3427	331-3467		
14-24	6	8	331-3428	331-3468		
20-30	11	10	331-3429	331-3469		
20-34	14	10	331-3430	331-3470		



ANSI Standard

Drilling range	Steps	Shank Dia.	Round Shank		Hexagon Shank	
			HSS Order No.	TiN Coated Order No.	HSS Order No.	TiN Coated Order No.
1/8-1/2"	7	1/4	331-3600	331-3620		
1/8-1/2	13	1/4	331-3601	331-3621	331-3701	331-3721
1/8-3/8	5	1/4	331-3602	331-3622		
1/4-3/4	9	3/8	331-3607	331-3627	331-3707	331-3727
1/4-7/8	11	3/8	331-3603	331-3623		
1/4-1-3/8	10	3/8	331-3613	331-3625		
3/16-1/2	6	1/4	331-3604	331-3624	331-3704	331-3724
3/16-9/16	7	1/4	331-3606	331-3626		
3/16-7/8	12	3/8	331-3610	331-3630	331-3710	331-3730
9/16-1	8	3/8	331-3608	331-3628		
13/16-1-3/8	10	1/2	331-3609	331-3629		
1/4-1-3/8	10	1/8				331-3733

NEW



Metal Case Sets

Specification	HSS Order No.	TiN Coated Order No.
4-12, 4-20, 6-30	331-3471	331-3472
4-12, 6-20, 6-30	331-3481	331-3483
4-12, 4-20, 4-32	331-3473	331-3474
4-12, 4-20, 4-30	331-3475	331-3476
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3688	331-3689



Plastic Case Sets

Specification	HSS Order No.	TiN Coated Order No.
4-12, 4-20, 6-30	331-3477	331-3478
4-12, 6-20, 6-30	331-3479	331-3484
4-12, 4-20, 4-32	331-3485	331-3486
4-12, 4-20, 4-30	331-3487	331-3488
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3686	331-3687
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3681	331-3682
Blistar Card		



Wooden Case Sets

Specification	HSS Order No.	TiN Coated Order No.
3-12, 4-12, 6-20	331-3489	331-3490
4-12, 4-20, 4-30	331-3491	331-3492
4-12, 6-20, 6-30	331-3480	331-3482
4-12, 4-20, 4-32	331-3493	331-3494
4-12, 4-22, 4-32	331-3495	331-3496
4-12, 6-20, 4-30	331-3497	331-3498
4-12, 6-20, 6-30	331-3499	331-3500
1/8-1/2", 1/4-3/4", 3/16-7/8"	331-3684	331-3685
1/8-1/2", 3/16-1/2", 1/4-3/4"	331-3680	331-3683

Single Flute Countersinks

High Speed Steel

单刃锪钻



Size	Shank Dia.	Shank Length	OAL	60° Order No.	82° Order No.	90° Order No.	100° Order No.	120° Order No.
3/16	3/16			380-5601	380-5801	380-5901	380-5101	380-5001
1/4	3/16	1-1/2	3/4	380-5600	380-5800	380-5900	380-5100	
1/4	1/4	1-1/2	3/4	380-5602	380-5802	380-5902	380-5102	380-5002
5/16	1/4	1-3/4	7/8	380-5603	380-5803	380-5903	380-5103	380-5003
3/8	1/4	1-3/4	7/8	380-5604	380-5804	380-5904	380-5104	380-5004
1/2	1/4	2	1	380-5606	380-5806	380-5906	380-5106	380-5006
1/2	3/8	2	1	380-5607	380-5807	380-5907	380-5107	380-5007
5/8	3/8	2-1/4	1	380-5608	380-5808	380-5908	380-5108	380-5008
5/8	1/2	2-1/4	1	380-5610	380-5810	380-5910	380-5110	380-5010
3/4	3/8	2-1/4	1	380-5612	380-5812	380-5912	380-5112	380-5012
3/4	1/2	2-1/2	1-1/4	380-5614	380-5814	380-5914	380-5114	380-5014
7/8	1/2	2-1/2	1-1/4	380-5615	380-5815	380-5915	380-5115	380-5015
1	1/2	2-3/4	1-1/2	380-5616	380-5816	380-5916	380-5116	380-5016
1-1/4	1/2	3-3/8	1-5/8	380-5618	380-5818	380-5918	380-5118	380-5018
1-1/4	3/4			380-5620	380-5820	380-5920	380-5120	380-5020
1-1/2	1/2	3-1/2	1-3/4	380-5622	380-5822	380-5922	380-5122	380-5022
1-1/2	3/4	3-1/2	1-3/4	380-5624	380-5824	380-5924	380-5124	380-5024
1-3/4	3/4			380-5626	380-5826	380-5926	380-5126	380-5026
2	3/4	4	2	380-5628	380-5828	380-5928	380-5128	380-5028
2	1/2	4	2	380-5627	380-5827	380-5927	380-5127	380-5027
5pcs/set: 1/4, 3/8, 1/2", with 1/4" Shk, 3/4, 1" with 1/2" Shk				380-5695	380-5895	380-5995	380-5195	
9pcs/set: 3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1"				380-5699	380-5899	380-5999	380-5199	
10pcs/set: 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2"				380-5698	380-5898	380-5998		
12pcs/set: 3/16-2",				380-5692	380-5892	380-5992		

3 Flute Countersinks

High Speed Steel

3 刃锪钻

Use for countersinking holes for centers or for enlarging existing holes.



Size	Shank Dia.	Shank Length	Overall Length	60° Order No.	82° Order No.	90° Order No.	100° Order No.	110° Order No.	120° Order No.
1/4"	3/16"	3/4"	1-1/2"	380-8116	380-8316	380-8516	380-8716	380-7516	380-7716
1/4	3/16		2	380-8118	380-8318	380-8518			
5/16	1/4		2	380-8119	380-8319	380-8519			
3/8	1/4	7/8	1-3/4	380-8124	380-8324	380-8524	380-8724	380-7524	380-7724
3/8	1/4		2	380-8125	380-8325	380-8525			
1/2	1/4	1	2	380-8130	380-8330	380-8530			
1/2	3/8	1	2	380-8132	380-8332	380-8532	380-8732	380-7532	380-7732
5/8	3/8	1	2-1/4	380-8140	380-8340	380-8540	380-8740	380-7540	380-7740
5/8	3/8	1	2	380-8142	380-8342	380-8542			
3/4	3/8	1	2	380-8146	380-8346	380-8546	380-8746		
3/4	1/2	1-1/4	2-5/8	380-8148	380-8348	380-8548	380-8748	380-7548	380-7748
3/4	1/2		2-3/4	380-8150	380-8350	380-8550			
7/8	1/2	1-1/2	2-1/2	380-8156	380-8356	380-8556	380-8756	380-7556	380-7756
7/8	1/2		2-3/4	380-8158	380-8358	380-8558			
1	1/2	1-1/4	2-3/4	380-8164	380-8364	380-8564	380-8764	380-7564	380-7764
1	1/2	1-1/2	2-3/4	380-8166	380-8366	380-8566	380-8766		
1-1/4	3/4	1-1/4	3	380-8180	380-8380	380-8580	380-8780	380-7580	380-7780
1-1/2	1/2	1-3/4	3-1/2	380-8190	380-8390	380-8590	380-8790		
1-1/2	3/4	1-1/4	3	380-8196	380-8396	380-8596	380-8796	380-7596	380-7796
1-1/2	3/4	1-3/4	3-1/2	380-8198	380-8398	380-8598	380-8798		
2	3/4	1-1/4	3-1/4	380-8228	380-8428	380-8628	380-8828	380-7628	380-7828
2	1/2	2	4	380-8230	380-8430	380-8630	380-8830		
2	3/4	2	4	380-8232	380-8432	380-8632	380-8832		
5pcs/set: 1/4, 3/8, 1/2, 3/4, 1"				380-8285	380-8485	380-8685	380-8885	380-7685	380-7885
6pcs/set: 1/4, 3/8, 1/2, 5/8, 3/4, 1"				380-8286	380-8486	380-8686	380-8886	380-7686	380-7886
9pcs: 1/4, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2"				380-8289	380-8489	380-8689	380-8889	380-7689	380-7889

4 Flute Machine Countersinks

4 槽机用锥形沉头孔锪钻

High Speed Steel



Size	Shank Dia.	Shank Length	Overall Length	60° Order No.	82° Order No.	90° Order No.	100° Order No.	120° Order No.
1/4	3/16	3/4	1-1/2	380-1216	380-1416	380-1616	380-1316	380-1716
5-16	1/4	7/8	1-3/4	380-1220	380-1420	380-1620	380-1320	380-1720
3/8	1/4	7/8	1-3/4	380-1224	380-1424	380-1624	380-1324	
1/2	3/8	1-1/8	2-1/8	380-1231	380-1431	380-1631	380-1331	380-1731
1/2"	1/2"	2-1/4"	3-7/8"	380-1232	380-1432	380-1632	380-1332	380-1732
5/8	3/8	1-1/8	2-3/8	380-1239	380-1439	380-1639	380-1339	
5/8	1/2	2-1/4	4	380-1240	380-1440	380-1640	380-1340	380-1740
3/4	1/2	1-5/16	2-11/16	380-1247	380-1447	380-1647	380-1347	380-1747
3/4	1/2	2-1/4	4-1/8	380-1248	380-1448	380-1648	380-1348	380-1748
7/8	1/2	1-5/16	2-13/16		380-1455	380-1655	380-1355	
7/8	1/2	2-1/4	4-1/4	380-1256	380-1456	380-1656	380-1356	380-1756
1	1/2	1-5/16	2-13/16	380-1263	380-1463	380-1663	380-1363	380-1763
1	1/2	2-1/4	4-3/8	380-1264	380-1464	380-1664	380-1364	380-1764
1-1/4	1/2	1-5/8	3-3/8	380-1279		380-1679	380-1379	380-1779
1-1/4	1/2	2-1/4	5	380-1280	380-1480	380-1680	380-1380	380-1780
1-1/2	3/4	1-5/8	3-1/2		380-1495	380-1695	380-1395	
1-1/2	1/2	2-1/4	5-3/8	380-1296	380-1496	380-1696	380-1396	380-1796
2	3/4	2-1/8	4-3/8	380-1297	380-1497	380-1697	380-1397	380-1797
5pcs/set: 1/2, 5/8, 3/4, 7/8, 1"				380-1205	380-1405	380-1605	380-1305	
7pcs/set: 1/2, 5/8, 3/4, 7/8, 1, 1-1/4, 1-1/2"				380-1207	380-1407	380-1607	380-1307	

6 Flute Chatterless Countersinks 6 刃导角刀

High Speed Steel



Size	Shank Diameter	Overall Length	60° Order No.	82° Order No.	90° Order No.	100° Order No.	110° Order No.	120° Order No.
3/16"	3/16"	1-1/2"	380-6005	380-6105	380-6205	380-6405	380-6505	380-6305
1/4	1/4	2	380-6010	380-6110	380-6210	380-6410	380-6510	380-6310
5/16	1/4	2	380-6015	380-6115	380-6215	380-6415	380-6515	380-6315
3/8	1/4	2	380-6020	380-6120	380-6220	380-6420	380-6520	380-6320
1/2	1/4	2	380-6025	380-6125	380-6225	380-6425	380-6525	380-6325
5/8	1/2	2-3/4	380-6030	380-6130	380-6230	380-6430	380-6530	380-6330
3/4	1/2	2-3/4	380-6035	380-6135	380-6235	380-6435	380-6535	380-6335
7/8	1/2	2-3/4	380-6040	380-6140	380-6240	380-6440	380-6540	380-6340
1	1/2	2-3/4	380-6045	380-6145	380-6245	380-6445	380-6545	380-6345
1-1/4	3/4	3-3/8	380-6050	380-6150	380-6250	380-6450	380-6550	380-6350
1-1/2	3/4	3-1/2	380-6055	380-6155	380-6255	380-6455	380-6555	380-6355
1-3/4	1	4-1/4	380-6060	380-6160	380-6260	380-6460	380-6560	380-6360
2	1	4-3/8	380-6065	380-6165	380-6265	380-6465	380-6565	380-6365
8pcs/set wooden stand (1/4-1")			380-6080	380-6180	380-6280	380-6480	380-6580	380-6380
5pcs/set wooden Stand(1/4,3/8,1/2,3/4,1")			380-6085	380-6185	380-6285	380-6485	380-6585	380-6385
10pcs/set wooden stand(3/16--1-1/4")			380-6090	380-6190	380-6290	380-6490	380-6590	380-6390
11pcs/set wooden Stand(3/16-1-1/2")			380-6091	380-6191	380-6291	380-6491	380-6591	380-6391
10pcs/set wooden Stand(1/4-1-1/2")			380-6092	380-6192	380-6292	380-6492	380-6592	380-6392

Cobalt M35



Size	Shank Diameter	Overall Length	60° Order No.	82° Order No.	90° Order No.	100° Order No.	110° Order No.	120° Order No.
3/16"	3/16"	1-1/2"	380-7005	380-7105	380-7205	380-6705	380-7605	380-7805
1/4	1/4	2	380-7010	380-7110	380-7210	380-6710	380-7610	380-7810
5/16	1/4	2	380-7015	380-7115	380-7215	380-6715	380-7615	380-7815
3/8	1/4	2	380-7020	380-7120	380-7220	380-6720	380-7620	380-7820
1/2	1/4	2	380-7025	380-7125	380-7225	380-6725	380-7625	380-7825
5/8	1/2	2-3/4	380-7030	380-7130	380-7230	380-6730	380-7630	380-7830
3/4	1/2	2-3/4	380-7035	380-7135	380-7235	380-6735	380-7635	380-7835
7/8	1/2	2-3/4	380-7040	380-7140	380-7240	380-6740	380-7640	380-7840
1	1/2	2-3/4	380-7045	380-7145	380-7245	380-6745	380-7645	380-7845
1-1/4	3/4	3-3/8	380-7050	380-7150	380-7250	380-6750	380-7650	380-7850
1-1/2	3/4	3-1/2	380-7055	380-7155	380-7255	380-6755	380-7655	380-7855
1-3/4	1	4-1/4	380-7060	380-7160	380-7260	380-6760	380-7660	380-7860
2	1	4-3/8	380-7065	380-7165	380-7265	380-6765	380-7665	380-7865
8pcs /set wooden stand (1/4-1")			380-7080	380-7180	380-7280	380-6780	380-7680	380-7880
10pcs/set wooden stand(3/16--1-1/4")			380-7090	380-7190	380-7290	380-6790	380-7690	380-7890

DIN335C 90° 3 Flute Countersinks DIN335C 高速 90 度 3 刃铰钻

Individuals



Size	Shank Dia.	Overall Length	HSS Order No.	HSS TiN Order No.	Cobalt Order No.
4.3mm	4	40	381-6043	381-7043	381-8043
5mm	4	40	381-6050	381-7050	381-8050
5.3mm	4	40	381-6053	381-7053	381-8053
5.8mm	5	45	381-6058	381-7058	381-8058
6mm	5	45	381-6060	381-7060	381-8060
6.3mm	5	45	381-6063	381-7063	381-8063
7mm	6	50	381-6070	381-7070	381-8070
7.3mm	6	50	381-6073	381-7073	381-8073
8mm	6	50	381-6080	381-7080	381-8080
8.3mm	6	50	381-6083	381-7083	381-8083
9.4mm	6	50	381-6094	381-7094	381-8094
10mm	6	50	381-6100	381-7100	381-8100
10.4mm	6	50	381-6104	381-7104	381-8104
11.5mm	8	56	381-6115	381-7115	381-8115
12.4mm	8	56	381-6124	381-7124	381-8124
13.4mm	8	56	381-6134	381-7134	381-8134
15mm	10	60	381-6150	381-7150	381-8150
16.5mm	10	60	381-6165	381-7165	381-8165
19mm	10	63	381-6190	381-7190	381-8190
20.5mm	10	63	381-6205	381-7205	381-8205
23mm	10	67	381-6230	381-7230	381-8230
25mm	10	67	381-6250	381-7250	381-8250
26mm	10	67	381-6260	381-7260	381-8260
28mm	12	71	381-6280	381-7280	381-8280
30mm	12	71	381-6300	381-7300	381-8300
31mm	12	71	381-6310	381-7310	381-8310
6 Pcs/set: 6.3, 8.3, 10.4, 12.4, 16.5, 20.5mm			381-6906	381-7906	381-8906
12 Pcs/set: 5.3, 5.8, 6.3, 7.3, 8.3, 9.4, 10.4, 12.4, 13.4, 16.5, 20.5, 25mm			381-6912	381-7912	381-8912

Inch Countersinks & Deburring Tools

High Speed Steel

无槽铰钻

Individuals



Range	Shank Dia.	Description	60° Order No.	82° Order No.	90° Order No.
1/16" - 15/64"	1/4"	0 double end	380-0815	380-1815	380-2815
5/32 - 13/32	1/4"	1 single end	380-0816	380-1816	380-2816
3/16 - 17/32	1/4"	2 single end	380-0817	380-1817	380-2817
3/16 - 25/32	1/2"	3 single end	380-0818	380-1818	380-2818
9/16 - 1-1/16	1/2"	4 single end	380-0819	380-1819	380-2819
5/8 - 1-15/32	1/2"	5 single end	380-0822	380-1822	380-2822
3/4 - 1-3/4	5/8"	6 single end	380-0823	380-1823	380-2823
1 - 2	5/8"	7 single end	380-0824	380-1824	380-2824
1-1/4 - 2-1/2	3/4"	8 single end	380-0825	380-1825	380-2825

Sets

Pieces	Description	Plastic Stand Order No.	Wooden stand Order No.
8Pcs	60° 1 each of: 1/16"-1"		380-0808
5Pcs	60° 1 each of: 1/16" to 9/16"	380-0811	380-0810
8Pcs	82° 1 each of: 1/16"-1"		380-1808
5Pcs	82° 1 each of: 1/16 to 9/16	380-1811	380-1810
5Pcs	82° 1 each of: 5/32" to 1-15/32"		380-1813
5Pcs	90° 1 each of: 1/16 to 9/16	380-2811	380-2810
8Pcs	90° 1 each of: 1/16"-1"		380-2808

Metric Countersinks & Deburring Tools

High Speed Steel

公制无槽铰钻

Individuals

Range	Head Dia.	Shank Dia.	Length	60° Order No.	82° Order No.	90° Order No.
2-5mm	10	6	45	380-3002	380-3102	380-3202
5-10mm	14	8	48	380-3005	380-3105	380-3205
10-15mm	21	10	65	380-3010	380-3110	380-3210
15-20mm	28	12	85	380-3015	380-3115	380-3215
20-25mm	35	15	102	380-3020	380-3120	380-3220
25-30mm	44	15	115	380-3025	380-3125	380-3225
30-35mm	48	15	127	380-3030	380-3130	380-3230
35-40mm	53	15	136	380-3035	380-3135	380-3235
40-50mm	64	18	166	380-3040	380-3140	380-3240

Sets

Pieces	Description	Order No.
4Pcs/set	60° 1 each of 2/5mm - 15/20mm	380-3402
4Pcs/set	82° 1 each of 2/5mm - 15/20mm	380-3404
4Pcs/set	90° 1 each of 2/5mm - 15/20mm	380-3406
5Pcs/set	60° 1 each of 2/5mm - 20/25mm	380-3602
5Pcs/set	82° 1 each of 2/5mm - 20/25mm	380-3604
5Pcs/set	90° 1 each of 2/5mm - 20/25mm	380-3606

2 Flute Solid Pilot Counterbores

High Speed Steel, Straight Shank

2 槽圆柱头平底铰钻



Screw Size	Pilot Dia.	Cutting Size	Shank Dia.	Overall Length	Order No.
2#	.085"	.155"		2-1/2"	381-5102
3#	.098	.176		3-1/2"	381-5103
4#	.111	.198		2-5/8"	381-5104
5#	.124	.220		2-5/8"	381-5105
6#	.137	.241		2-5/8"	381-5106
8#	.163	.285		2-3/4"	381-5108
10#	.189	.328		2-7/8"	381-5110
12#	.215	.372		3"	381-5112
	1/4"	13/32"	5/16"	3-5/8"	381-5316
	5/16	15/32	3/8	4"	381-5320
	3/8	19/32	7/16	4-3/8"	381-5324
	7/16	21/32	1/2	4-3/4"	381-5328
	1/2	25/32	9/16	5-1/4"	381-5332

Interchangeable Pilots Counterbores

高速钢可换导向柱铰钻

High Speed Steel, Straight Shank, Right Hand

Use for counter boring holes for socket heads of cap screws



Pilot				Straight			Taper			Pilot				Straight			Taper		
	Overall	No. of	Hole	Shank	Shank	Shank	Shank	Shank		Overall	No. of	Hole	Shank	Shank	Shank	Shank	Shank		
Size	Length	Flutes	Dia.	Dia.	Length	Order No.	Taper	Order No.	Size	Length	Flutes	Dia.	Dia.	Length	Order No.	Taper	Order No.		
3/16"	3"	3	3/32"	15/64	2-3/8"	381-2012	MT1	381-4012	53/64"	5-3/8"	3	1/4"	3/4"	3-7/8"	381-2053	MT2	381-4053		
13/64	3	3	3/32	15/64	2-3/8	381-2013	MT1	381-4013	27/32	5-3/8	3	1/4	3/4	3-7/8	381-2054	MT2	381-4054		
7/32	3	3	3/32	15/64	2-3/8	381-2014	MT1	381-4014	55/64	5-3/8	3	1/4	3/4	3-7/8	381-2055	MT2	381-4055		
15/64	3-13/16	3	3/32	15/64	3-1/16	381-2015	MT1	381-4015	7/8	5-3/8	3	1/4	3/4	3-7/8	381-2056	MT2	381-4056		
1/4	3-13/16	3	3/32	15/64	3-1/16	381-2016	MT1	381-4016	57/64	6-1/8	3	1/4	3/4	4-5/8	381-2057	MT2	381-4057		
17/64	3-13/16	3	3/32	17/64	3-1/16	381-2017	MT1	381-4017	29/32	6-1/8	3	1/4	3/4	4-5/8	381-2058	MT2	381-4058		
9/32	3-13/16	3	3/32	17/64	3-1/16	381-2018	MT1	381-4018	59/64	6-1/8	3	1/4	3/4	4-5/8	381-2059	MT2	381-4059		
19/64	3-13/16	3	3/32	17/64	3-1/16	381-2019	MT1	381-4019	15/16	6-1/8	3	1/4	3/4	4-5/8	381-2060	MT3	381-4060		
5/16	3-13/16	3	3/32	19/64	3-1/16	381-2020	MT1	381-4020	61/64	6-3/8	3	1/4	3/4	4-5/8	381-2061	MT3	381-4061		
21/64	3-13/16	3	3/32	5/16	3-1/16	381-2021	MT1	381-4021	31/32	6-3/8	3	5/16	3/4	4-5/8	381-2062	MT3	381-4062		
11/32	3-13/16	3	3/32	5/16	3-1/16	381-2022	MT1	381-4022	63/64	6-3/8	3	5/16	3/4	4-5/8	381-2063	MT3	381-4063		
23/64	4-1/16	3	5/32	5/16	3-1/16	381-2023	MT1	381-4023	1	6-3/8	3	5/16	3/4	4-5/8	381-2064	MT3	381-4064		
3/8	4-1/16	3	5/32	5/16	3-1/16	381-2024	MT1	381-4024	1-1/16	6-3/8	3	5/16	3/4	4-5/8	381-2068	MT3	381-4068		
25/64	4-1/16	3	5/32	3/8	3-1/16	381-2025	MT1	381-4025	1-1/8	6-3/8	3	5/16	1	4-5/8	381-2072	MT3	381-4072		
13/32	4-1/16	3	5/32	3/8	3-1/16	381-2026	MT1	381-4026	1-3/16	6-3/8	3	5/16	1	4-5/8	381-2076	MT3	381-4076		
27/64	4-1/16	3	5/32	3/8	3-1/16	381-2027	MT1	381-4027	1-1/4	6-5/8	5	3/8	1	4-5/8	381-2080	MT3	381-4080		
7/16	4-1/16	3	5/32	3/8	3-1/16	381-2028	MT1	381-4028	1-5/16	6-5/8	5	3/8	1	4-5/8	381-2084	MT3	381-4084		
29/64	4-5/16	3	3/16	7/16	3-1/16	381-2029	MT1	381-4029	1-3/8	6-5/8	5	3/8	1	4-5/8	381-2088	MT3	381-4088		
15/32	4-5/16	3	3/16	7/16	3-1/16	381-2030	MT1	381-4030	1-7/16	7-7/8	5	3/8	1-1/4	5-7/8	381-2090	MT4	381-4090		
31/64	4-5/16	3	3/16	7/16	3-1/16	381-2031	MT1	381-4031	1-1/2	7-7/8	5	3/8	1-1/4	5-7/8	381-2096	MT4	381-4096		
1/2	4-5/16	3	3/16	7/16	3-1/16	381-2032	MT1	381-4032	1-9/16	8-1/8	5	7/16	1-1/4	5-7/8	381-2100	MT4	381-4100		
33/64	4-5/16	3	3/16	1/2	3-1/16	381-2033	MT1	381-4033	1-5/8	8-1/8	5	7/16	1-1/4	5-7/8	381-2104	MT4	381-4104		
17/32	4-5/16	3	3/16	1/2	3-1/16	381-2034	MT1	381-4034	1-11/16	8-1/8	5	7/16	1-1/4	5-7/8	381-2108	MT4	381-4108		
35/64	4-5/16	3	3/16	1/2	3-1/16	381-2035	MT1	381-4035	1-3/4	8-1/8	5	7/16	1-1/4	5-7/8	381-2112	MT4	381-4112		
9/16	4-5/16	3	3/16	1/2	3-1/16	381-2036	MT1	381-4036	1-13/16	8-1/8	5	7/16	1-1/2	5-7/8	381-2116	MT4	381-4116		
37/64	5-1/8	3	3/16	1/2	3-7/8	381-2037	MT2	381-4037	1-7/8	8-1/8	5	7/16	1-1/2	5-7/8	381-2120	MT4	381-4120		
19/32	5-1/8	3	3/16	1/2	3-7/8	381-2038	MT2	381-4038	1-15/16	8-1/8	5	7/16	1-1/2	5-7/8	381-2124	MT4	381-4124		
39/64	5-1/8	3	3/16	1/2	3-7/8	381-2039	MT2	381-4039	2	8-3/8	5	1/2	1-1/2	5-7/8	381-2128	MT4	381-4128		
5/8	5-1/8	3	3/16	1/2	3-7/8	381-2040	MT2	381-4040	2-1/16	9-7/8	5	1/2	1-1/2	7-3/8	381-2136	MT5	381-4136		
41/64	5-1/8	3	3/16	1/2	3-7/8	381-2041	MT2	381-4041	2-1/8	9-7/8	5	1/2	1-1/2	7-3/8	381-2144	MT5	381-4144		
21/32	5-1/8	3	3/16	1/2	3-7/8	381-2042	MT2	381-4042	2-3/16	9-7/8	5	1/2	1-1/2	7-3/8	381-2152	MT5	381-4152		
43/64	5-1/8	3	3/16	1/2	3-7/8	381-2043	MT2	381-4043	2-1/4	9-7/8	5	1/2	1-1/2	7-3/8	381-2160	MT5	381-4160		
11/16	5-1/8	3	3/16	1/2	3-7/8	381-2044	MT2	381-4044	2-5/16	9-7/8	5	1/2	1-1/2	7-3/8	381-2168	MT5	381-4168		
45/64	5-3/8	3	1/4	1/2	3-7/8	381-2045	MT2	381-4045	2-3/8	9-7/8	5	1/2	1-3/4	7-3/8	381-2176	MT5	381-4176		
23/32	5-3/8	3	1/4	1/2	3-7/8	381-2046	MT2	381-4046	2-7/16	9-7/8	5	1/2	1-3/4	7-3/8	381-2184	MT5	381-4184		
47/64	5-3/8	3	1/4	1/2	3-7/8	381-2047	MT2	381-4047	2-1/2	9-7/8	5	1/2	1-3/4	7-3/8	381-2192	MT5	381-4192		
3/4	5-3/8	3	1/4	1/2	3-7/8	381-2048	MT2	381-4048	2-9/16	9-7/8	5	1/2	1-3/4	7-3/8	381-2200	MT5	381-4200		
49/64	5-3/8	3	1/4	5/8	3-7/8	381-2049	MT2	381-4049	2-5/8	9-7/8	5	1/2	1-3/4	7-3/8	381-2208	MT5	381-4208		
25/32	5-3/8	3	1/4	5/8	3-7/8	381-2050	MT2	381-4050	2-3/4	9-7/8	5	1/2	1-3/4	7-3/8	381-2216	MT5	381-4216		
51/64	5-3/8	3	1/4	5/8	3-7/8	381-2051	MT2	381-4051	2-7/8	9-7/8	5	1/2	1-3/4	7-3/8	381-2224	MT5	381-4224		
13/16	5-3/8	3	1/4	5/8	3-7/8	381-2052	MT2	381-4052	3	9-7/8	5	1/2	1-3/4	7-3/8	381-2232	MT5	381-4232		

Interchangeable Pilots Counterbore Sets

可换导向柱套装划钻

39 Piece Inch 3 Flute Counterbore Set

Each Set Included: 13 Counterbores: 1/4-1" by 16ths

26 Pilots: 1/8", 5/32", 3/16", 1/4" with 3/32" shank

3/16", 7/32", 1/4", 9/32", 5/16" with 5/32" shank, 1/4", 5/16", 3/8", 7/16", 1/2" with 3/16" shank

5/16", 3/8", 7/16", 1/2", 9/16", 5/8" with 1/4" shank, 3/8", 7/16", 1/2", 9/16", 5/8", 3/4" with 5/16" shank

Order No. 381-2939

Packed in wooden fitted case



Metric, High Speed Steel, Straight Shank

21 Piece Set

Set Included one each of following:

Pilots: 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8,

8.5, 9, 9.5, 10, 10.5mm

Counterbores: 8.5, 9.5, 10.5,

11.5, 13.5, 16.5mm

1 Piece Straight Shank Holder



Order No.381-2921

22 Piece Set

Set Included one each of following:

Pilots: 12, 13, 14, 15, 16, 17, 18, 19,

20, 21, 22, 23, 24, 25mm

Counterbores: 26, 28, 30, 32,

33, 34, 36mm

1 Piece of MT2 Taper Shank Holder



Order No.381-2922

Interchange Pilots for Counterbores

铰钻导向柱



- Shank Diameters of interchangeable pilots must be same with the pilot holes of counterbore when choosing pilots.

Pilot Shank Diameter									
Pilot Dia.	3/32"	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"
Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
3/32"	381-3003								
1/8	381-3005	381-3105							
5/32	381-3009	381-3109	381-3203						
3/16	381-3013	381-3113	381-3205	381-3303					
7/32	381-3017	381-3117	381-3209	381-3305					
1/4	381-3021	381-3121	381-3213	381-3309	381-3405				
9/32	381-3025	381-3125	381-3217	381-3313	381-3409				
5/16	381-3029	381-3129	381-3221	381-3317	381-3413	381-3502			
11/32	381-3033	381-3133	381-3225	381-3321	381-3417	381-3503			
3/8	381-3037	381-3137	381-3229	381-3325	381-3421	381-3505	381-3602		
13/32		381-3141	381-3233	381-3329	381-3425	381-3509	381-3603		
7/16	381-3041	381-3145	381-3237	381-3333	381-3429	381-3513	381-3605	381-3705	381-3805
15/32		381-3149	381-3241	381-3337	381-3433	381-3517	381-3609	381-3707	381-3807
1/2	381-3045	381-3153	381-3245	381-3341	381-3437	381-3521	381-3613	381-3709	381-3809
17/32		381-3155		381-3345	381-3441	381-3525	381-3617	381-3713	381-3813
9/16		381-3157		381-3349	381-3445	381-3529	381-3621	381-3715	381-3817
19/32				381-3353	381-3449	381-3533	381-3625	381-3716	381-3819
5/8		381-3161		381-3357	381-3453	381-3537	381-3629	381-3717	381-3821
21/32				381-3359	381-3457	381-3541	381-3633	381-3719	381-3823
11/16				381-3361	381-3461	381-3545	381-3637	381-3721	381-3825
23/32				381-3365	381-3465	381-3549	381-3641	381-3723	381-3827
3/4				381-3369	381-3469	381-3553	381-3645	381-3725	381-3829
25/32				381-3373	381-3473	381-3557	381-3649	381-3729	381-3833
13/16				381-3377	381-3477	381-3561	381-3653	381-3733	381-3837
27/32				381-3381	381-3481	381-3565	381-3657	381-3735	381-3839
7/8				381-3385	381-3485	381-3569	381-3661	381-3737	381-3841
29/32					381-3487	381-3573	381-3665	381-3739	381-3843
15/16						381-3577	381-3669	381-3741	381-3845
31/32						381-3578	381-3670	381-3743	381-3847
1						381-3581	381-3673	381-3745	381-3849
1-1/32							381-3675	381-3747	381-3851
1-1/16						381-3585	381-3677	381-3749	381-3853
1-3/32						381-3587	381-3679	381-3751	381-3855
1-1/8						381-3589	381-3681	381-3753	381-3857
1-5/32						381-3591	381-3683	381-3755	381-3859
1-3/16						381-3593	381-3685	381-3757	381-3861
1-7/32							381-3687	381-3759	381-3863
1-1/4							381-3689	381-3761	381-3865
1-5/16							381-3693	381-3765	381-3869
1-3/8							381-3697	381-3769	381-3873
1-13/32							381-3699		
1-7/16							381-3696	381-3773	381-3877
1-1/2							381-3698	381-3777	381-3881
1-9/16							381-3703	381-3779	381-3885
1-5/8								381-3781	381-3889
1-11/16								381-3783	381-3893
1-3/4								381-3785	381-3897
1-13/16								381-3787	381-3901
1-7/8								381-3789	381-3905
1-15/16								381-3791	381-3909
2								381-3793	381-3913
2-1/16									381-3914
2-1/8									381-3915
2-3/16									381-3916
2-1/4									381-3917
2-5/16									381-3918
2-3/8									381-3919
2-7/16									381-3920
2-1/2									381-3921
2-9/16									381-3925
2-5/8									381-3929
2-11/16									381-3933
2-3/4									381-3937
2-13/16									381-3948
2-7/8									381-3956
2-15/16									381-3960
3									381-3996

Capscrew Counterbore Sets 套装固定导柱铰钻

Pieces	Descriptions	Set Order No.
4pcs	2FI Frac Set for Fillister Head Screws:1/4-1/2-Str shk	381-9040
4pcs	1/2,5/8,3/4,1" 3flt, straight shank	381-9042
4pcs	1/4,5/16,3/8,1/2" 3flt, Taper shank	381-9044
4pcs	2FI M/Screw Set for Fillister Head Screws:2-10-Str shk	381-9050
5pcs	#10, 1/4,3/8, 1/2, 5/8"	381-9055
6pcs	1/4,5/16,3/8,1/2,5/8 and 3/4"	381-9060
6pcs	Metric 3,4,5,6,8,10mm	381-9061
6pcs	#6,#8,#10,1/4,5/16,3/8	381-9062
7pcs	#6,#8,#10,1/4,5/16,3/8 and 1/2"	381-9070
7pcs	Metric 3,4,5,6,8,10,12mm	381-9079
8pcs	Metric 3,4,5,6,8,10,12,14mm	381-9080



HSS 4 Flute Interchangeable Pilot Aircraft Counterbores 4 齿可换导柱航空铰钻

Long Series - 1/2" or smaller Straight Shank

Can be used in any 1/2" capacity tool or machine.



Size	Shank Dia.	Hole Dia.	Overall Length	Order No.	Size	Shank Dia.	Hole Dia.	Overall Length	Order No.
1/4"	15/16"	3/32"	4"	381-0301	23/32"	1/2"	3/16"	5-3/8"	381-0316
9/32	17/64	3/32	4	381-0302	3/4	1/2	3/16	5-3/8	381-0317
5/16	119/64	3/32	4	381-0303	25/32	1/2	3/16	5-3/8	381-0318
11/32	5/16x	3/32	4	381-0304	13/16	1/2	3/16	5-3/8	381-0319
3/8	15/16	3/32	4	381-0305	7/8	1/2	3/16	5-3/8	381-0320
13/32	3/8	1/8	4	381-0306	15/16	1/2	3/16	5-3/8	381-0321
7/16	3/8	1/8	4	381-0307	1	1/2	3/16	5-3/8	381-0322
15/32	7/16	1/8	4-1/4	381-0308	1-1/16	1/2	3/16	5-1/2	381-0323
1/2	7/16	1/8	4-1/4	381-0309	1-1/8	1/2	3/16	5-1/2	381-0324
17/32	1/2	1/8	4-1/4	381-0310	1-3/16	1/2	3/16	5-1/2	381-0325
9/16	1/2	1/8	4-1/4	381-0311	1-1/4	1/2	3/16	5-1/2	381-0326
19/32	1/2	1/8	4-1/4	381-0312	1-5/16	1/2	1/4	5-1/2	381-0327
5/8	1/2	1/8	4-1/4	381-0313	1-3/8	1/2	1/4	5-1/2	381-0328
21/32	1/2	3/16	5-3/8	381-0314	1-7/16	1/2	1/4	5-1/2	381-0329
11/16	1/2	3/16	5-3/8	381-0315	1-1/2	1/2	1/4	5-1/2	381-0330

Short Series - 1/4" Straight Shank

Can be used in 1/4" electric or pneumatic drills especially in aircraft work



Size	Hole Dia.	Overall Length	Order No.	Size	Hole Dia.	Overall Length	Order No.
1/4"	3/32"	2-3/8"	381-0401	21/32"	3/16"	3-1/8"	381-0414
9/32	3/32	2-3/8	381-0402	11/16	3/16	3-1/8	381-0415
5/16	3/32	2-3/8	381-0403	23/32	3/16	3-1/8	381-0416
11/32	3/32	2-3/8	381-0404	3/4	3/16	3-1/8	381-0417
3/8	3/32	2-3/8	381-0405	25/32	3/16	3-1/8	381-0418
13/32	1/8	2-13/16	381-0406	13/16	3/16	3-1/8	381-0419
7/16	1/8	2-13/16	381-0407	27/32	3/16	3-1/8	381-0420
15/32	1/8	2-13/16	381-0408	7/8	3/16	3-1/8	381-0421
1/2	1/8	2-13/16	381-0409	29/32	3/16	3-1/8	381-0422
17/32	1/8	2-13/16	381-0410	15/16	3/16	3-1/8	381-0423
9/16	1/8	2-13/16	381-0411	31/32	3/16	3-1/8	381-0424
19/32	1/8	2-13/16	381-0412	1	3/16	3-1/8	381-0425
5/8	1/8	2-13/16	381-0413				

Taper Shank Counterbores 3 槽圆柱沉头孔用锥柄铰钻

3 Flute, High Speed Steel



Cap Screw Size	Cutter Dia.	Pilot Dia.	Overall Length	Shank Taper	Order No.	Cap Screw Size	Cutter Dia.	Pilot Dia.	Overall Length	Shank Taper	Order No.
1/4"	13/32"	9/32"	5-3/4"	MT2	381-1025	5/8"	31/32"	21/32"	7-1/2"	MT2	381-1050
5/16	1/2	11/32	6	MT2	381-1030	5/8	11/16	1	7-1/2	MT2	381-1053
3/8	19/32	13/32	6-1/2	MT2	381-1035	3/4	1-3/16	13/16	9	MT3	381-1055
7/16	11/16	15/32	7	MT2	381-1040	7/8	1-3/8	15/16	9	MT3	381-1060
1/2	25/32	17/32	7-1/4	MT2	381-1045	1	1-9/16	1-1/16	10	MT3	381-1065

Cap Screw Counterbores 直柄平底固定导柱铰钻

3 Flute, High Speed Steel, Straight Shank



Screw Size	Pilot Dia.	Cutting Dia.	Shank Dia.	Overall Length	Order No.	Screw Size	Pilot Dia.	Cutting Dia.	Shank Dia.	Overall Length	Order No.
5#	0.1410"	0.2210"	3/16"	3"	381-0005	1/2"	17/32"	25/32"	5/8"	7-1/2"	381-0043
6#	0.1500	0.2420	7/32	3	381-0010	1/2	17/32	25/32	3/4	7-1/2	381-0045
8#	11/64	19/64	1/4	3	381-0015	1/2	9/16	13/16	3/4	7-1/2	381-0047
10#	13/64	21/64	5/16	3-1/2	381-0020	5/8	21/32	31/32	3/4	7-1/2	381-0050
1/4	9/32	13/32	3/8	5	381-0025	5/8	1	11/16	3/4	7-1/2	381-0053
5/16	11/32	1/2	7/16	5	381-0030	3/4	13/16	1-3/16	1	8	381-0055
3/8	13/32	19/32	1/2	6	381-0035	7/8	15/16	1-3/8	1	8	381-0060
7/16	15/32	11/16	1/2	7	381-0040	1	1-1/16	1-9/16	1	10	381-0065

Cap Screw Counterbores 直柄平底固定导柱铰钻

High Speed Steel, Straight Shank



Screw Size	Pilot Dia.	Cutting Dia.	Flute Length	Shank Dia.	Overall Length	Order No.	Screw Size	Pilot Dia.	Cutting Dia.	Flute Length	Shank Dia.	Overall Length	Order No.
4-40	0.1120	0.1860	11/16	5/32	3-7/8	381-0070	3/8	0.3750	0.5720	1-5/8	1/2	6-1/2	381-0110
4-40	0.1270	0.2020	11/16	5/32	3-7/8	381-0071	3/8	0.3900	0.5880	1-5/8	1/2	6-1/2	381-0115
4-40	0.1430	0.180	11/16	5/32	3-7/8	381-0072	3/8	0.4060	0.6040	1-5/8	1/2	6-1/2	381-0120
5-40	0.1250	0.2050	11/16	3/16	4-1/8	381-0074	7/16	.4370	0.6630	1-11/16	1/2	7	381-0125
5-40	0.1400	0.2210	11/16	3/16	4-1/8	381-0075	7/16	.4520	0.6790	1-11/16	1/2	7	381-0130
5-40	0.1560	0.2370	11/16	3/16	4-1/8	381-0076	7/16	.4680	0.6950	1-11/16	1/2	7	381-0135
6-32	0.1380	0.2280	7/8	7/32	4-5/8	381-0078	1/2	0.5000	0.7570	2	1/2	7-1/2	381-0140
6-32	0.1530	0.2440	7/8	7/32	4-5/8	381-0079	1/2	0.5150	0.7730	2	1/2	7-1/2	381-0145
6-32	0.1690	0.2600	7/8	7/32	4-5/8	381-0080	1/2	0.5310	0.7890	2	1/2	7-1/2	381-0150
8-32	0.1640	0.2720	15/16	1/4	5	381-0083	5/8	0.6250	0.9450	2	5/8	7-5/8	381-0155
8-32	0.1790	0.2880	15/16	1/4	5	381-0084	5/8	0.6400	0.9610	2	5/8	7-5/8	381-0160
8-32	0.1950	0.3040	15/16	1/4	5	381-0085	5/8	0.6560	0.9770	2	5/8	7-5/8	381-0165
10-32	0.1900	0.3140	1-1/8	9/32	5-1/4	381-0087	3/4	0.7500	1.1330	2-1/8	3/4	7-3/4	381-0170
10-32	0.2050	0.3300	1-1/8	9/32	5-1/4	381-0088	3/4	0.7650	1.1490	2-1/8	3/4	7-3/4	381-0175
10-32	0.2210	0.3460	1-1/8	9/32	5-1/4	381-0089	3/4	0.7810	1.1650	2-1/8	3/4	7-3/4	381-0180
1/4	0.2810	0.4140	1-5/16	5/16	5-5/8	381-0094	7/8	0.8750	1.3220	2-1/8	7/8	8-1/8	381-0185
1/4	0.2650	0.3980	1-5/16	5/16	5-5/8	381-0095	7/8	0.8910	1.3380	2-1/8	7/8	8-1/8	381-0190
1/4	0.2500	0.3820	1-5/16	5/16	5-5/8	381-0096	7/8	0.9060	1.3540	2-1/8	7/8	8-1/8	381-0195
5/16	0.3120	0.4750	1-5/16	3/8	6-1/8	381-0098	1	1.0000	1.5100	2-1/4	1	8-1/2	381-0200
5/16	0.3280	0.4910	1-5/16	3/8	6-1/8	381-0100	1	1.0150	1.5260	2-1/4	1	8-1/2	381-0205
5/16	0.3430	0.5070	1-5/16	3/8	6-1/8	381-0105	1	1.0310	1.5420	2-1/4	1	8-1/2	381-0210

Sets

Pieces	Descriptions	Order No.	Pieces	Descriptions	Order No.
6pcs	6pcs/set, Size: 1/4, 5/16, 3/8, 1/2, 5/8 & 3/4"	381-0260	6pcs	1/4, 5/16, 3/8, 1/2, 5/8 and 3/4"	381-9060
7pcs	7pcs /set, Size: 6, 8, 10, 1/4, 5/16, 3/8 & 1/2"	381-0270	7pcs	6#, 8#, 10#, 1/4, 5/16, 3/8 and 1/2"	381-9070
4pcs	4Pcs/set, Size: #6, #8, #10, 1/4"	381-9301	10pcs	4-40 through 1/2", 1/32" Oversized Pilots	381-9101
4pcs	4Pcs/set, Size: 1/4, 5/16, 3/8 & 1/2"	381-9302	10pcs	4-40 through 1/2", 1/64" Oversized Pilots	381-9102
4pcs	4Pcs/set, Size: 1/2, 5/8, 3/4 & 1"	381-9303	10pcs	4-40 through 1/2", Standard Size Pilots	381-9103
4pcs	4Pcs/set, Size: 1/4, 5/16, 3/8 & 1/2"	381-9304			



Metric Capscrew Counterbores 公制3槽固定导柱铰钻

High Speed Steel

3Flute, Straight Shank



Screw Size	Pilot Dia.	Cutter Dia.	Shank Dia.	OAL	Order No.	Screw Size	Pilot Dia.	Cutter Dia.	Shank Dia.	OAL	Order No.
M2	2.2	4.3	4.3	56	381-1502	M3	3.4	6	5.0	71	381-1553
M3	3.2	6	5	71	381-1503	M4	4.5	8	5.0	71	381-1554
M4	4.3	8	5	71	381-1504	M5	5.5	10	8.0	80	381-1555
M5	5.3	10	8	80	381-1505	M6	6.6	11	8.0	80	381-1556
M6	6.4	11	8	80	381-1506	M8	9.0	15	12.5	100	381-1558
M8	8.4	15	12.5	100	381-1508	M10	11	18	12.5	100	381-1560
M10	10.5	18	12.5	100	381-1510	M12	14	20	12.5	100	381-1562
M12	13	20	12.5	100	381-1512						

3Flute, Taper Shank



Screw Size	Pilot Dia.	Cutter Dia.	Cutter Length	Shank Taper	OAL	Order No.	Screw Size	Pilot Dia.	Cutter Dia.	Cutter Length	Shank Taper	OAL	Order No.
M14	15	24	60.325	MT2	228.6	381-1614	M20	21	33	79.375	MT2	254	381-1620
M16	17	26	79.375	MT2	228.6	381-1616	M24	25.4	40	79.375	MT3	254	381-1624

Capscrew Counterbore Sets 套装固定导柱铰钻

Pieces	Descriptions	Set Order No.
4pcs	2FI Frac Set for Fillister Head Screws: 1/4-1/2-Str shk	381-9040
4pcs	1/2, 5/8, 3/4, 1" 3ft, straight shank	381-9042
4pcs	1/4, 5/16, 3/8, 1/2" 3ft, Taper shank	381-9044
4pcs	2FI M/Screw Set for Fillister Head Screws: 2-10-Str shk	381-9050
5pcs	#10, 1/4, 3/8, 1/2, 5/8 "	381-9055
6pcs	1/4, 5/16, 3/8, 1/2, 5/8 and 3/4"	381-9060
6pcs	Metric 3, 4, 5, 6, 8, 10mm	381-9061
6pcs	#6, #8, #10, 1/4, 5/16, 3/8	381-9062
7pcs	#6, #8, #10, 1/4, 5/16, 3/8 and 1/2"	381-9070
7pcs	Metric 3, 4, 5, 6, 8, 10, 12mm	381-9079
8pcs	Metric 3, 4, 5, 6, 8, 10, 12, 14mm	381-9080



Straight Shank Chucking Reamers 直柄直槽铰刀

Straight Flute, HSS & M35 Cobalt

- Right hand cutting direction,
- Designed for general purpose machine reaming in most materials, using screw machines, turret lathes, drill presses and machining centers.
- Precision engineered design for exceptional quality and accuracy.
- Ground with a 45 deg. Chamfer, suitable for reaming most materials.



Fractional Sizes



Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.	Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.	Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.
3/64"	1/2"	2-1/2"	331-1003	331-1303	15/32"	1-3/4"	7"	331-1030	331-1330	57/64"	2-5/8"	10"	331-1057	331-1357
1/16	1/2	2-1/2	331-1004	331-1304	31/64	2	8	331-1031	331-1331	29/32	2-5/8	10	331-1058	331-1358
5/64	3/4	3	331-1005	331-1305	1/2	2	8	331-1032	331-1332	59/64	2-5/8	10	331-1059	331-1359
3/32	3/4	3	331-1006	331-1306	33/64	2	8	331-1033	331-1333	15/16	2-5/8	10	331-1060	331-1360
7/64	7/8	3-1/2	331-1007	331-1307	17/32	2	8	331-1034	331-1334	61/64	2-5/8	10	331-1061	331-1361
1/8	7/8	3-1/2	331-1008	331-1308	35/64	2	8	331-1035	331-1335	31/32	2-5/8	10	331-1062	331-1362
9/64	1	4	331-1009	331-1309	9/16	2	8	331-1036	331-1336	63/64	2-3/4	10	331-1063	331-1363
5/32	1	4	331-1010	331-1310	37/64	2	8	331-1037	331-1337	1	2-3/4	10-1/2	331-1100	331-1364
11/64	1-1/8	4-1/2	331-1011	331-1311	19/32	2	8	331-1038	331-1338	1-1/32	2-3/4	10-1/2	331-1102	331-1366
3/16	1-1/8	4-1/2	331-1012	331-1312	39/64	2-1/4	9	331-1039	331-1339	1-1/16	2-3/4	10-1/2	331-1104	331-1368
13/64	1-1/4	5	331-1013	331-1313	5/8	2-1/4	9	331-1040	331-1340	1-3/32	2-7/8	10-1/2	331-1106	331-1370
7/32	1-1/4	5	331-1014	331-1314	41/64	2-1/4	9	331-1041	331-1341	1-1/8	2-7/8	11	331-1108	331-1372
15/64	1-1/2	6	331-1015	331-1315	21/32	2-1/4	9	331-1042	331-1342	1-5/32	2-7/8	11	331-1110	331-1374
1/4	1-1/2	6	331-1016	331-1316	43/64	2-1/4	9	331-1043	331-1343	1-3/16	2-7/8	11	331-1112	331-1376
17/64	1-1/2	6	331-1017	331-1317	11/16	2-1/4	9	331-1044	331-1344	1-7/32	2-7/8	11	331-1114	331-1378
9/32	1-1/2	6	331-1018	331-1318	45/64	2-1/4	9	331-1045	331-1345	1-1/4	3	11-1/2	331-1116	331-1380
19/64	1-1/2	6	331-1019	331-1319	23/32	2-1/4	9	331-1046	331-1346	1-9/32	3	11-1/2	331-1118	331-1382
5/16	1-1/2	6	331-1020	331-1320	47/64	2-1/2	9-1/2	331-1047	331-1347	1-5/16	3	11-1/2	331-1120	331-1384
21/64	1-1/2	6	331-1021	331-1321	3/4	2-1/2	9-1/2	331-1048	331-1348	1-3/8	3-1/4	12	331-1124	331-1386
11/32	1-1/2	6	331-1022	331-1322	49/64	2-1/2	9-1/2	331-1049	331-1349	1-7/16	3-1/2	12-1/2	331-1128	331-1388
23/64	1-3/4	7	331-1023	331-1323	25/32	2-1/2	9-1/2	331-1050	331-1350	1-1/2	3-1/2	12-1/2	331-1132	331-1390
3/8	1-3/4	7	331-1024	331-1324	51/64	2-1/2	9-1/2	331-1051	331-1351	1-9/16	3-1/2	12-1/2	331-1136	331-1392
25/64	1-3/4	7	331-1025	331-1325	13/16	2-1/2	9-1/2	331-1052	331-1352	1-5/8	3-1/2	13	331-1140	331-1394
13/32	1-3/4	7	331-1026	331-1326	53/64	2-1/2	9-1/2	331-1053	331-1353	1-11/16	3-1/2	13	331-1144	331-1396
27/64	1-3/4	7	331-1027	331-1327	27/32	2-1/2	9-1/2	331-1054	331-1354	1-3/4	4	13-1/2	331-1148	331-1398
7/16	1-3/4	7	331-1028	331-1328	55/64	2-5/8	9-1/2	331-1055	331-1355	1-7/8	4	14	331-1156	331-1199
29/64	1-3/4	7	331-1029	331-1329	7/8	2-5/8	10	331-1056	331-1356	2	4	14	331-1200	331-1400

Number Sizes

Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.	Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.	Size	Flute Length	Overall Length	HSS Order No.	M35 Order No.
No.1	1-1/2"	6"	331-0201	331-1401	No.21	1-1/8"	4-1/2"	331-0221	331-1421	No.41	7/8"	3-1/2"	331-0241	331-1441
No.2	1-1/2	6	331-0202	331-1402	No.22	1	4	331-0222	331-1422	No.42	3/4	3	331-0242	331-1442
No.3	1-1/4	5	331-0203	331-1403	No.23	1	4	331-0223	331-1423	No.43	3/4	3	331-0243	331-1443
No.4	1-1/4	5	331-0204	331-1404	No.24	1	4	331-0224	331-1424	No.44	3/4	3	331-0244	331-1444
No.5	1-1/4	5	331-0205	331-1405	No.25	1	4	331-0225	331-1425	No.45	3/4	3	331-0245	331-1445
No.6	1-1/4	5	331-0206	331-1406	No.26	1	4	331-0226	331-1426	No.46	3/4"	3"	331-0246	331-1446
No.7	1-1/4	5	331-0207	331-1407	No.27	1	4	331-0227	331-1427	No.47	3/4	3	331-0247	331-1447
No.8	1-1/4	5	331-0208	331-1408	No.28	1	4	331-0228	331-1428	No.48	3/4	3	331-0248	331-1448
No.9	1-1/4	5	331-0209	331-1409	No.29	1	4	331-0229	331-1429	No.49	3/4	3	331-0249	331-1449
No.10	1-1/4	5	331-0210	331-1410	No.30	7/8	3-1/2	331-0230	331-1430	No.50	3/4	3	331-0250	331-1450
No.11	1-1/4	5	331-0211	331-1411	No.31	7/8	3-1/2	331-0231	331-1431	No.51	3/4	3	331-0251	331-1451
No.12	1-1/8	4-1/2	331-0212	331-1412	No.32	7/8	3-1/2	331-0232	331-1432	No.52	1/2	2-1/2	331-0252	331-1452
No.13	1-1/8	4-1/2	331-0213	331-1413	No.33	7/8	3-1/2	331-0233	331-1433	No.53	1/2	2-1/2	331-0253	331-1453
No.14	1-1/8	4-1/2	331-0214	331-1414	No.34	7/8	3-1/2	331-0234	331-1434	No.54	1/2	2-1/2	331-0254	331-1454
No.15	1-1/8	4-1/2	331-0215	331-1415	No.35	7/8	3-1/2	331-0235	331-1435	No.55	1/2	2-1/2	331-0255	331-1455
No.16	1-1/8	4-1/2	331-0216	331-1416	No.36	7/8	3-1/2	331-0236	331-1436	No.56	1/2	2-1/2	331-0256	331-1456
No.17	1-1/8	4-1/2	331-0217	331-1417	No.37	7/8	3-1/2	331-0237	331-1437	No.57	1/2	2-1/2	331-0257	331-1457
No.18	1-1/8	4-1/2	331-0218	331-1418	No.38	7/8	3-1/2	331-0238	331-1438	No.58	1/2	2-1/2	331-0258	331-1458
No.19	1-1/8	4-1/2	331-0219	331-1419	No.39	7/8	3-1/2	331-0239	331-1439	No.59	1/2	2-1/2	331-0259	331-1459
No.20	1-1/8	4-1/2	331-0220	331-1420	No.40	7/8	3-1/2	331-0240	331-1440	No.60	1/2	2-1/2	331-0260	331-1460

Straight Shank Chucking Reamers Continued 直柄直槽铰刀

Straight Flute, HSS & M35 Cobalt

- Right hand cutting direction,
- Designed for general purpose machine reaming in most materials, using screw machines, turret lathes, drill presses and machining centers.
- Precision engineered design for exceptional quality and accuracy.
- Ground with a 45 deg. Chamfer, suitable for reaming most materials.



Letter Sizes

Flute Size	Overall Length	HSS Order No.	M35 Order No.	Flute Size	Overall Length	HSS Order No.	M35 Order No.	Flute Size	Overall Length	HSS Order No.	M35 Order No.
A 1-1/2	6"	331-1501	331-0001	J 1-1/2	6"	331-1510	331-0010	S 1-3/4	7"	331-1519	331-0019
B 1-1/2	6	331-1502	331-0002	K 1-1/2	6	331-1511	331-0011	T 1-3/4	7	331-1520	331-0020
C 1-1/2	6	331-1503	331-0003	L 1-1/2	6	331-1512	331-0012	U 1-3/4	7	331-1521	331-0021
D 1-1/2	6	331-1504	331-0004	M 1-1/2	6	331-1513	331-0013	V 1-3/4	7	331-1522	331-0022
E 1-1/2	6	331-1505	331-0005	N 1-1/2	6	331-1514	331-0014	W 1-3/4	7	331-1523	331-0023
F 1-1/2	6	331-1506	331-0006	O 1-1/2	6	331-1515	331-0015	X 1-3/4	7	331-1524	331-0024
G 1-1/2	6	331-1507	331-0007	P 1-1/2	6	331-1516	331-0016	Y 1-3/4	7	331-1525	331-0025
H 1-1/2	6	331-1508	331-0008	Q 1-1/2	6	331-1517	331-0017	Z 1-3/4	7	331-1526	331-0026
I 1-1/2	6	331-1509	331-0009	R 1-1/2	6	331-1518	331-0018				

Spiral Flute Chucking Reamers 直柄螺旋槽铰刀

High Speed Steel, Straight Shank, Right Hand

- Provides better surface finish than straight flute reamers.
- Spiral flutes pull chips away from part, providing excellent chip removal, especially in blind holes.
- Right hand spiral – right hand cut.
- Use for difficult-to-ream materials.
- Best choice for interrupted cuts such as keyways or cross holes.



Fractional Sizes

Size	Decimal Size	Flute Length	Overall Length	No. of Flute	HSS Order No.	Size	Decimal Size	Flute Length	Overall Length	No. of Flute	HSS Order No.
3/64	.0469	1/2	2	4	241-2011	15/32	.4688	1-3/4	8	6	241-2111
1/16	.0625	1/2	2-1/2	4	241-2001	31/64	.4844	2	8	6	241-2115
1/16	.0625	1/2	2	4	241-2012	1/2	.5000	2	8	6	241-2120
5/64	.0781	3/4	3	4	241-2002	33/64	.5156	2	8	6	241-2121
5/64	.0781	1/2	2	4	241-2013	17/32	.5312	2	8	6	241-2125
3/32	.0938	3/4	3	4	241-2003	35/64"	.5469	2"	8"	6	241-2126
3/32	.0938	5/8	2-1/4	4	241-2014	9/16	.5625	2	8	6	241-2130
7/64	.1094	7/8	3-1/2	4	241-2004	37/64	.5781	2	8	6	241-2131
7/64	.1094	3/4	3	4	241-2016	19/32	.5938	2	8	6	241-2135
1/8"	.1250"	7/8"	3-1/2"	4	241-2005	39/64	.6094	2-1/4	9	8	241-2139
9/64	.1406	1	4	4	241-2010	5/8	.6250	2-1/4	9	8	241-2140
5/32	.1562	1	4	4	241-2015	41/64	.6406	2-1/4	9	8	241-2144
11/64	.1719	1-1/8	4-1/2	6	241-2020	21/32	.6562	2-1/4	9	8	241-2145
3/16	.1875	1-1/8	4-1/2	6	241-2025	11/16	.6875	2-1/4	9	8	241-2150
13/64	.2031	1-1/4	5	6	241-2030	23/32	.7188	2-1/4	9	8	241-2155
7/32	.2188	1-1/4	5	6	241-2035	3/4	.7500	2-1/2	9-1/2	8	241-2160
15/64	.2344	1-1/2	6	6	241-2040	25/32	.7812	2-1/2	9-1/2	8	241-2165
1/4	.2500	1-1/2	6	6	241-2045	13/16	.8125	2-1/2	9-1/2	8	241-2170
17/64	.2656	1-1/2	6	6	241-2050	27/32	.8438	2-1/2	9-1/2	8	241-2175
9/32	.2812	1-1/2	6	6	241-2055	7/8	.8750	2-5/8	10	8	241-2180
19/64	.2969	1-1/2	6	6	241-2060	29/32	.9062	2-5/8	10	8	241-2185
5/16	.3125	1-1/2	6	6	241-2065	15/16	.9375	2-5/8	10	8	241-2190
21/64	.3281	1-1/2	6	6	241-2070	31/32	.9688	2-5/8	10	8	241-2195
21/64	.3281	1-1/2	7	6	241-2071	1	1.0000	2-3/4	10-1/2	8	241-2200
11/32	.3438	1-1/2	6	6	241-2075	1-1/16	1.0625	2-3/4	10-1/2	10	241-2205
11/32	.3438	1-1/2	7	6	241-2076	1-1/8	1.1250	2-7/8	11	10	241-2210
23/64	.3594	1-3/4	7	6	241-2080	1-3/16	1.1875	2-7/8	11	10	241-2215
3/8	.3750	1-3/4	7	6	241-2085	1-1/4	1.2500	3	11-1/2	10	241-2220
25/64	.3906	1-3/4	7	6	241-2090	1-5/16	1.3125	3-1/4	12	10	241-2225
13/32	.4062	1-3/4	7	6	241-2095	1-3/8	1.3750	3-1/4	12	12	241-2230
27/64	.4219	1-3/4	7	6	241-2100	1-7/16	1.4375	3-1/2	12-1/2	12	241-2235
7/16	.3745	1-3/4	7	6	241-2101	1-1/2	1.5000	3-1/2	12-1/2	12	241-2240
29/64	.4531	1-3/4	7	6	241-2105	1-11/16	1.6875	3-5/8	13	12	241-2244
15/32	.4688	1-3/4	7	6	241-2110	2	2.0000	4	14	12	241-2264

Special Decimal Chucking Reamers 特殊绞刀 - 小数位尺寸直槽直柄

High Speed Steel, Straight Shank, Straight Flute



Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.
.0415"	1/2"	2-1/2"	339-0415	.0845	3/4	3	339-0845	.1260	7/8	3-1/2	339-1260	.1635	1-1/8	4-1/2	339-1635
.0425	1/2	2-1/2	339-0425	.0850	3/4	3	339-0850	.1265	7/8	3-1/2	339-1265	.1640	1-1/8	4-1/2	339-1640
.0435	1/2	2-1/2	339-0435	.0855	3/4	3	339-0855	.1270	7/8	3-1/2	339-1270	.1645	1-1/8	4-1/2	339-1645
.0440	1/2	2-1/2	339-0440	.0865	3/4	3	339-0865	.1275	7/8	3-1/2	339-1275	.1650	1-1/8	4-1/2	339-1650
.0445	1/2	2-1/2	339-0445	.0870	3/4	3	339-0870	.1280	7/8	3-1/2	339-1280	.1655	1-1/8	4-1/2	339-1655
.0450	1/2	2-1/2	339-0450	.0875	3/4	3	339-0875	.1285	7/8	3-1/2	339-1285	.1665	1-1/8	4-1/2	339-1665
.0455	1/2	2-1/2	339-0455	.0880	3/4	3	339-0880	.1290	7/8	3-1/2	339-1290	.1670	1-1/8	4-1/2	339-1670
.0460	1/2	2-1/2	339-0460	.0885	3/4	3	339-0885	.1295	7/8	3-1/2	339-1295	.1675	1-1/8	4-1/2	339-1675
.0470	1/2	2-1/2	339-0470	.0895	3/4	3	339-0895	.1300	7/8	3-1/2	339-1300	.1680	1-1/8	4-1/2	339-1680
.0475	1/2	2-1/2	339-0475	.0900	3/4	3	339-0900	.1305	7/8	3-1/2	339-1305	.1685	1-1/8	4-1/2	339-1685
.0480	1/2	2-1/2	339-0480	.0905	3/4	3	339-0905	.1310	7/8	3-1/2	339-1310	.1690	1-1/8	4-1/2	339-1690
.0485	1/2	2-1/2	339-0485	.0910	3/4	3	339-0910	.1315	7/8	3-1/2	339-1315	.1700	1-1/8	4-1/2	339-1700
.0490	1/2	2-1/2	339-0490	.0915	3/4	3	339-0915	.1320	7/8	3-1/2	339-1320	.1705	1-1/8	4-1/2	339-1705
.0495	1/2	2-1/2	339-0495	.0920	3/4	3	339-0920	.1325	7/8	3-1/2	339-1325	.1710	1-1/8	4-1/2	339-1710
.0500	1/2	2-1/2	339-0500	.0925	3/4	3	339-0925	.1330	7/8	3-1/2	339-1330	.1715	1-1/8	4-1/2	339-1715
.0505	1/2	2-1/2	339-0505	.0930	3/4	3	339-0930	.1335	7/8	3-1/2	339-1335	.1719	1-1/8	4-1/2	339-1719
.0510	1/2	2-1/2	339-0510	.0938	3/4	3	339-0938	.1340	7/8	3-1/2	339-1340	.1720	1-1/8	4-1/2	339-1720
.0515	1/2	2-1/2	339-0515	.0940	3/4	3	339-0940	.1345	7/8	3-1/2	339-1345	.1724	1-1/8	4-1/2	339-1724
.0525	1/2	2-1/2	339-0525	.0945	3/4	3	339-0945	.1350	7/8	3-1/2	339-1350	.1725	1-1/8	4-1/2	339-1725
.0530	1/2	2-1/2	339-0530	.0950	3/4	3	339-0950	.1355	7/8	3-1/2	339-1355	.1735	1-1/8	4-1/2	339-1735
.0535	1/2	2-1/2	339-0535	.0955	3/4	3	339-0955	.1365	1	4	339-1365	.1740	1-1/8	4-1/2	339-1740
.0540	1/2	2-1/2	339-0540	.0965	7/8	3-1/2	339-0965	.1370	1	4	339-1370	.1745	1-1/8	4-1/2	339-1745
.0545	1/2	2-1/2	339-0545	.0970	7/8	3-1/2	339-0970	.1375	1	4	339-1375	.1750	1-1/8	4-1/2	339-1750
.0555	1/2	2-1/2	339-0555	.0975	7/8	3-1/2	339-0975	.1380	1	4	339-1380	.1755	1-1/8	4-1/2	339-1755
.0560	1/2	2-1/2	339-0560	.0985	7/8	3-1/2	339-0985	.1385	1	4	339-1385	.1760	1-1/8	4-1/2	339-1760
.0565	1/2	2-1/2	339-0565	.0990	7/8	3-1/2	339-0990	.1390	1	4	339-1390	.1765	1-1/8	4-1/2	339-1765
.0570	1/2	2-1/2	339-0570	.1000	7/8	3-1/2	339-1000	.1395	1	4	339-1395	.1770	1-1/8	4-1/2	339-1770
.0575	1/2	2-1/2	339-0575	.1005	7/8	3-1/2	339-1005	.1400	1	4	339-1400	.1775	1-1/8	4-1/2	339-1775
.0580	1/2	2-1/2	339-0580	.1010"	7/8"	3-1/2"	339-1010	.1410	1	4	339-1410	.1780	1-1/8	4-1/2	339-1780
.0585	1/2	2-1/2	339-0585	.1020	7/8	3-1/2	339-1020	.1415	1	4	339-1415	.1785	1-1/8	4-1/2	339-1785
.0590	1/2	2-1/2	339-0590	.1025	7/8	3-1/2	339-1025	.1420	1	4	339-1420	.1790	1-1/8	4-1/2	339-1790
.0600	1/2	2-1/2	339-0600	.1030	7/8	3-1/2	339-1030	.1425	1	4	339-1425	.1795	1-1/8	4-1/2	339-1795
.0605	1/2	2-1/2	339-0605	.1035	7/8	3-1/2	339-1035	.1430	1	4	339-1430	.1800	1-1/8	4-1/2	339-1800
.0610	1/2	2-1/2	339-0610	.1045	7/8	3-1/2	339-1045	.1435	1	4	339-1435	.1805	1-1/8	4-1/2	339-1805
.0615	1/2	2-1/2	339-0615	.1050	7/8	3-1/2	339-1050	.1440	1	4	339-1440	.1810	1-1/8	4-1/2	339-1810
.0620	1/2	2-1/2	339-0620	.1055	7/8	3-1/2	339-1055	.1445	1	4	339-1445	.1815	1-1/8	4-1/2	339-1815
.0630	1/2	2-1/2	339-0630	.1060	7/8	3-1/2	339-1060	.1450	1	4	339-1450	.1820	1-1/8	4-1/2	339-1820
.0640	1/2	2-1/2	339-0640	.1070	7/8	3-1/2	339-1070	.1455	1	4	339-1455	.1825	1-1/8	4-1/2	339-1825
.0645	1/2	2-1/2	339-0645	.1075	7/8	3-1/2	339-1075	.1460	1	4	339-1460	.1830	1-1/8	4-1/2	339-1830
.0650	1/2	2-1/2	339-0650	.1080	7/8	3-1/2	339-1080	.1465	1	4	339-1465	.1832	1-1/8	4-1/2	339-1832
.0655	1/2	2-1/2	339-0655	.1085	7/8	3-1/2	339-1085	.1470	1	4	339-1470	.1835	1-1/8	4-1/2	339-1835
.0660	1/2	2-1/2	339-0660	.1090	7/8	3-1/2	339-1090	.1475	1	4	339-1475	.1840	1-1/8	4-1/2	339-1840
.0665	1/2	2-1/2	339-0665	.1095	7/8	3-1/2	339-1095	.1480	1	4	339-1480	.1845	1-1/8	4-1/2	339-1845
.0675	3/4	3	339-0675	.1105	7/8	3-1/2	339-1105	.1485	1	4	339-1485	.1850	1-1/8	4-1/2	339-1850
.0680	3/4	3	339-0680	.1115	7/8	3-1/2	339-1115	.1490	1	4	339-1490	.1855	1-1/8	4-1/2	339-1855
.0685	3/4	3	339-0685	.1120	7/8	3-1/2	339-1120	.1500	1	4	339-1500	.1860	1-1/8	4-1/2	339-1860
.0690	3/4	3	339-0690	.1125	7/8	3-1/2	339-1125	.1505	1	4	339-1505	.1865	1-1/8	4-1/2	339-1865
.0695	3/4	3	339-0695	.1135	7/8	3-1/2	339-1135	.1510	1	4	339-1510	.1867	1-1/8	4-1/2	339-1867
.0705	3/4	3	339-0705	.1140	7/8	3-1/2	339-1140	.1515	1	4	339-1515	.1870	1-1/8	4-1/2	339-1870
.0710	3/4	3	339-0710	.1145	7/8	3-1/2	339-1145	.1520	1	4	339-1520	.1875	1-1/8	4-1/2	339-1875
.0715	3/4	3	339-0715	.1150	7/8	3-1/2	339-1150	.1525	1	4	339-1525	.1880	1-1/8	4-1/2	339-1880
.0720	3/4	3	339-0720	.1155	7/8	3-1/2	339-1155	.1530	1	4	339-1530	.1885	1-1/8	4-1/2	339-1885
.0725	3/4	3	339-0725	.1165	7/8	3-1/2	339-1165	.1535	1"	4"	339-1535	.1890	1-1/8	4-1/2	339-1890
.0735	3/4	3	339-0735	.1170	7/8	3-1/2	339-1170	.1545	1	4	339-1545	.1892	1-1/8	4-1/2	339-1892
.0740	3/4	3	339-0740	.1175	7/8	3-1/2	339-1175	.1550	1	4	339-1550	.1895	1-1/8	4-1/2	339-1895
.0745	3/4	3	339-0745	.1180	7/8	3-1/2	339-1180	.1555	1	4	339-1555	.1900	1-1/8	4-1/2	339-1900
.0750	3/4	3	339-0750	.1185	7/8	3-1/2	339-1185	.1557	1	4	339-1557	.1905	1-1/8	4-1/2	339-1905
.0755	3/4	3	339-0755	.1190	7/8	3-1/2	339-1190	.1558	1	4	339-1558	.1910	1-1/4	5	339-1910
.0765	3/4	3	339-0765	.1195	7/8	3-1/2	339-1195	.1560	1	4	339-1560	.1915	1-1/4	5	339-1915
.0770"	3/4"	3"	339-0770	.1205	7/8	3-1/2	339-1205	.1565	1	4	339-1565	.1920	1-1/4	5	339-1920
.0775	3/4	3	339-0775	.1210	7/8	3-1/2	339-1210	.1575	1	4	339-1575	.1925	1-1/4	5	339-1925
.0780	3/4	3	339-0780	.1211	7/8	3-1/2	339-1211	.1580	1	4	339-1580	.1930	1-1/4	5	339-1930
.0790	3/4	3	339-0790	.1215	7/8	3-1/2	339-1215	.1585	1-1/8	4-1/2	339-1585	.1940	1-1/4	5	339-1940
.0795	3/4	3	339-0795	.1220"	7/8"	3-1/2"	339-1220	.1595	1-1/8	4-1/2	339-1595	.1945	1-1/4	5	339-1945
.0800	3/4	3	339-0800	.1223	7/8	3-1/2	339-1223	.1600	1-1/8	4-1/2	339-1600	.1950	1-1/4	5	339-1950
.0805	3/4	3	339-0805	.1225	7/8	3-1/2	339-1225	.1605	1-1/8	4-1/2	339-1605	.1955	1-1/4	5	339-1955
.0815	3/4	3	339-0815	.1230	7/8	3-1/2	339-1230	.1615"	1-1/8"	4-1/2"	339-1615	.1965	1-1/4	5	339-1965
.0825	3/4	3	339-0825	.1235	7/8	3-1/2	339-1235	.1620	1-1/8	4-1/2	339-1620	.1970	1-1/4	5	339-1970
.0830	3/4	3	339-0830	.1240	7/8	3-1/2	339-1240	.1625	1-1/8	4-1/2	339-1625	.1975	1-1/4	5	339-1975
.0835	3/4	3	339-0835	.1245	7/8	3-1/2	339-1245	.1630	1-1/8	4-1/2	339-1630	.1980	1-1/4	5	339-1980
.0840	3/4	3	339-0840	.1255	7/8	3-1/2	339-1255								

Special Decimal Chucking Reamers Continued

特殊绞刀 - 小数位尺寸直槽直柄

High Speed Steel, Straight Shank, Straight Flute



Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.
.1985"	1-1/4"	5"	339-1985	.2370"	1-1/2"	6"	339-2370	.2760"	1-1/2"	6"	339-2760	.3130"	1-1/2"	6"	339-3130
.1995	1-1/4	5	339-1995	.2375	1-1/2	6	339-2375	.2765	1-1/2	6	339-2765	.3133	1-1/2	6	339-3133
.2000	1-1/4	5	339-2000	.2380	1-1/2	6	339-2380	.2775	1-1/2	6	339-2775	.3135	1-1/2	6	339-3135
.2005	1-1/4	5	339-2005	.2385	1-1/2	6	339-2385	.2785	1-1/2	6	339-2785	.3140	1-1/2	6	339-3140
.2015	1-1/4	5	339-2015	.2390	1-1/2	6	339-2390	.2790	1-1/2	6	339-2790	.3145	1-1/2	6	339-3145
.2020	1-1/4	5	339-2020	.2395	1-1/2	6	339-2395	.2795	1-1/2	6	339-2795	.3150	1-1/2	6	339-3150
.2025	1-1/4	5	339-2025	.2400	1-1/2	6	339-2400	.2800	1-1/2	6	339-2800	.3155	1-1/2	6	339-3155
.2030	1-1/4	5	339-2030	.2405	1-1/2	6	339-2405	.2805	1-1/2	6	339-2805	.3165	1-1/2	6	339-3165
.2035	1-1/4	5	339-2035	.2410	1-1/2	6	339-2410	.2814	1-1/2	6	339-2814	.3170	1-1/2	6	339-3170
.2045	1-1/4	5	339-2045	.2415	1-1/2	6	339-2415	.2815	1-1/2	6	339-2815	.3180	1-1/2	6	339-3180
.2050	1-1/4	5	339-2050	.2425	1-1/2	6	339-2425	.2818	1-1/2	6	339-2818	.3190	1-1/2	6	339-3190
.2060	1-1/4	5	339-2060	.2430	1-1/2	6	339-2430	.2820	1-1/2	6	339-2820	.3200	1-1/2	6	339-3200
.2065	1-1/4	5	339-2065	.2435	1-1/2	6	339-2435	.2825	1-1/2	6	339-2825	.3205	1-1/2	6	339-3205
.2070	1-1/4	5	339-2070	.2440	1-1/2	6	339-2440	.2830	1-1/2	6	339-2830	.3210	1-1/2	6	339-3210
.2075	1-1/4	5	339-2075	.2445	1-1/2	6	339-2445	.2835	1-1/2	6	339-2835	.3220	1-1/2	6	339-3220
.2080	1-1/4	5	339-2080	.2450	1-1/2"	6"	339-2450	.2840	1-1/2	6	339-2840	.3225	1-1/2	6	339-3225
.2085	1-1/4	5	339-2085	.2455	1-1/2	6	339-2455	.2845	1-1/2	6	339-2845	.3235	1-1/2	6	339-3235
.2090	1-1/4	5	339-2090	.2465	1-1/2	6	339-2465	.2850	1-1/2	6	339-2850	.3240	1-1/2	6	339-3240
.2095	1-1/4	5	339-2095	.2470	1-1/2	6	339-2470	.2855	1-1/2	6	339-2855	.3250	1-1/2	6	339-3250
.2100	1-1/4	5	339-2100	.2475	1-1/2	6	339-2475	.2860	1-1/2	6	339-2860	.3255	1-1/2	6	339-3255
.2105	1-1/4	5	339-2105	.2480	1-1/2	6	339-2480	.2865	1-1/2	6	339-2865	.3260	1-1/2	6	339-3260
.2110	1-1/4	5	339-2110	.2485	1-1/2	6	339-2485	.2870	1-1/2	6	339-2870	.3270	1-1/2	6	339-3270
.2115	1-1/4	5	339-2115	.2490	1-1/2	6	339-2490	.2875	1-1/2	6	339-2875	.3280	1-1/2	6	339-3280
.2120	1-1/4	5	339-2120	.2495	1-1/2	6	339-2495	.2880	1-1/2	6	339-2880	.3290	1-1/2	6	339-3290
.2125	1-1/4	5	339-2125	.2501	1-1/2	6	339-2501	.2885	1-1/2	6	339-2885	.3300	1-1/2	6	339-3300
.2126	1-1/4	5	339-2126	.2505	1-1/2	6	339-2505	.2890	1-1/2	6	339-2890	.3310	1-1/2	6	339-3310
.2135	1-1/4	5	339-2135	.2510	1-1/2	6	339-2510	.2895	1-1/2	6	339-2895	.3330	1-1/2	6	339-3330
.2140	1-1/4	5	339-2140	.2515	1-1/2	6	339-2515	.2898	1-1/2	6	339-2898	.3340	1-1/2	6	339-3340
.2145	1-1/4	5	339-2145	.2520	1-1/2	6	339-2520	.2900	1-1/2	6	339-2900	.3350	1-1/2	6	339-3350
.2150	1-1/4	5	339-2150	.2525	1-1/2	6	339-2525	.2905	1-1/2	6	339-2905	.3360	1-1/2	6	339-3360
.2155	1-1/4	5	339-2155	.2530	1-1/2	6	339-2530	.2910	1-1/2	6	339-2910	.3370	1-1/2	6	339-3370
.2157	1-1/4	5	339-2157	.2535	1-1/2	6	339-2535	.2915	1-1/2	6	339-2915	.3380	1-1/2	6	339-3380
.2160	1-1/4	5	339-2160	.2540	1-1/2	6	339-2540	.2920	1-1/2	6	339-2920	.3400	1-1/2	6	339-3400
.2165	1-1/4	5	339-2165	.2545	1-1/2	6	339-2545	.2925	1-1/2	6	339-2925	.3410	1-1/2	6	339-3410
.2170	1-1/4	5	339-2170	.2550	1-1/2	6	339-2550	.2930	1-1/2	6	339-2930	.3420	1-1/2	6	339-3420
.2175	1-1/4	5	339-2175	.2555	1-1/2	6	339-2555	.2935	1-1/2	6	339-2935	.3425	1-1/2	6	339-3425
.2180	1-1/4	5	339-2180	.2560	1-1/2	6	339-2560	.2940	1-1/2	6	339-2940	.3430	1-1/2	6	339-3430
.2185	1-1/4	5	339-2185	.2565	1-1/2	6	339-2565	.2945	1-1/2	6	339-2945	.3434	1-1/2	6	339-3434
.2190	1-1/4	5	339-2190	.2570	1-1/2	6	339-2570	.2950	1-1/2	6	339-2950	.3435	1-1/2	6	339-3435
.2195	1-1/4	5	339-2195	.2575	1-1/2	6	339-2575	.2955	1-1/2	6	339-2955	.3440	1-1/2	6	339-3440
.2200	1-1/4	5	339-2200	.2580	1-1/2	6	339-2580	.2960	1-1/2	6	339-2960	.3443	1-1/2	6	339-3443
.2205	1-1/4	5	339-2205	.2585	1-1/2	6	339-2585	.2961	1-1/2	6	339-2961	.3445	1-1/2	6	339-3445
.2210	1-1/2	6	339-2210	.2590	1-1/2	6	339-2590	.2965	1-1/2	6	339-2965	.3450	1-1/2	6	339-3450
.2215	1-1/2	6	339-2215	.2595	1-1/2	6	339-2595	.2969	1-1/2	6	339-2969	.3455	1-1/2	6	339-3455
.2220	1-1/2	6	339-2220	.2600	1-1/2	6	339-2600	.2970	1-1/2	6	339-2970	.3460	1-1/2	6	339-3460
.2225	1-1/2	6	339-2225	.2605	1-1/2	6	339-2605	.2975	1-1/2	6	339-2975	.3470	1-1/2	6	339-3470
.2230	1-1/2	6	339-2230	.2615	1-1/2	6	339-2615	.2980	1-1/2	6	339-2980	.3474	1-1/2	6	339-3474
.2235	1-1/2	6	339-2235	.2620	1-1/2	6	339-2620	.2985	1-1/2	6	339-2985	.3475	1-1/2	6	339-3475
.2240	1-1/2	6	339-2240	.2625	1-1/2	6	339-2625	.2995	1-1/2	6	339-2995	.3490	1-3/4	7	339-3490
.2245	1-1/2	6	339-2245	.2630	1-1/2	6	339-2630	.2999	1-1/2	6	339-2999	.3500	1-3/4	7	339-3500
.2250	1-1/2	6	339-2250	.2635	1-1/2	6	339-2635	.3000	1-1/2	6	339-3000	.3510	1-3/4	7	339-3510
.2255	1-1/2	6	339-2255	.2640	1-1/2	6	339-2640	.3005	1-1/2	6	339-3005	.3520	1-3/4	7	339-3520
.2260	1-1/2	6	339-2260	.2645	1-1/2	6	339-2645	.3010	1-1/2	6	339-3010	.3530	1-3/4	7	339-3530
.2265	1-1/2	6	339-2265	.2650	1-1/2	6	339-2650	.3015	1-1/2	6	339-3015	.3535	1-3/4	7	339-3535
.2270	1-1/2	6	339-2270	.2655	1-1/2	6	339-2655	.3025	1-1/2	6	339-3025	.3540	1-3/4	7	339-3540
.2275	1-1/2	6	339-2275	.2660	1-1/2	6	339-2660	.3030	1-1/2	6	339-3030	.3550	1-3/4	7	339-3550
.2280	1-1/2	6	339-2280	.2665	1-1/2	6	339-2665	.3035	1-1/2	6	339-3035	.3555	1-3/4	7	339-3555
.2285	1-1/2	6	339-2285	.2670	1-1/2	6	339-2670	.3040	1-1/2	6	339-3040	.3560	1-3/4	7	339-3560
.2290	1-1/2	6	339-2290	.2675	1-1/2	6	339-2675	.3045	1-1/2	6	339-3045	.3570	1-3/4	7	339-3570
.2295	1-1/2	6	339-2295	.2680	1-1/2	6	339-2680	.3050	1-1/2	6	339-3050	.3590	1-3/4	7	339-3590
.2300	1-1/2	6	339-2300	.2685	1-1/2	6	339-2685	.3055	1-1/2	6	339-3055	.3600	1-3/4	7	339-3600
.2305	1-1/2	6	339-2305	.2690	1-1/2	6	339-2690	.3060	1-1/2	6	339-3060	.3610	1-3/4	7	339-3610
.2310	1-1/2	6	339-2310	.2695	1-1/2	6	339-2695	.3065	1-1/2	6	339-3065	.3615	1-3/4	7	339-3615
.2315	1-1/2	6	339-2315	.2700	1-1/2	6	339-2700	.3070	1-1/2	6	339-3070	.3620	1-3/4	7	339-3620
.2320	1-1/2	6	339-2320	.2705	1-1/2	6	339-2705	.3075	1-1/2"	6"	339-3075	.3630	1-3/4	7	339-3630
.2325	1-1/2	6	339-2325	.2710	1-1/2	6	339-2710	.3080	1-1/2	6	339-3080	.3640	1-3/4	7	339-3640
.2330	1-1/2	6	339-2330	.2715	1-1/2	6	339-2715	.3085	1-1/2	6	339-3085	.3650	1-3/4	7	339-3650
.2335	1-1/2	6	339-2335	.2725	1-1/2	6	339-2725	.3090	1-1/2	6	339-3090	.3660	1-3/4	7	339-3660
.2340	1-1/2	6	339-2340	.2730	1-1/2	6	339-2730	.3095	1-1/2	6	339-3095	.3670	1-3/4	7	339-3670
.2345	1-1/2	6	339-2345	.2735	1-1/2	6	339-2735	.3100	1-1/2	6	339-3100	.3690	1-3/4	7	339-3690
.2350	1-1/2	6	339-2350	.2740	1-1/2	6	339-2740	.3105	1-1/2	6	339-3105	.3700	1-3/4	7	339-3700
.2355	1-1/2	6	339-2355	.2745	1-1/2	6	339-2745	.3110	1-1/2	6	339-3110	.3710	1-3/4	7	339-3710
.2360	1-1/2	6	339-2360	.2750	1-1/2	6	339-2750	.3115	1-1/2	6	339-3115	.3715	1-3/4	7	339-3715
.2365	1-1/2	6	339-2365	.2755	1-1/2	6	339-2755	.3120	1-1/2	6	339-3120	.3720	1-3/4	7	339-3720

Special Decimal Chucking Reamers continued 特殊绞刀 - 小数位尺寸直槽直柄

High Speed Steel, Straight Shank, Straight Flute

Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.
.3725"	1-3/4"	7"	339-3725	.4373"	1-3/4"	7"	339-4373	.5070"	2"	8"	339-5070	.7270"	2-1/2"	9-1/2"	339-7270
.3730	1-3/4"	7"	339-3730	.4374	1-3/4"	7"	339-4374	.5080	2	8	339-5080	.7300	2-1/2"	9-1/2"	339-7300
.3735	1-3/4"	7"	339-3735	.4380	1-3/4"	7"	339-4380	.5090	2	8	339-5090	.7330	2-1/2"	9-1/2"	339-7330
.3740	1-3/4"	7"	339-3740	.4385	1-3/4"	7"	339-4385	.5100	2	8	339-5100	.7360	2-1/2"	9-1/2"	339-7360
.3745	1-3/4"	7"	339-3745	.4390	1-3/4"	7"	339-4390	.5110	2	8	339-5110	.7470	2-1/2"	9-1/2"	339-7470
.3752	1-3/4"	7"	339-3752	.4400	1-3/4"	7"	339-4400	.5120	2	8	339-5120	.7490	2-1/2"	9-1/2"	339-7490
.3755	1-3/4"	7"	339-3755	.4410	1-3/4"	7"	339-4410	.5130	2"	8"	339-5130	.7495	2-1/2"	9-1/2"	339-7495
.3760	1-3/4"	7"	339-3760	.4420	1-3/4"	7"	339-4420	.5140	2	8	339-5140	.7500	2-1/2"	9-1/2"	339-7500
.3765	1-3/4"	7"	339-3765	.4425	1-3/4"	7"	339-4425	.5150	2	8	339-5150	.7505	2-1/2"	9-1/2"	339-7505
.3770	1-3/4"	7"	339-3770	.4430	1-3/4"	7"	339-4430	.5160	2	8	339-5160	.7510	2-1/2"	9-1/2"	339-7510
.3780	1-3/4"	7"	339-3780	.4440	1-3/4"	7"	339-4440	.5170	2	8	339-5170	.7520	2-1/2"	9-1/2"	339-7520
.3790	1-3/4"	7"	339-3790	.4450	1-3/4"	7"	339-4450	.5180	2	8	339-5180	.7530	2-1/2"	9-1/2"	339-7530
.3800	1-3/4"	7"	339-3800	.4460	1-3/4"	7"	339-4460	.5200	2	8	339-5200	.7550	2-1/2"	9-1/2"	339-7550
.3805	1-3/4"	7"	339-3805	.4470	1-3/4"	7"	339-4470	.5210	2	8	339-5210	.7640	2-1/2"	9-1/2"	339-7640
.3810	1-3/4"	7"	339-3810	.4480	1-3/4"	7"	339-4480	.5250	2	8	339-5250	.7670	2-1/2"	9-1/2"	339-7670
.3820	1-3/4"	7"	339-3820	.4490	1-3/4"	7"	339-4490	.5300	2	8	339-5300	.7680	2-1/2"	9-1/2"	339-7680
.3830	1-3/4"	7"	339-3830	.4500	1-3/4"	7"	339-4500	.5320	2	8	339-5320	.7800	2-1/2"	9-1/2"	339-7800
.3835	1-3/4"	7"	339-3835	.4510	1-3/4"	7"	339-4510	.5450	2	8	339-5450	.7820	2-1/2"	9-1/2"	339-7820
.3840	1-3/4"	7"	339-3840	.4520	1-3/4"	7"	339-4520	.5480	2	8	339-5480	.7860	2-1/2"	9-1/2"	339-7860
.3850	1-3/4"	7"	339-3850	.4530	1-3/4"	7"	339-4530	.5500	2	8	339-5500	.7880	2-1/2"	9-1/2"	339-7880
.3860	1-3/4"	7"	339-3860	.4540	1-3/4"	7"	339-4540	.5510	2	8	339-5510	.7950	2-1/2"	9-1/2"	339-7950
.3870	1-3/4"	7"	339-3870	.4550	1-3/4"	7"	339-4550	.5520	2	8	339-5520	.7980	2-1/2"	9-1/2"	339-7980
.3880	1-3/4"	7"	339-3880	.4560	1-3/4"	7"	339-4560	.5610	2	8	339-5610	.8060	2-1/2"	9-1/2"	339-8060
.3885	1-3/4"	7"	339-3885	.4570	1-3/4"	7"	339-4570	.5615	2	8	339-5615	.8080	2-1/2"	9-1/2"	339-8080
.3890	1-3/4"	7"	339-3890	.4580	1-3/4"	7"	339-4580	.5635	2	8	339-5635	.8110	2-5/8	10	339-8110
.3900	1-3/4"	7"	339-3900	.4590	1-3/4"	7"	339-4590	.5640	2	8	339-5640	.8115	2-5/8	10	339-8115
.3910	1-3/4"	7"	339-3910	.4600	1-3/4"	7"	339-4600	.5690	2	8	339-5690	.8130	2-5/8	10	339-8130
.3920	1-3/4"	7"	339-3920	.4610	1-3/4"	7"	339-4610	.5720	2	8	339-5720	.8140	2-5/8	10	339-8140
.3925	1-3/4"	7"	339-3925	.4620	1-3/4"	7"	339-4620	.5770	2	8	339-5770	.8250	2-5/8	10	339-8250
.3930	1-3/4"	7"	339-3930	.4630	1-3/4"	7"	339-4630	.5790	2	8	339-5790	.8275	2-5/8	10	339-8275
.3940	1-3/4"	7"	339-3940	.4640	1-3/4"	7"	339-4640	.5890	2	8	339-5890	.8290	2-5/8	10	339-8290
.3950	1-3/4"	7"	339-3950	.4650	1-3/4"	7"	339-4650	.5910	2	8	339-5910	.8420	2-5/8	10	339-8420
.3955	1-3/4"	7"	339-3955	.4660	1-3/4"	7"	339-4660	.5920	2	8	339-5920	.8450	2-5/8	10	339-8450
.3960	1-3/4"	7"	339-3960	.4670	1-3/4"	7"	339-4670	.5950	2	8	339-5950	.8470	2-5/8	10	339-8470
.3980	1-3/4"	7"	339-3980	.4680	1-3/4"	7"	339-4680	.6005	2	8	339-6005	.8530	2-5/8	10	339-8530
.3990	1-3/4"	7"	339-3990	.4690	1-3/4"	7"	339-4690	.6080	2-1/4	9	339-6080	.8580	2-5/8	10	339-8580
.4000	1-3/4"	7"	339-4000	.4700	1-3/4"	7"	339-4700	.6110	2-1/4	9	339-6110	.8610	2-5/8	10	339-8610
.4010	1-3/4"	7"	339-4010	.4710	1-3/4"	7"	339-4710	.6125	2-1/4	9	339-6125	.8670	2-5/8	10	339-8670
.4020	1-3/4"	7"	339-4020	.4720	1-3/4"	7"	339-4720	.6160	2-1/4	9	339-6160	.8740	2-5/8	10	339-8740
.4030	1-3/4"	7"	339-4030	.4725	2	8	339-4725	.6200	2-1/4	9	339-6200	.8745	2-5/8	10	339-8745
.4050	1-3/4"	7"	339-4050	.4730	2	8	339-4730	.6220	2-1/4	9	339-6220	.8760	2-5/8	10	339-8760
.4060	1-3/4"	7"	339-4060	.4735	2	8	339-4735	.6230	2-1/4	9	339-6230	.8780	2-5/8	10	339-8780
.4070	1-3/4"	7"	339-4070	.4740	2	8	339-4740	.6240	2-1/4	9	339-6240	.8840	2-5/8	10	339-8840
.4080	1-3/4"	7"	339-4080	.4750	2	8	339-4750	.6245	2-1/4	9	339-6245	.8870	2-5/8	10	339-8870
.4090	1-3/4"	7"	339-4090	.4760	2	8	339-4760	.6255	2-1/4	9	339-6255	.8890	2-5/8	10	339-8890
.4100	1-3/4"	7"	339-4100	.4770	2	8	339-4770	.6260	2-1/4	9	339-6260	.8920	2-5/8	10	339-8920
.4110	1-3/4"	7"	339-4110	.4780	2	8	339-4780	.6270	2-1/4	9	339-6270	.8950	2-5/8	10	339-8950
.4120	1-3/4"	7"	339-4120	.4800	2	8	339-4800	.6280	2-1/4	9	339-6280	.9040	2-3/4	10-1/2	339-9040
.4140	1-3/4"	7"	339-4140	.4810	2	8	339-4810	.6290	2-1/4	9	339-6290	.9070	2-3/4	10-1/2	339-9070
.4150	1-3/4"	7"	339-4150	.4820	2	8	339-4820	.6300	2-1/4	9	339-6300	.9200	2-3/4	10-1/2	339-9200
.4160	1-3/4"	7"	339-4160	.4830	2	8	339-4830	.6310	2-1/4	9	339-6310	.9220	2-3/4	10-1/2	339-9220
.4170	1-3/4"	7"	339-4170	.4840	2	8	339-4840	.6330	2-1/4	9	339-6330	.9240	2-3/4	10-1/2	339-9240
.4180	1-3/4"	7"	339-4180	.4850	2	8	339-4850	.6350	2-1/4	9	339-6350	.9260	2-3/4	10-1/2	339-9260
.4190	1-3/4"	7"	339-4190	.4860	2	8	339-4860	.6390	2-1/4	9	339-6390	.9360	2-3/4	10-1/2	339-9360
.4200	1-3/4"	7"	339-4200	.4870	2	8	339-4870	.6420	2-1/4	9	339-6420	.9390	2-3/4	10-1/2	339-9390
.4210	1-3/4"	7"	339-4210	.4880	2	8	339-4880	.6480	2-1/4	9	339-6480	.9430	2-3/4	10-1/2	339-9430
.4220	1-3/4"	7"	339-4220	.4890	2	8	339-4890	.6510	2-1/4	9	339-6510	.9460	2-3/4	10-1/2	339-9460
.4230	1-3/4"	7"	339-4230	.4900	2	8	339-4900	.6550	2-1/4	9	339-6550	.9520	2-3/4	10-1/2	339-9520
.4240	1-3/4"	7"	339-4240	.4910	2	8	339-4910	.6570	2-1/4	9	339-6570	.9540	2-3/4	10-1/2	339-9540
.4250	1-3/4"	7"	339-4250	.4920	2	8	339-4920	.6680	2-1/4	9	339-6680	.9595	2-3/4	10-1/2	339-9595
.4260	1-3/4"	7"	339-4260	.4930	2	8	339-4930	.6710	2-1/4	9	339-6710	.9630	2-3/4	10-1/2	339-9630
.4270	1-3/4"	7"	339-4270	.4940	2	8	339-4940	.6730	2-1/4	9	339-6730	.9660	2-3/4	10-1/2	339-9660
.4280	1-3/4"	7"	339-4280	.4950	2	8	339-4950	.6860	2-1/4	9	339-6860	.9670	2-3/4	10-1/2	339-9670
.4285	1-3/4"	7"	339-4285	.4960	2	8	339-4960	.6865	2-1/4	9	339-6865	.9700	2-3/4	10-1/2	339-9700
.4290	1-3/4"	7"	339-4290	.4970	2	8	339-4970	.6870	2-1/4	9	339-6870	.9830	2-3/4	10-1/2	339-9830
.4295	1-3/4"	7"	339-4295	.4980	2	8	339-4980	.6880	2-1/4	9	339-6880	.9850	2-3/4	10-1/2	339-9850
.4300	1-3/4"	7"	339-4300	.4990	2	8	339-4990	.6885	2-1/4	9	339-6885	.9915	2-3/4	10-1/2	339-9915
.4310	1-3/4"	7"	339-4310	.4991	2	8	339-4991	.6900	2-1/4	9	339-6900	.9950	2-3/4	10-1/2	339-9950
.4320	1-3/4"	7"	339-4320	.4995	2	8	339-4995	.6905	2-1/4	9	339-6905	.9960	2-3/4	10-1/2	339-9960
.4330	1-3/4"	7"	339-4330	.5005	2	8	339-5005	.7020	2-1/4	9	339-7020	.9970	2-3/4	10-1/2	339-9970
.4340	1-3/4"	7"	339-4340	.5010	2	8	339-5010	.7040	2-1/4	9	339-7040	.9980	2-3/4	10-1/2	339-9980
.4350	1-3/4"	7"	339-4350	.5015	2	8	339-5015	.7070	2-1/4	9	339-7070	.9990	2-3/4	10-1/2	339-9990
.4355	1-3/4"	7"	339-4355	.5020	2	8	339-5020	.7100	2-1/4	9	339-7100	.9995	2-3/4	10-1/2	339-9995
.4360	1-3/4"	7"	339-4360	.5030	2	8	339-5030	.7120	2-1/4	9	339-7120	1.0010	2-3/4	10-1/2	339-0010
.4365	1-3/4"	7"	339-4365	.5040	2	8	339-5040	.7170	2-1/2	9-1/2	339-7170	1.0020	2-3/4	10-1/2	339-0020
.4370	1-3/4"	7"	339-4370	.5050	2	8	339-5050	.7200	2-1/2	9-1/2	339-7200	1.0030	2-3/4	10-1/2	339-0030
.4371	1-3/4"	7"	339-4371	.5060	2	8	339-5060	.7235	2-1/2	9-1/2	339-7235	1.0100	2-3/4	10-1/2	339

Carbide Tipped Chucking Reamers 硬质合金直槽铰刀

C2 Grade, Straight Flute, Right Hand Cutting

- Special steel cutting tool geometry: positive radial rake (behind center).



Straight Shank

Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.	Size	Flute Length	Overall Length	Order No.
3/16"	1-1/18"	4-1/2"	241-1012	15/32"	1-3/4"	7"	241-1030	3/4"	2-1/2"	9-1/2"	241-1048	1-1/16"	2-3/4"	10-1/2"	241-1068
7/32	1-1/4	5	241-1014	1/2	2	8	241-1032	25/32	2-1/2	9-1/2	241-1050	1-1/8	2-7/8	11	241-1072
1/4	1-1/2	6	241-1016	17/32	2	8	241-1034	13/16	2-1/2	9-1/2	241-1052	1-3/16	2-7/8	11	241-1076
9/32	1-1/2	6	241-1018	9/16	2	8	241-1036	27/32	2-1/2	9-1/2	241-1054	1-1/4	3	11-1/2	241-1080
5/16	1-1/2	6	241-1020	19/32	2	8	241-1038	7/8	2-5/8	10	241-1056	1-5/16	3	11-1/2	241-1084
11/32	1-1/2	6	241-1022	5/8	2-1/4	9	241-1040	29/32	2-5/8	10	241-1058	1-3/8	3-1/4	12	241-1088
3/8	1-3/4	7	241-1024	21/32	2-1/4	9	241-1042	15/16	2-5/8	10	241-1060	1-7/16	3-1/4	12	241-1092
13/32	1-3/4	7	241-1026	11/16	2-1/4	9	241-1044	31/32	2-5/8	10	241-1062	1-1/2	3-1/2	12-1/2	241-1096
7/16	1-3/4	7	241-1028	23/32	2-1/4	9	241-1046	1	2-3/4	10-1/2	241-1064				

Taper Shank



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1/2"	2"	8"	MT1	241-1132	3/4	2-1/2	9-1/2	MT2	241-1148	1	2-3/4	10-1/2	MT3	241-1164
9/16	2	8	MT1	241-1136	13/16	2-1/2	9-1/2	MT2	241-1152	1-1/16	2-3/4	10-1/2	MT3	241-1168
5/8	2-1/4	9	MT2	241-1140	7/8	2-5/8	10	MT2	241-1156	1-1/8	2-7/8	11	MT3	241-1172
11/16	2-1/4	9	MT2	241-1144	15/16	2-5/8	10	MT3	241-1160	1-3/16	2-7/8	11	MT3	241-1176

Taper Pin & Die Maker Reamers

High Speed Steel

方柄锥度销子铰刀



Small Size	Small End Dia.	Large End Dia.	Flute Length	Overall Length	Straight Flute Order No.	Spiral Flute Order No.	Small Size	Small End Dia.	Large End Dia.	Flute Length	Overall Length	Straight Flute Order No.	Spiral Flute Order No.
7/0#	.0497"	.0666"	13/16"	1-13/16"	331-8200	331-8300	5#	.2409"	.2994"	2-13/16"	4-5/16"	331-8222	331-8322
6/0#	.0611	.0806	15/16	1-15/16	331-8202	331-8302	6#	.2773	.354	3-11/16	5-7/16	331-8224	331-8324
5/0#	.0719	.0966	1-3/16	2-3/16	331-8204	331-8304	7#	.3297	.422	4-7/16	6-5/16	331-8226	331-8326
4/0#	.0869	.1142	1-5/16	2-5/16	331-8206	331-8306	8#	.3971	.505	5-3/16	7-3/16	331-8228	331-8328
3/0#	.1029	.1302	1-5/16	2-5/16	331-8208	331-8308	9#	.4805	.6066	6-1/16	8-5/16	331-8230	331-8330
2/0#	.1137	.1462	1-9/16	2-9/16	331-8210	331-8310	10#	.5799	.7216	6-13/16	9-5/16	331-8232	331-8332
0#	.1287	.1638	1-11/16	2-15/16	331-8212	331-8312	11#	.7060	.8780	8-1/4	11-1/4	331-8234	331-8334
1#	.1447	.1798	1-11/16	2-15/16	331-8214	331-8314	12#	.8420	1.0500	10	13-5/8	331-8236	331-8336
2#	.1605	.2008	1-15/16	3-3/16	331-8216	331-8316	13#	1.0090	1.2590	12	16	331-8238	331-8338
3#	.1813	.2294	2-5/16	3-11/16	331-8218	331-8318	14#	1.2500	1.5420	14	18-1/4	331-8240	331-8340
4#	.2071	.2604	2-9/16	4-1/16	331-8220	331-8320							

HSS Taper Pin Reamer Sets

Pieces	Description	Straight Flute Order No.	Spiral Flute Order No.
6	0-5#	331-8250	331-8350
11	0-10#	331-8255	331-8355

Brown & Sharpe Taper Finishing Reamers B&S 锥度铰刀

High Speed Steel

- Right hand(clockwise rotation) Cutting Direction.
- Available as hand style reamers.
- Hand reamers have straight shanks and square driving area.



B & S Taper	Small End Diameter	Large End Diameter	Flute Length	Overall Length	HSS Order No.	B & S Taper	Small End Diameter	Large End Diameter	Flute Length	Overall Length	HSS Order No.
1#	0.200"	0.320"	2-7/8"	4-3/4"	337-6801	7#	0.600"	0.803"	4-7/8"	7-1/2"	337-6807
2#	0.250	0.380	3-1/8	5-1/8	337-6802	8#	0.750	0.979	5-1/2	8-1/8	337-6808
3#	0.312	0.453	3-3/8	5-1/2	337-6803	9#	0.900	1.155	6-1/8	8-7/8	337-6809
4#	0.350	0.504	3-11/16	5-7/8	337-6804	10#	1.045	1.340	6-7/8	9-3/4	337-6810
5#	0.450	0.617	4	6-3/8	337-6805	11#	1.250	1.568	7-5/8	10-5/8	337-6811
6#	0.500	0.682	4-3/8	6-7/8	337-6806	12#	1.500	1.844	8-1/4	11-3/8	337-6812

Taper Shank Chucking Reamers 锥柄直槽铰刀

High Speed Steel, Right Hand, Spiral & Straight Flute



Fractional Sizes

Size	Flute Length	Overall Length	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.	Size	Flute Length	Overall Length	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.
7/32"	1-1/2"	6"	MT1	241-3004		15/16"	2-5/8"	10"	MT3	241-3115	241-4115
1/4	1-1/2	6	MT1	241-3005	241-4005	31/32	2-5/8	10	MT3	241-3120	241-4120
9/32	1-1/2	6	MT1	241-3010	241-4010	1	2-3/4	10-1/2	MT3	241-3125	241-4125
5/16	1-1/2	6	MT1	241-3015	241-4015	1-1/32	2-3/4	10-1/2	MT3	241-3127	241-4127
11/32	1-1/2	6	MT1	241-3020	241-4020	1-1/16	2-3/4	10-1/2	MT3	241-3130	241-4130
3/8	1-3/4	7	MT1	241-3025	241-4025	1-3/32	2-3/4	10-1/2	MT3	241-3132	241-4132
13/32	1-3/4	7	MT1	241-3030	241-4030	1-1/8	2-7/8	11	MT3	241-3135	241-4135
7/16	1-3/4	7	MT1	241-3035	241-4035	1-5/32	2-7/8	11	MT3	241-3137	241-4137
15/32	1-3/4	7	MT1	241-3040	241-4040	1-3/16	2-7/8	11	MT3	241-3140	241-4140
1/2	2	8	MT1	241-3045	241-4045	1-7/32	2-7/8	11-1/2	MT3	241-3144	
33/64	2	8	MT1	241-3046		1-1/4	3	11-1/2	MT4	241-3145	241-4145
17/32	2	8	MT1	241-3050	241-4050	1-9/32	3	11-1/2	MT4	241-3147	241-4147
9/16	2	8	MT1	241-3055	241-4055	1-5/16	3	11-1/2	MT4	241-3150	241-4150
19/32	2	8	MT1	241-3060	241-4060	1-3/8	3-1/4	12	MT4	241-3155	241-4155
5/8	2-1/4	9	MT2	241-3065	241-4065	1-7/16	3-1/4	12	MT4	241-3160	241-4160
21/32	2-1/4	9	MT2	241-3070	241-4070	1-1/2	3-1/2	12-1/2	MT4	241-3165	241-4165
11/16	2-1/4	9	MT2	241-3075	241-4075	1-9/16	3-1/2	12-1/2	MT4	241-3170	241-4170
23/32	2-1/4	9	MT2	241-3080	241-4080	1-5/8	3-1/2	13	MT4	241-3175	241-4175
3/4	2-1/2	9-1/2	MT2	241-3085	241-4085	1-11/16	4	13-1/2	MT4	241-3180	241-4180
25/32	2-1/2	9-1/2	MT2	241-3090	241-4090	1-3/4	4	13-1/2	MT4	241-3185	241-4185
13/16	2-1/2	9-1/2	MT2	241-3095	241-4095	1-7/8	4	14	MT4	241-3190	241-4190
27/32	2-1/2	9-1/2	MT2	241-3100	241-4100	2	4	14-1/2	MT4	241-3195	241-4195
7/8	2-5/8	10	MT2	241-3105	241-4105	2-1/4	4-1/2	15-1/2	MT5	241-3216	
29/32	2-5/8	10	MT2	241-3110	241-4110	2-5/16	4-1/2	15-1/2	MT5	241-3220	

Metric Taper Shank Chucking Reamers 公制锥柄直槽铰刀

DIN208/A, High Speed Steel, Straight Flute



Size (mm)	Flute Length (mm)	Overall Length (mm)	Shank Taper	Order No.	Size (mm)	Flute Length (mm)	Overall Length (mm)	Shank Taper	Order No.
5	23	133	MT1	337-1050	24	68	268	MT3	337-1240
6	26	138	MT1	337-1060	25	68	268	MT3	337-1250
7	31	150	MT1	337-1070	26	70	273	MT3	337-1260
8	33	156	MT1	337-1080	27	71	277	MT3	337-1270
9	36	162	MT1	337-1090	28	71	277	MT3	337-1280
10	38	168	MT1	337-1100	29	73	281	MT3	337-1290
11	41	175	MT1	337-1110	30	73	281	MT3	337-1300
12	44	185	MT1	337-1120	31	75	285	MT3	337-1310
13	44	182	MT1	337-1130	32	77	317	MT4	337-1320
14	47	189	MT1	337-1140	33	77	317	MT4	337-1330
15	50	204	MT2	337-1150	34	78	321	MT4	337-1340
16	52	210	MT2	337-1160	35	78	321	MT4	337-1350
17	54	214	MT2	337-1170	36	79	325	MT4	337-1360
18	56	219	MT2	337-1180	37	79	325	MT4	337-1370
19	58	223	MT2	337-1190	38	81	329	MT4	337-1380
20	60	228	MT2	337-1200	40	81	329	MT4	337-1400
21	62	232	MT2	337-1210	45	83	336	MT4	337-1450
22	64	237	MT2	337-1220	50	86	344	MT4	337-1500
23	66	241	MT2	337-1230					

Expansion Chucking Reamers

High Speed Steel, Straight Flute

直柄可涨铰刀

- An economical, general purpose high production reamer designed to maintain initial size by compensating for wear on the cutting edge.
- Expansion feature allows resharpener with retaining the original size.
- Expand by tightening the end adjusting screw and regrind to original size.



Straight Shank

Size	Shank Dia.	Flute Length	Overall Length	Straight Shank Order No.
3/8"	5/16"	3/4"	7"	331-9202
13/32	5/16	3/4	7	331-9204
7/16	3/8	7/8	7	331-9206
15/32	3/8	7/8	7	331-9208
1/2	7/16	1	8	331-9210
17/32	7/16	1	8	331-9212
9/16	7/16	1-1/8	8	331-9214
19/32	7/16	1-1/8	8	331-9216
5/8	9/16	1-1/4	9	331-9218
21/32	9/16	1-1/4	9	331-9220
11/16	9/16	1-1/4	9	331-9222
23/32	9/16	1-1/4	9	331-9224
3/4	5/8	1-3/8	9-1/2	331-9226
25/32	5/8	1-3/8	9-1/2	331-9228
13/16	5/8	1-3/8	9-1/2	331-9230
27/32	5/8	1-3/8	9-1/2	331-9232
7/8	3/4	1-1/2	10	331-9234
29/32	3/4	1-1/2	10	331-9236
15/16	3/4	1-1/2	10	331-9238
31/32	3/4	1-1/2	10	331-9240
1	7/8	1-5/8	10-1/2	331-9242
1-1/32	7/8	1-5/8	10-1/2	331-9244
1-1/16	7/8	1-5/8	10-1/2	331-9246
1-3/32	7/8	1-5/8	10-1/2	331-9248
1-1/8	7/8	1-3/4	11	331-9250
1-5/32	7/8	1-3/4	11	331-9252
1-3/16	1	1-3/4	11	331-9254
1-7/32	1	1-3/4	11	331-9256
1-1/4	1	1-7/8	11-1/2	331-9258
1-5/16	1	1-7/8	11-1/2	331-9260
1-3/8	1	2	12	331-9262
1-7/16	1-1/4	2	12	331-9264
1-1/2	1-1/4	2-1/8	12-1/2	331-9266
1-9/16	1-1/4	2-1/8	12-1/2	331-9268
1-5/8	1-1/4	2-1/4	13	331-9270
1-11/16	1-1/4	2-1/4	13	331-9272
1-3/4	1-1/4	2-3/8	13-1/2	331-9274
1-13/16	1-1/2	2-3/8	13-1/2	331-9276
1-7/8	1-1/2	2-1/2	14	331-9278
1-15/16	1-1/2	2-1/2	14	331-9280
2	1-1/2	2-1/2	14	331-9282
2-1/8	1-1/2	2-3/4	14-1/2	331-9284
2-1/4	1-3/4	2-3/4	14-1/2	331-9286
2-1/2	1-3/4	3	15	331-9288



Taper Shank

Size	Flute Length	Overall Length	Shank Taper	Taper Shank Order No.
3/8"	3/4"	7"	MT1	331-9302
13/32	3/4	7	MT1	331-9304
7/16	7/8	7	MT1	331-9306
15/32	7/8	7	MT1	331-9308
1/2	1	8	MT1	331-9310
17/32	1	8	MT1	331-9312
9/16	1-1/8	8	MT1	331-9314
19/32	1-1/8	8	MT1	331-9316
5/8	1-1/4	9	MT2	331-9318
21/32	1-1/4	9	MT2	331-9320
11/16	1-1/4	9	MT2	331-9322
23/32	1-1/4	9	MT2	331-9324
3/4	1-3/8	9-1/2	MT2	331-9326
25/32	1-3/8	9-1/2	MT2	331-9328
13/16	1-3/8	9-1/2	MT2	331-9330
27/32	1-3/8	9-1/2	MT2	331-9332
7/8	1-1/2	10	MT2	331-9334
29/32	1-1/2	10	MT2	331-9336
15/16	1-1/2	10	MT3	331-9338
31/32	1-1/2	10	MT3	331-9340
1	1-5/8	10-1/2	MT3	331-9342
1-1/32	1-5/8	10-1/2	MT3	331-9344
1-1/16	1-5/8	10-1/2	MT3	331-9346
1-3/32	1-5/8	10-1/2	MT3	331-9348
1-1/8	1-3/4	11	MT3	331-9350
1-5/32	1-3/4	11	MT3	331-9352
1-3/16	1-3/4	11	MT3	331-9354
1-7/32	1-3/4	11	MT3	331-9356
1-1/4	1-7/8	11-1/2	MT4	331-9358
1-5/16	1-7/8	11-1/2	MT4	331-9360
1-3/8	2	12	MT4	331-9362
1-7/16	2	12	MT4	331-9364
1-1/2	2-1/8	12-1/2	MT4	331-9366
1-9/16	2-1/8	12-1/2	MT4	331-9368
1-5/8	2-1/4	13	MT4	331-9370
1-11/16	2-1/4	13	MT4	331-9372
1-3/4	2-3/8	13-1/2	MT5	331-9374
1-13/16	2-3/8	13-1/2	MT5	331-9376
1-7/8	2-1/2	14	MT5	331-9378
1-15/16	2-1/2	14	MT5	331-9380
2-1/16	2-3/4	14-1/2	MT5	331-9381
2	2-1/2	14	MT5	331-9382
2-3/16	2-3/4	14-1/2	MT5	331-9383
2-1/8	2-3/4	14-1/2	MT5	331-9384
2-1/4	2-3/4	14-1/2	MT5	331-9385
2-3/8	3	15	MT5	331-9386
2-5/16	3	15	MT5	331-9387
2-1/2	3	15	MT5	331-9388
2-7/16	3	15	MT5	331-9389
2-3/4	3	15-1/2	MT5	331-9390
3	3	16	MT5	331-9394

Morse Taper Reamers

High Speed Steel

莫式锥度直柄手用铰刀

- Each morse taper reamer set consists of one finishing and one roughing reamer.



Hand Use, Straight Shank

Size	Dia. of Small End	Dia. of Large End	Flute Length	Overall Length	Roughing Reamer Order No.	Finishing Reamer Order No.	2 Pcs/set Order No.
MT0	.2503"	.3674"	2-1/4"	3-3/4"	337-6100	337-6200	337-6500
MT1	.3674	.5170	3	5	337-6110	337-6210	337-6510
MT2	.5696	.7441	3-1/2	6	337-6120	337-6220	337-6520
MT3	.7448	.9881	4-1/4	7-1/4	337-6130	337-6230	337-6530
MT4	1.0167	1.2893	5-1/4	8-1/2	337-6140	337-6240	337-6540
MT5	1.4717	1.8005	6-1/4	9-3/4	337-6150	337-6250	337-6550
MT6	2.1119	2.5550	8-1/2	12-1/4	337-6160	337-6260	337-6560



Machine Use, Taper Shank

Size	Dia. of Small End	Dia. of Large End	Flute Length	Overall Length	Roughing Reamer Order No.	Finishing Reamer Order No.	2 Pcs/set Order No.
MT0	.2503"	.3674"	2-1/4"	3-3/4"	337-6300	337-6400	337-6600
MT1	.3674	.5170	3	5	337-6310	337-6410	337-6610
MT2	.5696	.7441	3-1/2	6	337-6320	337-6420	337-6620
MT3	.7448	.9881	4-1/4	7-1/4	337-6330	337-6430	337-6630
MT4	1.0167	1.2893	5-1/4	8-1/2	337-6340	337-6440	337-6640
MT5	1.4717	1.8005	6-1/4	9-3/4	337-6350	337-6450	337-6650
MT6	2.1119	2.5550	8-1/2	12-1/4	337-6360	337-6460	337-6660

Taper Shank Bridge Reamers 锥柄桥梁铰刀

High Speed Steel

- Featured two flute type: straight flute and spiral flute.
- Spiral flute reamers with left hand spiral flute and right hand cut.



Size	Flute Length	Overall Length	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.	Size	Flute Length	Overall Length	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.
17/64"	2-3/4"	5-1/2"	MT1	331-9002	331-9102	15/16"	7-3/8"	12"	MT3	331-9046	331-9146
19/64	2	5-1/4	MT1	331-9004	331-9104	1	7-3/8	12	MT3	331-9048	331-9148
5/16	4-3/8	8-1/4	MT1	331-9006	331-9106	1-1/32	7-1/2	12-1/4	MT3	331-9050	331-9150
11/32	4	7-1/4	MT1	331-9008	331-9108	1-1/16	7-3/8	12	MT3	331-9052	331-9152
3/8	4-3/8	8-1/4	MT2	331-9010	331-9110	1-3/32	6-13/16	11-1/2	MT3	331-9054	331-9154
13/32	4-3/8	8-1/4	MT2	331-9012	331-9112	1-1/8	7-3/8	12	MT3	331-9056	331-9156
27/64	4-3/8	8-1/4	MT2	331-9014	331-9114	1-5/32	7-1/2	11-1/2	MT3	331-9058	331-9158
7/16	4-3/8	8-1/4	MT2	331-9016	331-9116	1-3/16	7-3/8	12	MT3	331-9060	331-9160
15/32	5-1/8	9	MT2	331-9018	331-9118	1-1/4	7-3/8	13	MT4	331-9062	331-9162
1/2	5-1/8	9	MT2	331-9020	331-9120	1-5/16	7-3/8	13	MT4	331-9064	331-9164
17/32	5-1/8	9	MT2	331-9022	331-9122	1-3/8	7-3/8	13	MT4	331-9066	331-9166
9/16	5-1/8	9	MT2	331-9024	331-9124	1-7/16	7-3/8	13	MT4	331-9068	331-9168
19/32	6-1/8	10-7/8	MT2	331-9026	331-9126	1-15/32	6-7/8	13	MT4	331-9070	331-9170
5/8	6-1/8	10	MT2	331-9028	331-9128	1-1/2	7-3/8	13	MT4	331-9072	331-9172
21/32	7	12	MT2	331-9030	331-9130	1-9/16	7-3/8	13	MT4	331-9074	331-9174
11/16	7-1/8	11-3/4	MT2	331-9032	331-9132	1-5/8	7-3/8	13	MT4	331-9076	331-9176
11/16	7-1/8	11-3/4	MT3	331-9034	331-9134	1-11/16	7-3/8	13	MT4	331-9078	331-9178
23/32	7-1/8	11-3/4	MT3	331-9036	331-9136	1-3/4	7-3/8	13	MT4	331-9080	331-9180
3/4	7-3/8	12	MT3	331-9038	331-9138	1-13/16	7-3/8	13	MT4	331-9082	331-9182
25/32	7-3/8	12	MT3	331-9040	331-9140	1-7/8	7-3/8	13	MT4	331-9084	331-9184
13/16	7-3/8	12	MT3	331-9042	331-9142	1-15/16	7-3/8	13	MT4	331-9086	331-9186
7/8	7-3/8	12	MT3	331-9044	331-9144	2	7-3/8	13	MT4	331-9088	331-9188

Metric Taper Shank Bridge Reamers

公制锥柄桥梁铰刀

High Speed Steel

DIN 311



Size (mm)	Flute Length (mm)	Overall Length (mm)	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.	Size (mm)	Flute Length (mm)	Overall Length (mm)	Shank Taper	Straight Flute Order No.	Spiral Flute Order No.
6.4	75	151	MT1	331-9431	331-9631	23	165	281	MT3	331-9488	331-9688
7.4	80	156	MT1	331-9434	331-9634	24	180	296	MT3	331-9491	331-9691
8	85	161	MT1	331-9437	331-9637	25	180	296	MT3	331-9494	331-9694
8.4	85	161	MT1	331-9440	331-9640	26	180	296	MT3	331-9497	331-9697
9	90	166	MT1	331-9443	331-9643	27	195	311	MT3	331-9500	331-9700
9.5	90	166	MT1	331-9446	331-9646	28	195	311	MT3	331-9503	331-9703
10	95	171	MT1	331-9449	331-9649	29	195	311	MT3	331-9506	331-9706
11	100	176	MT1	331-9452	331-9652	30	195	311	MT3	331-9509	331-9709
12	105	199	MT2	331-9455	331-9655	31	210	326	MT3	331-9512	331-9712
13	105	199	MT2	331-9458	331-9658	32	210	354	MT4	331-9515	331-9715
14	115	209	MT2	331-9461	331-9661	33	210	354	MT4	331-9518	331-9718
15	125	219	MT2	331-9464	331-9664	34	220	364	MT4	331-9521	331-9721
16	135	229	MT2	331-9467	331-9667	35	220	364	MT4	331-9524	331-9724
17	135	251	MT3	331-9470	331-9670	36	220	364	MT4	331-9527	331-9727
18	145	261	MT3	331-9473	331-9673	37	220	364	MT4	331-9530	331-9730
19	145	261	MT3	331-9476	331-9676	38	230	374	MT4	331-9533	331-9733
20	155	271	MT3	331-9479	331-9679	39	230	374	MT4	331-9536	331-9736
21	155	271	MT3	331-9482	331-9682	40	230	374	MT4	331-9539	331-9739
22	165	281	MT3	331-9485	331-9685						

Inch Hand Reamers 高速钢手用铰刀

High Speed Steel

- Straight flute for most jobs.
- Spiral flute for holes with keyways or other interruptions.

Left Hand Spiral with Right Hand Cut, Straight Flute, Straight Shank



Spiral Flute



Straight Flute

Size	Flute Length	Overall Length	Straight Flute Order No.	Spiral Flute Order No.	Size	Flute Length	Overall Length	Straight Flute Order No.	Spiral Flute Order No.
1/8"	1-1/2"	3"	337-0108	337-0308	21/32"	3-11/16"	7-3/8"	337-0142	337-0342
9/64	1-5/8"	3-1/4"	337-0109	337-0309	43/64	3-7/8"	7-3/4"	337-0143	337-0343
5/32	1-5/8"	3-1/4"	337-0110	337-0310	11/16	3-7/8"	7-3/4"	337-0144	337-0344
11/64	1-3/4"	3-1/2"	337-0111	337-0311	23/32	4-1/16"	8-1/8"	337-0146	337-0346
3/16	1-3/4"	3-1/2"	337-0112	337-0312	3/4	4-3/16"	8-3/8"	337-0148	337-0348
7/32	1-7/8"	3-3/4"	337-0114	337-0314	25/32	4-3/8"	8-3/4"	337-0150	337-0350
1/4	2"	4"	337-0116	337-0316	13/16	4-9/16"	9-1/8"	337-0152	337-0352
9/32	2-1/8"	4-1/4"	337-0118	337-0318	27/32	4-11/16"	9-3/8"	337-0154	337-0354
5/16	2-1/4"	4-1/2"	337-0120	337-0320	7/8	4-7/8"	9-3/4"	337-0156	337-0356
11/32	2-3/8"	4-3/4"	337-0122	337-0322	29/32	5"	10"	337-0158	337-0358
3/8	2-1/2"	5"	337-0124	337-0324	15/16	5-1/8"	10-1/4"	337-0160	337-0360
25/64	2-1/2"	4-3/4"	337-0125	337-0325	31/32	5-5/16"	10-5/8"	337-0162	337-0362
13/32	2-5/8"	5-1/4"	337-0126	337-0326	1"	5-7/16"	10-7/8"	337-0164	337-0364
7/16	2-3/4"	5-1/2"	337-0128	337-0328	1-1/16	5-5/8"	11-1/4"	337-0168	337-0368
15/32	2-7/8"	5-3/4"	337-0130	337-0330	1-1/8	5-13/16"	11-5/8"	337-0172	337-0372
31/64	3"	6"	337-0131	337-0331	1-3/16	6"	12"	337-0176	337-0376
1/2	3"	6"	337-0132	337-0332	1-1/4	6-1/8"	12-1/4"	337-0180	337-0380
17/32	3-1/8"	6-1/4"	337-0134	337-0334	1-5/16	6-1/4"	12-1/2"	337-0184	337-0384
9/16	3-1/4"	6-1/2"	337-0136	337-0336	1-3/8	6-5/16"	12-5/8"	337-0188	337-0388
19/32	3-3/8"	6-3/4"	337-0138	337-0338	1-7/16	6-7/16"	12-7/8"	337-0192	337-0392
5/8	3-1/2"	7"	337-0140	337-0340	1-1/2	6-1/2"	13"	337-0196	337-0396

Metric Hand Reamers 公制高速手用铰刀

DIN 206/A & 206/B

High Speed Steel, Left Hand, Spiral & Straight Flute, Straight Shank



Spiral



Straight

Size (mm)	Flute Length (mm)	Overall Length (mm)	Straight Flute DIN206/A Order No.	Spiral Flute DIN206/B Order No.	Size (mm)	Flute Length (mm)	Overall Length (mm)	Straight Flute DIN206/A Order No.	Spiral Flute DIN206/B Order No.	Size (mm)	Flute Length (mm)	Overall Length (mm)	Straight Flute DIN206/A Order No.	Spiral Flute DIN206/B Order No.
1.5	20	41	337-2015	337-3015	9.5	62	124	337-2095	337-3095	18.0	93	188	337-2180	337-3180
2	25	50	337-2020	337-3020	10.0	66	133	337-2100	337-3100	18.5	93	188	337-2185	337-3185
2.5	29	58	337-2025	337-3025	10.5	66	133	337-2105	337-3105	19.0	93	188	337-2190	337-3190
3.0	31	62	337-2030	337-3030	11.0	71	142	337-2110	337-3110	19.5	100	201	337-2195	337-3195
3.2	33	66	337-2032	337-3032	11.5	71	142	337-2115	337-3115	20.0	100	201	337-2200	337-3200
3.5	35	71	337-2035	337-3035	12.0	76	152	337-2120	337-3120	21.0	100	201	337-3210	337-3210
4.0	38	76	337-2040	337-3040	12.5	76	152	337-2125	337-3125	22.0	107	215	337-2220	337-3220
4.5	41	81	337-2045	337-3045	13.0	76	152	337-2130	337-3130	24.0	115	231	337-3240	337-3240
5.0	44	87	337-2050	337-3050	13.5	81	163	337-2135	337-3135	25.0	115	231	337-2250	337-3250
5.5	47	93	337-2055	337-3055	14.0	81	163	337-2140	337-3140	28.0	124	247	337-2280	337-3280
6.0	47	93	337-2060	337-3060	14.5	81	163	337-2145	337-3145	30.0	124	247	337-2300	337-3300
6.5	50	100	337-2065	337-3065	15.0	81	163	337-2150	337-3150	32.0	133	265	337-2320	337-3320
7.0	54	107	337-2070	337-3070	15.5	87	175	337-2155	337-3155	36.0	142	284	337-2360	337-3360
7.5	54	107	337-2075	337-3075	16.0	87	175	337-2160	337-3160	40.0	152	305	337-2400	337-3400
8.0	58	115	337-2080	337-3080	16.5	87	175	337-2165	337-3165	45.0	163	326	337-2450	337-3450
8.5	58	115	337-2085	337-3085	17.0	87	175	337-2170	337-3170	50.0	174	347	337-2500	337-3500
9.0	62	124	337-2090	337-3090	17.5	93	188	337-2175	337-3175					

Hex Haed Taper Car Reamers 高速5槽锥度车铰刀, 六角头柄

High Speed Steel, 5 Flute, Left Hand Spiral, Right Hand Cut



Size	Flute Length	Overall Length	Hex Shank Size	Order No.
11/16"	4-1/2"	6-1/2"	1-1/16"	337-5444
13/16	5	7	1-1/4"	337-5452
15/16	5	7	1-7/16"	337-5460
1-1/16	5	7	1-5/8"	337-5468

Taper Car Reamers

高速钢5槽锥度车铰刀

Taper Shank



Size	Flute Length	Overall Length	Shank Taper	Order No.
5/16"	2-3/4"	5-11/16"	MT1	337-5020
3/8	2-3/4"	5-11/16"	MT1	337-5024
7/16	3-1/2"	6-15/16"	MT2	337-5028
1/2	4	7-9/16"	MT2	337-5032
9/16	4	7-9/16"	MT2	337-5036
5/8	4-1/2"	8-1/16"	MT2	337-5040
11/16	4-1/2"	8-13/16"	MT3	337-5044
3/4	5	9-1/2"	MT3	337-5048
13/16	5	9-1/2"	MT3	337-5052
15/16	5	9-1/2"	MT3	337-5056
1	5	9-1/2"	MT3	337-5064
1-1/16	5	9-1/2"	MT3	337-5068

HSS Straight Shank With Safety Collar



Size	Overall Length	Shank Dia.	Order No.
5/16	4-5/8	5/16	337-5120
3/8	5-7/8	3/8	337-5124
7/16	5-3/8	7/16	337-5128
1/2	5-7/8	1/2	337-5132
9/16	5-7/8	1/2	337-5136
5/8	6-3/8	1/2	337-5140
21/32	6-3/8	1/2	337-5142
11/16	6-3/8	1/2	337-5144
3/4	6-7/8	1/2	337-5148
25/32	6-7/8	1/2	337-5150
13/16	6-7/8	1/2	337-5152
7/8	6-7/8	1/2	337-5156
15/16	6-7/8	1/2	337-5160
1	6-7/8	1/2	337-5164
1-1/16	6-7/8	1/2	337-5168

3 Equal-Flat Straight Shank



Size	Flute Length	Overall Length	Shank Dia.	Shank Length	Order No.
5/16"	2-3/4"	4-5/8"	5/16"	1-1/2"	337-5220
3/8	2-3/4"	4-5/8"	3/8	1-1/2"	337-5224
7/16	3-1/2"	5-3/8"	7/16	1-1/2"	337-5228
1/2	4	5-7/8"	1/2	1-1/2"	337-5232
9/16	4	5-7/8"	1/2	1-1/2"	337-5236
5/8	4-1/2"	6-3/8"	1/2	1-1/2"	337-5240
11/16	4-1/2"	6-3/8"	1/2	1-1/2"	337-5244
3/4	5	6-7/8"	1/2	1-1/2"	337-5248
13/16	5	6-7/8"	1/2	1-1/2"	337-5252
7/8	5	6-7/8"	1/2	1-1/2"	337-5256
15/16	5	6-7/8"	1/2	1-1/2"	337-5260
1	5	6-7/8"	1/2	1-1/2"	337-5264
1-1/16	5	6-7/8"	1/2	1-1/2"	337-5268
1-1/8	5	6-7/8"	1/2	1-1/2"	337-5272

Expansion Hand Reamers

High Speed Steel, Right Hand

可涨式手用铰刀

- Straight flute for most jobs.
- Spiral flute for holes with keyways or other interruptions.

Expansion limits:

1/4" - 15/32"	.006"
1/2" - 31/32"	.010"
1" - 1-1/2"	.012"
1-1/2" - 2"	.015"



Straight



Spiral

Size	Flute Length	Overall Length	No. of Flute	Straight Flute Order No.	Spiral Flute Order No.	Size	Flute Length	Overall Length	No. of Flute	Straight Flute Order No.	Spiral Flute Order No.
1/4"	1-7/16"	3-7/8"	6"	349-1016	349-3016	27/32"	3-1/2"	8"	8"	349-1054	349-3054
9/32	1-3/4	4	6	349-1018	349-3018	7/8	4	9	8	349-1056	349-3056
5/16	1-3/4	4	6	349-1020	349-3020	29/32	4	9	8	349-1058	349-3058
11/32	1-3/4	4	6	349-1022		15/16	4	9	8	349-1060	349-3060
3/8	2	5	6	349-1024	349-3024	31/32	4	9	8	349-1062	349-3062
13/32	2	5	6	349-1026	349-3026	1	4-1/2	10	8	349-1064	349-3064
7/16	2	5	6	349-1028	349-3028	1-1/16	4-1/2	10	8	349-1068	349-3068
15/32	2	5	6	349-1030	349-3030	1-1/8	4-3/4	10-1/2	8	349-1072	349-3072
1/2	2	5-1/2	6	349-1032	349-3032	1-3/16	4-3/4	10-1/2	8	349-1076	349-3076
17/32	2	5-1/2	6	349-1034	349-3034	1-1/4	5	11	8	349-1080	349-3080
9/16	2-1/2	6	6	349-1036	349-3036	1-5/16	5	11	10	349-1084	349-3084
19/32	2-1/2	6	6	349-1038	349-3038	1-3/8	5-1/4	11-1/2	10	349-1088	349-3088
5/8	3	7	6	349-1040	349-3040	1-7/16	5-1/4	11-1/2	10	349-1092	349-3092
21/32	3	7	6	349-1042	349-3042	1-1/2	5-1/2	12	10	349-1096	349-3096
11/16	3	7	6	349-1044	349-3044	1-1/2	4-13/16	11-5/8	10		349-3097
23/32	3	7	6	349-1046	349-3046	1-3/4	5-1/2	12-3/8	12	349-1112	349-3112
3/4	3-1/2	8	8	349-1048	349-3048	1-7/8	5-1/2	12-3/8	12	349-1120	349-3120
25/32	3-1/2	8	8	349-1050	349-3050	2	5-1/2	13-1/8	12	349-1128	349-3128
13/16	3-1/2	8	8	349-1052	349-3052						

Metric Expansion Hand Reamers

公制可涨手用铰刀

DIN859, High Speed Steel, Spiral Flute



Size (mm)	Flute Length (mm)	Total Length (mm)	Square Size (mm)	No. of Flute	Order No.	Size (mm)	Flute Length (mm)	Total Length (mm)	Square Size (mm)	No. of Flute	Order No.
6	47	93	7	6	349-5006	17	87	175	16	9	349-5017
7	54	107	8	9	349-5007	18	93	188	18	9	349-5018
8	58	115	9	9	349-5008	19	93	188	18	9	349-5019
9	62	124	10	9	349-5009	20	100	201	20	12	349-5020
10	66	133	11	9	349-5010	21	100	201	20	12	349-5021
11	71	142	12	9	349-5011	22	107	201	22	12	349-5022
12	76	152	13	9	349-5012	23	107	201	22	12	349-5023
13	76	152	13	9	349-5013	24	115	231	24	12	349-5024
14	81	163	14	9	349-5014	25	115	231	24	12	349-5025
15	81	163	14	9	349-5015	30	124	247	26	12	349-5030
16	87	175	16	9	349-5016						

Jobber Reamers 锥柄长刃铰刀

High Speed Steel, Taper Shank, Straight Flute

Longer flute length than regular chucking reamer for using on jobs where a longer flute machine reamer needed



Size	Flute Length	Overall Length	Shank Taper	Order No.	Size	Flute Length	Overall Length	Shank Taper	Order No.
1/4"	2"	5-3/16"	1	337-4016	3/4"	4-3/16"	8-3/8"	2	337-4048
9/32	2	5-3/16	1	337-4018	25/32	4-3/16	8-3/8	2	337-4050
5/16	2-1/4	5-1/2	1	337-4020	13/16	4-9/16	8-13/16	2	337-4052
11/32	2-1/4	5-1/2	1	337-4022	27/32	4-7/8	9-3/16	2	337-4054
3/8	2-1/2	5-13/16	1	337-4024	7/8	4-7/8	9-3/16	2	337-4056
13/32	2-1/2	5-13/16	1	337-4026	15/16	5-1/8	10	3	337-4060
7/16	2-3/4	6-1/8	1	337-4028	1	5-7/16	10-3/8	3	337-4064
15/32	2-3/4	6-1/8	1	337-4030	1-1/16	5-5/8	10-5/8	3	337-4068
1/2	3	6-7/16	1	337-4032	1-1/8	5-13/16	10-7/8	3	337-4072
17/32	3	6-7/16	1	337-4034	1-3/16	6	11-1/8	3	337-4076
9/16	3-1/4	6-3/4	1	337-4036	1-1/4	6-1/8	12-9/16	4	337-4080
19/32	3-1/4	6-3/4	1	337-4038	1-5/16	6-1/4	12-11/16	4	337-4084
5/8	3-1/2	7-9/16	2	337-4040	1-3/8	6-5/16	12-13/16	4	337-4088
21/32	3-1/2	7-9/16	2	337-4042	1-7/16	6-7/16	13	4	337-4092
11/16	3-7/8	8	2	337-4044	1-1/2	6-1/2	13-1/8	4	337-4096
23/32	3-7/8	8	2	337-4046					

Adjustable Blade Reamers 可调刃铰刀

High Speed Steel

- Reamer sizes can be achieved by loosening or tightening two adjustable nuts.
- Featured replaceable and regroundable reamer blades.



Size Range	Size	Overall Length	Order No.	Size Range	Size	Overall Length	Order No.
1/4 to 9/32"	8/A	3-1/2"	337-1601	21/32 to 23/32	D	6-3/4	337-1611
9/32 to 5/16	7/A	3-3/4	337-1602	23/32 to 25/32"	E	7-1/4"	337-1612
5/16 to 11/32	6/A	4	337-1603	25/32 to 27/32	F	7-3/4	337-1613
11/32 to 3/8	5/A	4-1/4	337-1604	27/32 to 15/16	G	8-1/4	337-1614
3/8 to 13/32	4/A	4-1/2	337-1605	15/16 to 1-1/16	H	8-3/4	337-1615
13/32 to 7/16	3/A	4-3/4	337-1606	1-1/16 to 1-3/16	I	10	337-1616
7/16 to 15/32	2/A	5	337-1607	1-3/16 to 1-11/32	J	11	337-1617
15/32 to 17/32	A	5-1/4	337-1608	1-11/32 to 1-1/2	K	12	337-1618
17/32 to 19/32	B	5-3/4	337-1609	1-1/2 to 1-13/16	L	13	337-1619
19/32 to 21/32	C	6-1/4	337-1610	1-13/16 to 2-7/32	M	15	337-1620

Metric Adjustable Blade Reamers 公制可调刃铰刀

High Speed Steel



Size Range (mm)	Flute Length (mm)	Overall Length (mm)	Order No.	Size Range (mm)	Flute Length (mm)	Overall Length (mm)	Order No.
6.50 to 7.00	35	85	337-1510	19.00 to 21.00	60	180	337-1543
7.00 to 7.75	35	90	337-1513	21.00 to 23.00	65	195	337-1546
7.75 to 8.50	38	100	337-1516	23.00 to 26.00	72	215	337-1549
8.50 to 9.25	38	100	337-1518	26.00 to 29.50	80	240	337-1552
9.25 to 10.00	38	115	337-1519	29.50 to 33.50	85	270	337-1555
10.00 to 10.75	38	125	337-1522	33.50 to 38.00	95	310	337-1558
10.75 to 11.75	38	130	337-1525	38.00 to 44.00	105	350	337-1561
11.75 to 12.75	44	135	337-1528	44.00 to 54.00	120	400	337-1564
12.75 to 13.75	48	145	337-1531	54.00 to 64.00	120	460	337-1567
13.75 to 15.25	52	150	337-1534	64.00 to 74.00	135	510	337-1570
15.25 to 17.00	55	165	337-1537	74.00 to 84.00	135	510	337-1573
17.00 to 19.00	60	170	337-1540				

Shell Reamers 套式铰刀

High Speed Steel, Right Hand

Designed as a sizing or finishing reamer, can be held on an arbor which complete with driving lugs

O.D.Tolerance:

3/4" - 1"	+ .0005"	- .0001"
Over 1"	+ .0006"	- .0002"



Size	Overall Length	Hole Diameter	No. of Flutes	Fitting Arbor No.	Straight Flute Order No.	Spiral Flute Order No.	Size	Overall Length	Hole Diameter	No. of Flutes	Fitting Arbor No.	Straight Flute Order No.	Spiral Flute Order No.
3/4"	2-1/4"	3/8"	10	4	337-7048	337-8048	2-1/4	3-3/4	1-1/4	14	9	337-7144	337-8144
13/16	2-1/2	1/2	10	5	337-7052	337-8052	2-5/16	3-3/4	1-1/4	14	9	337-7148	337-8148
7/8	2-1/2	1/2	10	5	337-7056	337-8056	2-3/8	3-3/4	1-1/4	14	9	337-7152	337-8152
15/16	2-1/2	1/2	10	5	337-7060	337-8060	2-7/16"	3-3/4"	1-1/4"	14	9	337-7156	337-8156
1	2-1/2	1/2	10	5	337-7064	337-8064	2-1/2	3-3/4	1-1/4	14	9	337-7160	337-8160
1-1/16	2-3/4	5/8	10	6	337-7068	337-8068	2-9/16	4	1-1/2	16	10	337-7164	337-8164
1-1/8	2-3/4	5/8	10	6	337-7072	337-8072	2-5/8	4	1-1/2	16	10	337-7168	337-8168
1-3/16	2-3/4	5/8	10	6	337-7076	337-8076	2-11/16	4	1-1/2	16	10	337-7172	337-8172
1-1/4	2-3/4	5/8	12	6	337-7080	337-8080	2-3/4	4	1-1/2	16	10	337-7176	337-8176
1-5/16	3	3/4	12	7	337-7084	337-8084	2-13/16	4	1-1/2	16	10	337-7180	337-8180
1-3/8	3	3/4	12	7	337-7088	337-8088	2-7/8	4	1-1/2	16	10	337-7184	337-8184
1-7/16	3	3/4	12	7	337-7092	337-8092	2-15/16	4	1-1/2	16	10	337-7188	337-8188
1-1/2	3	3/4	12	7	337-7096	337-8096	3	4	1-1/2	16	10	337-7192	337-8192
1-9/16	3	3/4	12	7	337-7100	337-8100	3-1/16	4-1/2	1-3/4	18	11	337-7196	337-8196
1-5/8	3	3/4	12	7	337-7104	337-8104	3-1/8	4-1/2	1-3/4	18	11	337-7200	337-8200
1-11/16	3-1/2	1	12	8	337-7108	337-8108	3-3/16	4-1/2	1-3/4	18	11	337-7204	337-8204
1-23/32	3-1/2	1	12	8	337-7109		3-1/4	4-1/2	1-3/4	18	11	337-7208	337-8208
1-3/4	3-1/2	1	12	8	337-7112	337-8112	3-5/16	4-1/2	1-3/4	18	11	337-7212	337-8212
1-25/32	3-1/2	1	12	8	337-7113		3-3/8	4-1/2	1-3/4	18	11	337-7216	337-8216
1-13/16	3-1/2	1	12	8	337-7116	337-8116	3-7/16	4-1/2	1-3/4	18	11	337-7220	337-8220
1-27/32	3-1/2	1	12	8	337-7117		3-1/2	4-1/2	1-3/4	18	11	337-7224	337-8224
1-7/8	3-1/2	1	12	8	337-7120	337-8120	3-9/16	5	2	20	12	337-7228	337-8228
1-29/32	3-1/2	1	12	8	337-7121		3-5/8	5	2	20	12	337-7232	337-8232
1-15/16	3-1/2	1	12	8	337-7124	337-8124	3-11/16	5	2	20	12	337-7236	337-8236
1-31/32	3-1/2	1	12	8	337-7125		3-3/4	5	2	20	12	337-7240	337-8240
2	3-1/2	1	14	8	337-7128	337-8128	3-13/16	5	2	20	12	337-7244	337-8244
2-1/16	3-3/4	1-1/4	14	9	337-7132	337-8132	3-7/8	5	2	20	12	337-7248	337-8248
2-1/8	3-3/4	1-1/4	14	9	337-7136	337-8136	3-15/16	5	2	20	12	337-7252	337-8252
2-3/16	3-3/4	1-1/4	14	9	337-7140	337-8140	4	5	2	20	12	337-7256	337-8256

Metric Shell Reamers 公制套式铰刀

High Speed Steel

- Featured two flute types:
Straight Flute(DIN219A) and Spiral Flute(DIN219B).



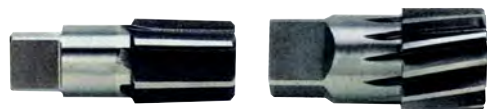
Size (mm)	Hole Dia. (mm)	Overall Length (mm)	DIN219A Straight Flute Order No.	DIN219B Spiral Flute Order No.	Size (mm)	Hole Dia. (mm)	Overall Length (mm)	DIN219A Straight Flute Order No.	DIN219B Spiral Flute Order No.
20	10	40	337-9120	337-9320	35	16	50	337-9135	337-9335
21	10	40	337-9121	337-9321	36	19	56	337-9136	337-9336
22	10	40	337-9122	337-9322	38	19	56	337-9138	337-9338
23	10	40	337-9123	337-9323	40	19	56	337-9140	337-9340
24	13	45	337-9124	337-9324	42	19	56	337-9142	337-9342
25	13	45	337-9125	337-9325	45	22	63	337-9145	337-9345
26	13	45	337-9126	337-9326	48	22	63	337-9148	337-9348
27	13	45	337-9127	337-9327	50	22	63	337-9150	337-9350
28	13	45	337-9128	337-9328	52	27	71	337-9152	337-9352
29	13	45	337-9129	337-9329	55	27	71	337-9155	337-9355
30	13	45	337-9130	337-9330	60	27	71	337-9160	337-9360
32	16	50	337-9132	337-9332					

Taper Pipe Reamers 高速钢锥度管子铰刀

High Speed Steel,

Right Hand Cut Taper 3/4 inch per foot

Designed for reaming holes to be tapped with American Standard Taper Pipe Taps(NPT)



Size	Large End Dia.	Small End Dia.	Flute Length	Overall Length	Straight Flute Order No.	Spiral Flute Order No.
1/16"	.291"	.245"	3/4"	2"	337-1704	337-0704
1/8	.362	.316	3/4	2-1/8	337-1708	337-0708
1/4	.472	.406	1-1/16	2-7/16	337-1716	337-0716
3/8	.606	.540	1-1/16	2-9/16	337-1724	337-0724
1/2	.751	.665	1-3/8	3-1/8	337-1732	337-0732
3/4	.962	.876	1-3/8	3-1/4	337-1748	337-0748
1	1.212	1.103	1-3/4	3-3/4	337-1764	337-0764
1-1/4	1.553	1.444	1-3/4	4	337-1780	337-0780
1-1/2	1.793	1.684	1-3/4	4-1/4	337-1796	337-0796
2	2.268	2.159	1-3/4	4-1/2	337-1828	337-0828
2-1/2	2.772	2.561	2-5/8	5-1/2	337-1860	337-0860
3	3.380	3.202	2-3/4	6	337-1892	337-0892

Shell Reamer Arbors 套式铰刀接杆

Straight Shank



Size	Shank Dia.	Fits Shell Reamer	Order No.
#4	1/2"	21/32"-25/32"	331-2204
#5	5/8	13/16"-1-1/32"	331-2205
#6	3/4	1-1/16"-1-9/32"	331-2206
#7	7/8	1-5/16"-1-5/8"	331-2207
#8	1-1/8	1-11/16"-2"	331-2208
#9	1-3/8	2-1/16"-2-1/2"	331-2209
#10	1-5/8	2-9/16"-3"	331-2210
#11	2	3-1/16"-3-1/2"	331-2211
#12	2-1/8	3-9/16"-4"	331-2212

Taper Shank



Size	Shank Taper	Fits Shell Reamer	Order No.
#4	MT2	21/32"-25/32"	331-2304
#5	MT2	13/16"-1-1/32"	331-2305
#6	MT3	1-1/16"-1-9/32"	331-2306
#7	MT3	1-5/16"-1-5/8"	331-2307
#8	MT4	1-11/16"-2"	331-2308
#9	MT4	2-1/16"-2-1/2"	331-2309
#10	MT5	2-9/16"-3"	331-2310
#11	MT5	3-1/16"-3-1/2"	331-2311
#12	MT5	3-9/16"-4"	331-2312

E-Z Eject Shell Reamer Arbors 弹出套式铰刀接杆 HRC55

Straight Shank



Size	Shank Dia.	Fits Shell Reamer	Overall Length	Order No.
#4	1/2"	21/32"-25/32"	9"	331-2002
#5	5/8	13/16"-1-1/32"	9-1/2	331-2004
#6	3/4	1-1/16"-1-9/32"	10	331-2006
#7	7/8	1-5/16"-1-5/8"	11	331-2008
#8	1-1/8	1-11/16"-2"	12	331-2010
#9	1-3/8	2-1/16"-2-1/2"	13	331-2012
#10	1-5/8	2-9/16"-3"	14	331-2014
#11	2	3-1/16"-3-1/2"	15	331-2016
#12	2-1/8	3-9/16"-4"	16	331-2018

Taper Shank



Size	Shank Taper	Arbor Dia.	Fits Shell Reamer	Overall Length	Order No.
#4	MT2	3/8"	21/32"-25/32"	9"	331-2102
#5	MT2	1/2	13/16"-1-1/32"	9-1/2	331-2104
#6	MT3	5/8	1-1/16"-1-9/32"	10	331-2106
#7	MT3	3/4	1-5/16"-1-5/8"	11	331-2108
#8	MT4	1	1-11/16"-2"	12	331-2110
#9	MT4	1-1/4	2-1/16"-2-1/2"	13	331-2112
#10	MT5	1-1/2	2-9/16"-3"	14	331-2114
#11	MT5	1-3/4	3-1/16"-3-1/2"	15	331-2116
#12	MT5	2	3-9/16"-4"	16	331-2118

DIN217 Taper Shank Shell Reamer Arbors

DIN217 套式铰刀接杆

Taper Shank



Fitting Range (mm)	Shank Taper	Arbor Size (mm)	OAL (mm)	Order No.
20-23	MT3	10	250	331-2511
23.6-30	MT3	13	250	331-2514
30-35.5	MT3	16	261	331-2517
35.5-42.5	MT4	19	298	331-2520
42.5-50.8	MT4	22	312	331-2523

Fitting Range (mm)	Shank Taper	Arbor Size (mm)	OAL (mm)	Order No.
50.8-60	MT5	27	358	331-2526
60-71	MT5	32	379	331-2529
71-85	MT5	40	396	331-2532
85-101.6	MT5	50	416	331-2535

NPT Taper Pipe Tap Sets 美标 NPT 圆锥管丝锥套装

Ground Thread



3 Piece Tap Sets

Set includes one each: Taps (3 Sizes).

Sets

Descriptions	Wooden Case Order No.
H.S.S.	314-9503
Carbon Steel	314-9603

Thread Size & Pitch
1-1/4"-11-1/2
1-1/2"-11-1/2
2"-11-1/2



4 Piece Tap Sets

Set includes one each: Taps (4 Sizes).

Sets

Descriptions	Wooden Case Order No.
Carbon Steel	314-9604

Thread Size
1
1-1/4
1-1/2
2"



6 Piece Tap Sets

Set includes one each: Taps (6 Sizes).

Sets

Descriptions	Wooden Case Order No.
H.S.S.	314-9506
Carbon Steel	314-9606

Thread Size & Pitch
1/4"-18
3/8-18
1/2-14

Thread Size & Pitch
3/4-14
1"-11-1/2
1-1/4"-11-1/2



6 Piece Tap Sets

Set includes one each: Taps (6 Sizes). 1/8, 1/4, 3/8, 1/2, 3/4, & 1"

Sets

Descriptions	Wooden Case Order No.
Carbon Steel	314-9605

Thread Size
1/8"
1/4"
3/8"

Thread Size
1/2"
3/4"
1"

Tap & Die Sets 套装丝锥板牙

Ground Thread



Plastic Case

12 Piece Tap & Die Sets

Set includes one each of:

Taps and 1" O.D. Round Dies (5 Sizes).

Adjustable Die Stock 1".

Straight Handle Tap Wrench 1/16"-1/2".



Polyethylene Case

Sets

Descriptions	Polyethylene Case Order No.	Plastic Case Order No.
H.S.S.	314-9512	314-9513
Carbon Steel	314-9612	314-9613

Thread Size & Pitch
1/4"-20NC
5/16-18 NC
3/8-16 NC

Thread Size & Pitch
7/16-14 NC
1/2-13NC

Tap & Die Sets 套装丝锥板牙

Ground Thread



12 Piece Tap & Die Sets

Set includes one each of:

Taps and 1" O.D. Round Dies (5 Sizes).

Adjustable Die Stock 1".

Straight Handle Tap Wrench 1/16"-1/2".

Descriptions	Plastic Case Order No.
H.S.S	314-9514
Carbon Steel	314-9614

Thread Size & Pitch
1/4"-28 NF
5/16-24NF
3/8-24 NF

Thread Size & Pitch
7/16-20 NF
1/2-20NF



16 Piece Tap & Die Sets

Set includes one each of:

Taps and 1-1/2" O.D. Round Dies (7 Sizes).

Adjustable Die Stock 1-1/2".

Straight Handle Tap Wrench 1/4"-3/4".

Descriptions	Plastic Case Order No.
H.S.S	314-9516
Carbon Steel	314-9616

Thread Size & Pitch
1/4"-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF

Thread Size & Pitch
1/2-20NF
5/8-18 NF
3/4-16 NF



16 Piece Tap & Die Sets

Set includes one each of:

Taps and 1-1/2" O.D. Round Dies (7 Sizes).

Adjustable Die Stock 1-1/2".

Straight Handle Tap Wrench 1/4"-3/4".

Descriptions	Plastic Case Order No.
H.S.S	314-9517
Carbon Steel	314-9617

Thread Size & Pitch
1/4"-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC

Thread Size & Pitch
1/2-13NC
5/8-11NC
3/4-10 NC



20 Piece Tap & Die Sets

Set includes one each of:

Taps and 1" O.D. Round Dies (9 Sizes).

Adjustable Die Stock.

Straight Handle Tap Wrench.

Descriptions	Polyethylene Case Order No.
H.S.S	314-9520
Carbon Steel	314-9620

Thread Size & Pitch
6-32NC
8-32NC
10-24NC
12-24NC
1/4-20NC

Thread Size & Pitch
5/16-18NC
3/8-16NC
7/16-14NC
1/2-13NC



21 Piece Tap & Die Sets

Set includes one each of:

Taps and 1-1/2" O.D. Round dies. (8 Sizes)

Die Stock 1-1/2".

Straight Handle Tap Wrench 1/4"-3/4".

T-Tap Wrench 1/4"-1/2"

Screw Driver

Screw Pitch Gage 12-40 Pitch

Descriptions	Plastic Case Order No.
H.S.S	314-9523
Carbon Steel	314-9623

Thread Size & Pitch
1/4"-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC

Thread Size & Pitch
1/2-13NC
9/16-12NC
5/8-11NC
3/4-10 NC

Tap & Die Sets 套装丝锥板牙

Ground Thread



21 Piece Tap & Die Sets

Set includes one each of:
Taps & 1" Adj. Dies. (18 Size)
Die Holder 1".
Tap Wrench 1/16"-1/2".
T-Tap Wrench.

NEW

Descriptions	Metal Case Order No.
H.S.S	314-9521
Carbon Steel	314-9621

Thread Size & Pitch
M2X0.4, M2.5X0.45, M3X0.6, M3.5X0.6, M4X0.75,

Thread Size & Pitch
M4.5X0.75, M5X0.9, M5.5X0.9, M6X1.0.



21 Piece Die Sets

Set includes one each of:
NC,NF, 1/4 to 1" carbon-Hex, rethreading die set

NEW

Descriptions	Wooden Case Order No.
Carbon Steel	314-9820

Thread Size & Pitch
1/4-20 1/4-28 5/16-18 5/16-24 3/8-16 3/8-24 7/16-14 7/16-20 1/2-13 1/2-20

Thread Size & Pitch
9/16-12 9/16-18 5/8-11 5/8-18 3/4-10 3/4-16 7/8-9 7/8-14 1-8 1-14



22 Piece Tap & Die Sets

Set includes one each of:
10 sizes each 1/4-20 to 1/2-20, Tap & 1" OD Adjust.
DIE, T- Handle Tap Wrench & Die Stock

NEW

Descriptions	Wooden Case Order No.
H.S.S	314-9526
Left Hand HSS	314-9527

Thread Size & Pitch
1/4-20 1/4-28 5/16-18 5/16-24 3/8-16

Thread Size & Pitch
3/8-24 7/16-14 7/16-20 1/2-13 1/2-20



22 Piece Tap & Die Sets

Set includes one each of:
Taps and 1" O.D. round dies. (10 Sizes)
Die Stock 1".
Straight Handle Tap Wrench 1/16"-1/2".

Descriptions	Plastic Case Order No.
H.S.S	314-9522
Carbon Steel	314-9622

Thread Size & Pitch
1/4"-20NC 5/16-18 NC 3/8-16 NC 7/16-14 NC 1/2-13NC

Thread Size & Pitch
1/4"-28 NF 5/16-24NF 3/8-24 NF 7/16-20 NF 1/2-20NF



22 Piece Tap & Die Sets

Set includes one each of:
Taps and 1" & 1-1/2" O.D. ADJ. Round Dies(9 Sizes).
Adjustable Die Stock 1" & 1-1/2".
Straight Handle Tap Wrench 1/2-3/4".
T-Tap Wrench.

Descriptions	Wooden Case Order No.
H.S.S	314-9519
Carbon Steel	314-9619

Thread Size & Pitch
M6x1.0, M7x1.0, M8x1.25, M9x1.25, M10x1.5,

Thread Size & Pitch
M11x1.5, M12x1.75, M14x2.0, M16x2.0

Tap & Die Sets 套装丝锥板牙

Ground Thread

23 Piece Tap & Die Sets

Set includes one each of:

Taps and Dies.(20 Sizes)

Tap wrench,

T-Tap wrench,

Die Stocks.



Descriptions		Metal Case Order No.
Carbon Steel		314-9823

Thread Size & Pitch
0-80NC
1-64NC
2-56NC
3-48NC
4-40NC

Thread Size & Pitch
5-40NC
6-32NC
8-32NC
10-24NC
12-24NC

24 Piece Tap & Die Sets

Set includes one each of:

M3-M12, 1/8NPT,

Hex Die, (11 sizes),

Tap wrench,

Die Stock



Descriptions		Metal Case Order No.
H.S.S		314-9525

Thread Size & Pitch
M3x0.50,
M4x0.70,
M5x0.80,
M6x1.00,
M7x1.00,
M8x1.25,

Thread Size & Pitch
M9x1.25,
M10x1.50,
M12x1.50,
M12x1.75,
1/8"NPT

30 Piece Tap & Die Sets

Set includes one each of:

Taps and 1-1/2" O.D. Round Dies. (14 Sizes)

Die Stock 1-1/2".

Straight Handle Tap wrench 1/4"-3/4".



Descriptions		Plastic Case Order No.
H.S.S		314-9530
Carbon Steel		314-9630

Thread Size & Pitch
1/4"-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC
1/2-13NC
5/8-11NC
3/4-10 NC

Thread Size & Pitch
1/4"-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF
1/2-20NF
5/8-18 NF
3/4-16 NF

32 Piece Metric Tap and Die Set DIN 352 Taps & DIN 223 Dies

Set includes one each:

Taps (21 metric thread sizes)

Dies (7 metric thread sizes)

Adjustable die stock.

Adjustable handle tap wrench.



Descriptions	Plastic Case Metal Case	
	Order No.	Order No.
H.S.S	314-9532	314-9533
Carbon Steel	314-9632	314-9633

Screw pitch gage.

Screw driver.

Remark: V= Coarse Tap, M= Middle Tap, F= Fine Tap.

Size of Dies
M3x0.5
M4x0.7
M5x0.8
M6x1.0
M8x1.25
M10x1.5
M12x1.75

Thread Size & Pitch		
M3(V)	M3(M)	M3(F)
M4(V)	M4(M)	M4(F)
M5(V)	M5(M)	M5(F)
M6(V)	M6(M)	M6(F)
M8(V)	M8(M)	M8(F)
M10(V)	M10(M)	M10(F)
M12(V)	M12(M)	M12(F)

39 Piece Metric Tap & Die Sets 3mm-12mm

Set includes one each:

Taps and 1" round dies.

(17 metric thread sizes)

Adjustable die stock.

Adjustable handle tap wrench.

T-Tap wrench

Screw pitch gage.

Screw driver.



Dsecriptions		Plastic Case Order No.
H.S.S		314-9535
Carbon Steel		314-9635

Thread Size & Pitch
3mmx0.5
3mmx0.6
4mmx0.7
4mmx0.75
5mmx0.8
5mmx0.9
6mmx0.75
6mmx1.0

Thread Size & Pitch
7mmx0.75
7mmx1.0
8mmx1.0
8mmx1.25
10mmx1.25
10mmx1.5
12mmx1.5
12mmx1.75
1/8-27 NPT

Tap & Die Sets 套装丝锥板牙

Ground Thread



39 Piece Tap & Die Sets

Set includes one each of:

Taps and 1" O.D. Round Dies.(17 Sizes)

Die Stock 1".

Straight Handle Tap Wrench 1/16"-1/2"

T handle Tap Wrench 0-1/4".

Screw Driver

Screw Pitch Gage

Descriptions	Plastic Case Order No.
H.S.S	314-9540
Carbon Steel	314-9640

Thread Size & Pitch
4-40NC
6-32NC
8-32NC
10-24NC
12-24NC
1/4-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC
1/2-13NC

Thread Size & Pitch
10-32NF
1/4-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF
1/2-20NF
1/8-27 NPT



39 Piece Tap & Die Sets

Set includes one each of:

17 sizes plug taps & 1" OD Dies.

Adj. Die stock,

Straight handle Tap wrench,

T-tap wrench,

Screw pitch gage,

Screwdriver.

Descriptions	Plastic Case Order No.
H.S.S	314-9539

Thread Size & Pitch
4-40,
6-32,
8-32,
10-24,
10-32,
12-24,
1/4-20,
1/4-28,
5/16-18,

Thread Size & Pitch
5/16-24,
3/8-16,
3/8-24,
7/16-14,
7/16-20,
1/2-13,
1/2-20 ,
1/8-27NPT



39 Piece Tap & Die Sets

Set includes one each of:

Taps and 1" Hex Dies.(17 Sizes)

Hex Die Stock.

Straight Handle Tap Wrench

1/16"-1/2"

T handle Tap Wrench 0-1/4".

Screw Driver

Screw Pitch Gage

Descriptions	Plastic Case Order No.
Carbon Steel	314-9639

Thread Size & Pitch
4-40NC
6-32NC
8-32NC
10-24NC
12-24NC
1/4-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC
1/2-13NC

Thread Size & Pitch
10-32NF
1/4-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF
1/2-20NF
1/8-27 NPT



40 Piece Tap & Die Sets

Set includes one each of:

#4 to 1/2", 1 of each Plug Tap and Round Adj. Die

Tap Wrenches

Die Stocks Screwdriver

Pitch Gage

Descriptions	Plastic Case Order No.
H.S.S	314-9537
Carbon Steel	314-9637

Thread Size & Pitch
4-40NC,
6-32NC,
8-32NC,
10-24NC,
12-24NC,
1/4-20NC,
5/16-18NC,
3/8-16NC,
7/16-14NC,
1/2-13NC

Thread Size & Pitch
#10-32NF,
1/4-28NF,
5/16-24NF,
3/8-24NF,
7/16-20NF,
1/2-20NF
1/8-27 NPT

Tap & Die Sets 套装丝锥板牙

Ground Thread



40 Piece Tap & Die Sets

Set includes one each of:
Taps and 1" Hex Dies.(17 Sizes)
Adj. Die stock,
Straight handle Tap wrench,
2 pcs of T-tap wrenchs,
Screw pitch gage,
Screwdriver.

Descriptions	Plastic Case Order No.
H.S.S	314-9538
Carbon Steel	314-9638

Thread Size & Pitch
4-40,
6-32,
8-32,
10-24,
10-32,
12-24,
1/4-20,
1/4-28,
5/16-18,

Thread Size & Pitch
5/16-24,
3/8-16,
3/8-24,
7/16-14,
7/16-20,
1/2-13,
1/2-20,
1/8NPT.



41 Piece Tap & Die Sets

Set includes one each of:
Taps and 1" HEX Dies.(17 Sizes)
Die stock,
Straight handle tap wrench,
3/8" & 1/2" T-tap wrench,
Metric screw pitch gage, screwdriver

Descriptions	Plastic Case Order No.
H.S.S	314-9543
Carbon Steel	314-9643

Thread Size & Pitch
3X.5
3X.6
4X.7
4X.75
5X.8
5X.9
6X.75
6X1.0
7X.75

Thread Size & Pitch
17X1.0
8X1.0
8X1.25
10X1.25
10X1.5
12X1.5
12X1.75
1/8-27NPT



41 Piece Tap & Die Sets

Set includes one each of:
18 Size(Plug Tap & 1-1/2". Solid Round Die NC NF NPT)
Adj. Handle Tap Wrench
Die Stock;
T-Handle Tap Wrench;
Screw Pitch Gage;
Screwdriver,
With plastic case

Descriptions	Plastic Case Order No.
H.S.S	314-9542
Carbon Steel	314-9642

Thread Size & Pitch
1/4-20NC
5/16-18NC
3/8-16NC
7/16-14NC
1/2-13NC
9/16-12NC
5/8-11NC
3/4-10NC

Thread Size & Pitch
1/4-28NF
5/16-24NF
3/8-24NF
7/16-20NF
1/2-20NF
9/16-18NF
5/8-18NF
3/4-16NF
1/8-27NPT
1/4-18NPT



41 Piece Tap & Die Sets

Set includes one each of:
Taps and 1-1/2" O.D. Round Dies.
(18 Sizes)
Die Stock 1-1/2".
Straight Handle Tap Wrench 1/4"-3/4".
T-Tap Wrench 0-1/4"
Screw Driver
Screw Pitch Gage 12-40 Pitch

Descriptions	Plastic Case Order No.
H.S.S	314-9541
Carbon Steel	314-9641

Thread Size & Pitch
1/4"-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC
1/2-13NC
9/16-12NC
5/8-11NC
3/4-10 NC

Thread Size & Pitch
1/4"-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF
1/2-20NF
9/16-18NF
5/8-18 NF
3/4-16 NF
1/8-27 NPT
1/4-18NPT

Tap & Die Sets 套装丝锥板牙

Ground Thread



44 Piece Tap & Die Sets

Set includes one each of:

20 sizes each, M2-M18, 1" & 1-1/2" OD Adjust die,
2 each of Tap wrench and Die Stock

Descriptions	Wooden Case Order No.
H.S.S	314-9566

48 Piece Tap & Die Sets

Set includes one each of:

22 sizes each, #6-3/4", 1" & 1-1/2" OD Adjust die,
2 each of Tap wrench and Die Stock

Descriptions	Wooden Case Order No.
Carbon Steel	314-9567
Left Hand HSS	314-9568



44 Piece Tap & Die Sets

Set includes one each:

Taps and Round Dies. (20 Sizes)
2" Adjustable Die Stock with Adapter.
Straight Handle Tap Wrench
T-Handle Tap Wrench.
Screw Driver

Descriptions	Plastic Case Order No.
H.S.S	314-9551
Carbon Steel	314-9651

Thread Size & Pitch	Thread Size & Pitch
1/4"-20NC	1/4"-28 NF
5/16-18 NC	5/16-24NF
3/8-16 NC	3/8-24 NF
7/16-14 NC	7/16-20 NF
1/2-13NC	1/2-20NF
9/16-12NC	9/16-18NF
5/8-11NC	5/8-18 NF
3/4-10 NC	3/4-16 NF
7/8-9NC	7/8-14 NF
1-8 NC	1-14NS



44 Piece Metric Tap & Die Sets 6mm-24mm

Set includes one each:

Taps and adjustable dies.
(20 metric thread sizes)
Adjustable die stock.
Adjustable handle tap wrench.
T-Tap wrench
Screw driver.

Descriptions	Plastic Case Order No.	Metal Case Order No.
H.S.S	314-9547	314-9548
Carbon Steel	314-9647	314-9648

Thread Size & Pitch	Thread Size & Pitch
6mmx0.75	16mmx1.5
6mmx1.0	16mmx2.0
8mmx1.0	18mmx1.5
8mmx1.25	18mmx2.5
10mmx1.25	20mmx1.5
10mmx1.5	20mmx2.5
12mmx1.5	22mmx1.5
12mmx1.75	22mmx2.5
14mmx1.5	24mmx1.5
14mmx2.0	24mmx3.0



44 Piece Tap & Die Sets

Set includes one each:

Plug Taps and Adjustable Dies
for the 20 thread sizes.
Die Stock with Adapter.
Straight Handle Tap Wrench.
T-Handle Tap Wrench.
Screw Driver.

Descriptions	Plastic Case Order No.	Metal Case Order No.
H.S.S	314-9545	314-9546
Carbon Steel	314-9645	314-9646

Thread Size & Pitch	Thread Size & Pitch
1/4" -20NC	1/4"-18NF
5/16-18 NC	5/16-24NF
3/8-16NC	3/8-24NF
7/16-14NC	7/16-20NF
1/2-13NC	1/2-20NF
9/16-12NC	9/16-18NF
5/8-11NC	5/8-18NF
3/4-10NC	3/4-16NF
7/8-9NC	7/8-14NF
1-8NC	
1-14NF	

Tap & Die Sets 套装丝锥板牙

Ground Thread



45 Piece Tap & Die Sets

Set includes one each:

Taps and Round Dies.(20 Sizes)
Die Stock 1-1/2".
Adjustable Die Stock 2".
Straight Handle Tap Wrench 1/4"-3/4".
Straight Handle Tap Wrench 3/8"-1".
Screw Driver

Descriptions	Plastic Case Order No.
H.S.S	314-9544
Carbon Steel	314-9644

Thread Size & Pitch

1/4"-20NC
5/16-18 NC
3/8-16 NC
7/16-14 NC
1/2-13NC
9/16-12NC
5/8-11NC
3/4-10 NC
7/8-9NC
1-8 NC

Thread Size & Pitch

1/4"-28 NF
5/16-24NF
3/8-24 NF
7/16-20 NF
1/2-20NF
9/16-18NF
5/8-18 NF
3/4-16 NF
7/8-14 NF
1-14NS



59 Piece Tap & Die Sets

Set includes one each of:

Taps and Hex Dies.(44Sizes)
Tap wrenchs,
Die Stock,
Screwdriver,
Pitch gage & Screw Extractors

Descriptions	Plastic Case Order No.
H.S.S	314-9558
Carbon Steel	314-9658

Thread Size & Pitch

#6-32
#8-32
#10-24
#10-32
#12-24
1/4-20
5/16-18
3/8-16
7/16-14
1/2-13
1/4-28

Thread Size & Pitch

5/16-24
3/8-24
7/16-20
1/2-20
1/8-27NPT
1/4-18NPT
9/16-12
9/16-18
5/8-11
3/4-10
3/4-16



59 Piece Tap & Die Sets

Set includes one each of:

Taps and Round Dies.(44Sizes)
Tap wrenchs,
Die Stocks,
Screwdriver,
Pitch gage & Screw Extractors

Descriptions	Plastic Case Order No.
H.S.S	314-9559
Carbon Steel	314-9659

Thread Size & Pitch

#6-32
#8-32
#10-24
#10-32
#12-24
1/4-20
5/16-18
3/8-16
7/16-14
1/2-13
1/4-28

Thread Size & Pitch

5/16-24
3/8-24
7/16-20
1/2-20
1/8-27NPT
1/4-18NPT
9/16-12
9/16-18
5/8-11
3/4-10
3/4-16

60 Piece Metric, Inch Tap & Die Sets

Set includes one each:

Plug taps and 1" round dies.(27 sizes)
Adjustable die stock.
Adjustable handle tap wrench.
T-Handle tap wrench.
Screw driver.
2 Screw pitch gage.

Descriptions	Plastic Case Order No.	Metal Case Order No.
H.S.S	314-9560	314-9561
Carbon Steel	314-9660	314-9661

Thread Size & Pitch

1/4"-20NC
5/16-18NC
3/8-16NC
7/16-14NC
1/2-13NC
4-40NC
6-32NC
8-32NC
10-24NC
12-24NC

Thread Size & Pitch

1/4"-28NF
5/16-24NF
3/8-24NF
7/16-20NF
1/2-20NF
10-32NF
1/8-27 NPT

Thread Size & Pitch

3mmx.5
4mmx.7
5mmx.8
6mmx1.0
7mmx1.0
8mmx1.25
9mmx1.25
10mmx1.5
10mmx1.0
12mmx1.75



Tap & Die Sets 套装丝锥板牙

Ground Thread



64 Piece Tap & Die Sets

Set includes one each:

Taps and Round Dies.(28 Sizes)
Die Stock 1" O.D.
Die Stock 1-1/2" O.D.
Die Stock 2" O.D.
Straight Handle Tap Wrench 1/16"-1/2"
Straight Handle Tap Wrench 3/8"-1"
T-Handle Tap Wrench 0-1/4".
Screw Driver
Screw Pitch Gage 12-40 Pitch

Descriptions	Plastic Case Order No.
H.S.S	314-9564
Carbon Steel	314-9664

Thread Size & Pitch	Thread Size & Pitch
4-40NC	10-32NF
6-32NC	1/4-28 NF
8-32NC	5/16-24NF
10-24NC	3/8-24 NF
12-24NC	7/16-20 NF
1/4-20NC	1/2-20NF
5/16-18 NC	9/16-18NF
3/8-16 NC	5/8-18 NF
7/16-14 NC	3/4-16 NF
1/2-13NC	7/8-14 NF
9/16-12NC	1/8-27 NPT
5/8-11NC	1/4-18NPT
3/4-10 NC	1-14NS
7/8-9NC	
1-8 NC	



110 Piece Tap & Die Sets

Set includes one each:

Taper Taps, Bottom Taps and Round Dies.
(35 Sizes)
Die Stock 1" O.D.
Die Stock 1-1/2" O.D.
Straight Handle Tap Wrench 1/4"-3/4"
Straight Handle Tap Wrench 1/16"-1/2"
T-Handle Tap Wrench 0-1/4".

Descriptions	Plastic Case Order No.
H.S.S	314-9596
Carbon Steel	314-9696

Thread Size & Pitch	Thread Size & Pitch	Thread Size & Pitch
4-40NC	10-32NF	M6X1.0
6-32NC	1/4-28 NF	M8X1.25
8-32NC	5/16-24NF	M10X1.0
10-24NC	3/8-24 NF	M10X1.5
12-24NC	7/16-20 NF	M11X1.5
1/4-20NC	1/2-20NF	M12X1.5
5/16-18 NC	9/16-18NF	M12X1.75
3/8-16 NC	5/8-18 NF	M14X1.25
7/16-14 NC	3/4-16 NF	M18X1.5
1/2-13NC	1/4-24NS	
9/16-12NC	1/4-32NS	
5/8-11NC	1/8-27 NPT	
3/4-10 NC	1/4-18NPT	

Drill & Tap Sets 丝锥钻头套装

HSS, Ground



Description	Sizes	Order No.
Inch	Tap(NC):6-32,8-32,10-24,10-32,1/4-20,5/16-18,3/8-16,7/16-14,1/2-13 Drill:36#,29#,25#,21#,7#,F,5/16,U,27/64"	314-9581
Inch	Tap(NF):6-40,8-36,10-24,10-32,1/4-28,5/16-24,3/8-24,7/16-20,1/2-20 Drill:33#,29#,25#,21#,3#,I,Q,25/64",29/64"	314-9582
Metric	Tap:M2.5x0.45,3.0x0.5,3.5x0.6,4.0x0.7,5.0x0.8,6.0x1.0,8.0x1.25, 10.0x1.50,12.0x1.75 Drill:2.05,2.5,2.9,3.3,4.2,5.0,6.7,8.5,10.20mm.	314-9583
18pcs	HSS Ground,18pcs.Spiral Point Tap(NC):6-32,8-32,10-24,10-32,1/4-20, 5/16-18,3/8-16,7/16-14,1/2-13; Drill:36#,29#,25#,21#,7#,F,5/16,U,27/64"	314-9586
18pcs	HSS Ground,18pcs.Spiral Point Tap(NF):6-40,8-36,10-24,10-32,1/4-28, 5/16-24,3/8-24,7/16-20,1/2-20, Drill:33#,29#,25#,21#,3#,I,Q,25/64",29/64"	314-9587
18pcs	HSS Ground,18pcs.Spiral Point Tap:M2.5x0.45,3.0x0.5,3.5x0.6,4.0x0.7,5.0x0.8, 6.0x1.0,8.0x1.25,10.0x1.50,12.0x1.75, Drill:2.05,2.5,2.9,3.3,4.2,5.0,6.7,8.5,10.20.	314-9588

29 Piece Metric Tap and Drill Set DIN 352

Set includes one each:

Taps (21 metric thread sizes)
Drills (7 metric sizes)
Adjustable handle tap wrench.

Dsecriptions	Metal Case Order No.
H.S.S	314-9529

Remark: V= Coarse Tap, M= Middle Tap, F= Fine Tap.

Size of Drills	Thread Size & Pitch		
M3	M3(V)	M3(M)	M3(F)
M4	M4(V)	M4(M)	M4(F)
M5	M5(V)	M5(M)	M5(F)
M6	M6(V)	M6(M)	M6(F)
M8	M8(V)	M8(M)	M8(F)
M10	M10(V)	M10(M)	M10(F)
M12	M12(V)	M12(M)	M12(F)



Hand Taps-Taper Style

高速钢美标手用丝锥(头攻)磨制

High Speed Steel, Ground Thread



- Use for hand or machine tapping in a wide variety of materials.
- Ensures easy starting.
- Higher volume of working teeth reduces tapping torque.
- Seven to ten thread chamfer.

Size	Thread Limit	No. of Flute	Thread Length	Overall Length	Order No.	Size	Thread Limit	No. of Flute	Thread Length	Overall Length	Order No.	Size	Thread Limit	No. of Flute	Thread Length	Overall Length	Order No.
0-80NF	H-1	2	5/16"	1-5/8"	440-1000	10-32NF	H-1	4	7/8	2-3/8	440-1083	1/2-13NC	H-1	4	1-21-32	3-3/8	440-1266
0-80NF	H-2	2	5/16	1-5/8	440-1002	10-32NF	H-2	4	7/8	2-3/8	440-1084	1/2-13NC	H-2	4	1-21-32	3-3/8	440-1268
1-64NC	H-1	2	3/8	1-11/16	440-1004	10-32NF	H-3	4	7/8	2-3/8	440-1085	1/2-13NC	H-3	4	1-21-32	3-3/8	440-1270
1-64NC	H-2	2	3/8	1-11/16	440-1006	12-24NC	H-3	4	15/16	2-3/8	440-1090	1/2-13NC	H-5	4	1-21-32	3-3/8	440-1272
1-72NF	H-1	2	3/8	1-11/16	440-1008	12-28NF	H-1	4	15/16	2-3/8	440-1091	1/2-20NF	H-3	3	1-21-32	3-3/8	440-1276
1-72NF	H-2	2	3/8	1-11/16	440-1009	12-28NF	H-3	4	15/16	2-3/8	440-1092	1/2-20NF	H-5	3	1-21-32	3-3/8	440-1278
2-56NC	H-1	2	7/16	1-3/4	440-1010	12-28NF	H-2	4	15/16	2-3/8	440-1093	1/2-20NF	H-1	4	1-21-32	3-3/8	440-1280
2-56NC	H-2	2	7/16	1-3/4	440-1011	14-20NF	H-1	4	1	2-1/2	440-1095	1/2-20NF	H-2	4	1-21-32	3-3/8	440-1282
2-56NC	H-1	3	7/16	1-3/4	440-1012	14-20NF	H-3	4	1	2-1/2	440-1096	1/2-20NF	H-3	4	1-21-32	3-3/8	440-1284
2-56NC	H-2	3	7/16	1-3/4	440-1013	14-24NF	H-1	4	1	2-1/2	440-1097	1/2-20NF	H-5	4	1-21-32	3-3/8	440-1286
2-64NF	H-1	3	7/16	1-3/4	440-1014	14-24NF	H-3	4	1	2-1/2	440-1098	9/16-12NC	H-1	4	1-21-32	3-19/32	440-1312
2-64NF	H-2	3	7/16	1-3/4	440-1015	1/4-20NC	H-3	2	1	2-1/2	440-1102	9/16-12NC	H-2	4	1-21-32	3-19/32	440-1314
3-48NC	H-1	3	1/2	1-3/4	440-1016	1/4-20NC	H-3	3	1	2-1/2	440-1108	9/16-12NC	H-3	4	1-21-32	3-19/32	440-1316
3-48NC	H-2	3	1/2	1-3/4	440-1018	1/4-20NC	H-5	3	1	2-1/2	440-1110	9/16-12NC	H-5	4	1-21-32	3-19/32	440-1318
3-56NF	H-1	3	1/2	1-3/4	440-1019	1/4-20NC	H-1	4	1	2-1/2	440-1112	9/16-18NF	H-1	4	1-21-32	3-19/32	440-1321
3-56NF	H-2	3	1/2	1-3/4	440-1020	1/4-20NC	H-2	4	1	2-1/2	440-1114	9/16-18NF	H-2	4	1-21-32	3-19/32	440-1322
4-36	H-2	3	9/16	1-7/8	440-1022	1/4-20NC	H-3	4	1	2-1/2	440-1116	9/16-18NF	H-3	4	1-21-32	3-19/32	440-1324
4-40NC	H-1	3	9/16	1-7/8	440-1025	1/4-20NC	H-5	4	1	2-1/2	440-1118	9/16-18NF	H-5	4	1-21-32	3-19/32	440-1326
4-40NC	H-2	3	9/16	1-7/8	440-1026	1/4-28NF	H-3	2	1	2-1/2	440-1132	5/8-11NC	H-2	4	1-13/16	3-13/16	440-1330
4-48NF	H-2	2	9/16	1-7/8	440-1030	1/4-28NF	H-3	3	1	2-1/2	440-1134	5/8-11NC	H-1	4	1-13/16	3-13/16	440-1331
4-48NF	H-1	3	9/16	1-7/8	440-1031	1/4-28NF	H-1	4	1	2-1/2	440-1136	5/8-11NC	H-3	4	1-13/16	3-13/16	440-1332
4-48NF	H-2	3	9/16	1-7/8	440-1032	1/4-28NF	H-2	4	1	2-1/2	440-1138	5/8-11NC	H-5	4	1-13/16	3-13/16	440-1334
5-40NC	H-2	2	5/8	1-15/16	440-1033	1/4-28NF	H-3	4	1	2-1/2	440-1140	5/8-18NF	H-1	4	1-13/16	3-13/16	440-1338
5-40NC	H-1	3	5/8	1-15/16	440-1034	1/4-28NF	H-4	4	1	2-1/2	440-1142	5/8-18NF	H-2	4	1-13/16	3-13/16	440-1340
5-40NC	H-2	3	5/8	1-15/16	440-1035	5/16-18NC	H-3	2	1-1/8	2-23/32	440-1144	5/8-18NF	H-3	4	1-13/16	3-13/16	440-1342
5-44NF	H-1	3	5/8	1-15/16	440-1036	5/16-18NC	H-3	3	1-1/8	2-23/32	440-1148	5/8-18NF	H-5	4	1-13/16	3-13/16	440-1343
5-44NF	H-2	3	5/8	1-15/16	440-1037	5/16-18NC	H-1	4	1-1/8	2-23/32	440-1152	3/4-10NC	H-3	4	2	4-1/4	440-1350
6-32NC	H-2	2	11/16	2	440-1039	5/16-18NC	H-2	4	1-1/8	2-23/32	440-1154	3/4-10NC	H-5	4	2	4-1/4	440-1352
6-32NC	H-3	2	11/16	2	440-1040	5/16-18NC	H-3	4	1-1/8"	2-23/32"	440-1156	3/4-16NF	H-1	4	2	4-1/4	440-1354
6-32NC	H-1	3	11/16	2	440-1041	5/16-18NC	H-5	4	1-1/8	2-23/32	440-1158	3/4-16NF	H-2	4	2	4-1/4	440-1356
6-32NC	H-2	3	11/16	2	440-1042	5/16-24NF	H-3	2	1-1/8	2-23/32	440-1165	3/4-16NF	H-3	4	2	4-1/4	440-1358
6-32NC	H-3	3	11/16	2	440-1043	5/16-24NF	H-3	3	1-1/8	2-23/32	440-1168	3/4-16NF	H-4	4	2	4-1/4	440-1359
6-40NF	H-2	2	11/16	2	440-1047	5/16-24NF	H-1	4	1-1/8	2-23/32	440-1170	3/4-16NF	H-5	4	2	4-1/4	440-1360
6-40NF	H-1	3	11/16	2	440-1048	5/16-24NF	H-2	4	1-1/8	2-23/32	440-1172	7/8-9NC	H-3	4	2-7/32	4-11/16	440-1364
6-40NF	H-2	3	11/16	2	440-1049	5/16-24NF	H-3	4	1-1/8	2-23/32	440-1174	7/8-9NC	H-4	4	2-7/32	4-11/16	440-1366
6-40NF	H-3	3	11/16	2	440-1050	5/16-24NF	H-4	4	1-1/8	2-23/32	440-1176	7/8-14NF	H-4	4	2-7/32	4-11/16	440-1374
8-32NC	H-2	2	3/4	2-1/8	440-1051	3/8-16NC	H-3	3	1-1/4	2-15/16	440-1182	1-8NC	H-4	4	2-1/2	5-1/8	440-1380
8-32NC	H-3	2	3/4	2-1/8	440-1052	3/8-16NC	H-5	3	1-1/4	2-15/16	440-1183	1-12NF	H-4	4	2-1/2	5-1/8	440-1388
8-32NC	H-2	3	3/4	2-1/8	440-1054	3/8-16NC	H-1	4	1-1/4	2-15/16	440-1184	1-14NS	H-4	4	2-1/2	5-1/8	440-1394
8-32NC	H-3	3	3/4	2-1/8	440-1055	3/8-16NC	H-2	4	1-1/4	2-15/16	440-1186	1-1/8-7NC	H-4	4	2-9/16	5-7/16	440-1398
8-32NC	H-1	4	3/4	2-1/8	440-1057	3/8-16NC	H-3	4	1-1/4	2-15/16	440-1188	1-1/8-12NF	H-4	4	2-9/16	5-7/16	440-1400
8-32NC	H-2	4	3/4	2-1/8	440-1058	3/8-16NC	H-5	4	1-1/4	2-15/16	440-1190	1-1/8-12NF	H-5	4	2-9/16	5-7/16	440-1401
8-32NC	H-3	4	3/4	2-1/8	440-1059	3/8-24NF	H-3	3	1-1/4	2-15/16	440-1224	1-1/4-7NC	H-4	4	2-9/16	5-3/4	440-1402
8-36NF	H-1	4	3/4	2-1/8	440-1062	3/8-24NF	H-1	4	1-1/4	2-15/16	440-1226	1-1/4-12NF	H-4	4	2-9/16	5-3/4	440-1403
8-36NF	H-2	2	3/4	2-1/8	440-1063	3/8-24NF	H-2	4	1-1/4	2-15/16	440-1228	1-1/4-12NF	H-4	6	2-9/16	5-3/4	440-1404
8-36NF	H-3	4	3/4	2-1/8	440-1064	3/8-24NF	H-3	4	1-1/4	2-15/16	440-1230	1-3/8-6NC	H-4	4	3	6-1/16	440-1406
8-36NF	H-2	4	3/4	2-1/8	440-1065	3/8-24NF	H-4	4	1-1/4	2-15/16	440-1232	1-3/8-12NF	H-4	6	3	6-1/16	440-1408
10-24NC	H-2	2	7/8	2-3/8	440-1066	7/16-14NC	H-3	3	1-7/16	3-5/32	440-1234	1-1/2-6NC	H-4	4	3	6-3/8	440-1410
10-24NC	H-3	2	7/8	2-3/8	440-1067	7/16-14NC	H-5	3	1-7/16	3-5/32	440-1236	1-1/2-12NF	H-4	6	3	6-3/8	440-1412
10-24NC	H-2	3	7/8	2-3/8	440-1068	7/16-14NC	H-2	4	1-7/16	3-5/32	440-1240	1-5/8-6-1/2	H-6	6			440-1414
10-24NC	H-3	3	7/8	2-3/8	440-1069	7/16-14NC	H-3	4	1-7/16	3-5/32	440-1242	1-5/8-12	H-4	6			440-1416
10-24NC	H-1	4	7/8	2-3/8	440-1071	7/16-14NC	H-5	4	1-7/16	3-5/32	440-1244	1-3/4-5	H-6	6			440-1418
10-24NC	H-2	4	7/8	2-3/8	440-1072	7/16-20NF	H-3	3	1-7/16	3-5/32	440-1246	1-3/4-12	H-4	6			440-1420
10-24NC	H-3	4	7/8	2-3/8	440-1073	7/16-20NF	H-2	4	1-7/16	3-5/32	440-1256	1-7/8-8	H-6	6			440-1422
10-32NF	H-2	2	7/8	2-3/8	440-1078	7/16-20NF	H-3	4	1-7/16	3-5/32	440-1258	1-7/8-12	H-6	6			440-1424
10-32NF	H-3	2	7/8	2-3/8	440-1079	7/16-20NF	H-5	4	1-7/16	3-5/32	440-1260	2-4-1/2	H-7	6			440-1426
10-32NF	H-2	3	7/8	2-3/8	440-1080	1/2-13NC	H-3	3	1-21-32	3-3/8	440-1262	2-12	H-7	6			440-1428
10-32NF	H-3	3	7/8	2-3/8	440-1081	1/2-13NC	H-5	3	1-21-32	3-3/8	440-1264						

Hand Taps-Plug Style 高速钢美标手用丝锥(二攻)磨制

High Speed Steel, Ground Thread

- Used for hand tapping or general machine and CNC tapping in wide variety of materials.
- The most versatile choice for through and semi-blind holes.
- Three to five thread chamfer.



Size	Thread Limit	No. of Flute	Thread Length	OAL	Thread No. of Thread	Size	Thread Limit	No. of Flute	Thread Length	OAL	Order No.	Size	Thread Limit	No. of Flute	Thread Length	OAL	Order No.
0-80NF	H-1	2	5/16"	1-5/8"	440-2000	10-32NF	H-1	4	7/8	2-3/8	440-2083	7/16-20NF	H-11	4	1-7/16	3-5/32	440-2261
0-80NF	H-2	2	5/16	1-5/8	440-2002	10-32NF	H-2	4	7/8	2-3/8	440-2084	1/2-13NC	H-3	3	1-21/32	3-3/8	440-2262
1-64NC	H-1	2	3/8	1-11/16	440-2004	10-32NF	H-3	4	7/8	2-3/8	440-2085	1/2-13NC	H-5	3	1-21/32	3-3/8	440-2264
1-64NC	H-2	2	3/8	1-11/16	440-2006	10-32NF	H-4	4	7/8	2-3/8	440-2086	1/2-13NC	H-1	4	1-21/32	3-3/8	440-2266
1-72NF	H-1	2	3/8	1-11/16	440-2008	10-32NF	H-5	4	7/8	2-3/8	440-2087	1/2-13NC	H-2	4	1-21/32	3-3/8	440-2268
1-72NF	H-2	2	3/8	1-11/16	440-2009	10-32NF	H-7	4	7/8	2-3/8	440-2088	1/2-13NC	H-3	4	1-21/32	3-3/8	440-2270
2-56NC	H-1	2	7/16	1-3/4	440-2010	12-24NC	H-1	4	15/16	2-3/8	440-2089	1/2-13NC	H-5	4	1-21/32	3-3/8	440-2272
2-56NC	H-2	2	7/16	1-3/4	440-2011	12-24NC	H-3	4	15/16	2-3/8	440-2090	1/2-13NC	H-11	4	1-21/32	3-3/8	440-2274
2-56NC	H-1	3	7/16	1-3/4	440-2012	12-28NF	H-1	4	15/16	2-3/8	440-2091	1/2-20NF	H-3	3	1-21/32	3-3/8	440-2276
2-56NC	H-2	3	7/16	1-3/4	440-2013	12-28NF	H-2	2	15/16	2-3/8	440-2100	1/2-20NF	H-5	3	1-21/32	3-3/8	440-2278
2-64NF	H-1	3	7/16	1-3/4	440-2014	12-28NF	H-3	4	15/16	2-3/8	440-2092	1/2-20NF	H-1	4	1-21/32	3-3/8	440-2280
2-64NF	H-2	3	7/16	1-3/4	440-2015	14-20	H-3	4	1-1/4	2-5/8	440-2093	1/2-20NF	H-2	4	1-21/32	3-3/8	440-2282
3-48NC	H-2	2	1/2	1-13/16	440-2016	14-24	H-3	4	1-1/4	2-5/8	440-2094	1/2-20NF	H-3	4	1-21/32	3-3/8	440-2284
3-48NC	H-1	3	1/2	1-13/16	440-2017	14-24	H-1	4	1-1/4	2-5/8	440-2095	1/2-20NF	H-5	4	1-21/32	3-3/8	440-2286
3-48NC	H-2	3	1/2	1-13/16	440-2018	1/4-20NC	H-3	2	1	2-1/2	440-2102	9/16-12NC	H-2	4	1-21/32	3-19/32	440-2314
3-56NF	H-1	3	1/2	1-13/16	440-2019	1/4-20NC	H-1	3	1	2-1/2	440-2104	9/16-12NC	H-3	4	1-21/32	3-19/32	440-2316
3-56NF	H-2	3	1/2	1-13/16	440-2020	1/4-20NC	H-2	3	1	2-1/2	440-2106	9/16-12NC	H-5	4	1-21/32	3-19/32	440-2318
4-36	H-1	3	1/2	1-13/16	440-2021	1/4-20NC	H-3	3	1	2-1/2	440-2108	9/16-18NF	H-1	4	1-21/32	3-19/32	440-2320
4-36	H-2	3	1/2	1-13/16	440-2022	1/4-20NC	H-5	3	1	2-1/2	440-2110	9/16-18NF	H-2	4	1-21/32	3-19/32	440-2322
4-40NC	H-1	2	9/16	1-7/8	440-2023	1/4-20NC	H-1	4	1	2-1/2	440-2112	9/16-18NF	H-3	4	1-21/32	3-19/32	440-2324
4-40NC	H-2	2	9/16	1-7/8	440-2024	1/4-20NC	H-2	4	1	2-1/2	440-2114	9/16-18NF	H-5	4	1-21/32	3-19/32	440-2326
4-40NC	H-1	3	9/16	1-7/8	440-2025	1/4-20NC	H-3	4	1	2-1/2	440-2116	5/8-11NC	H-1	4	1-13/16	3-13/16	440-2328
4-40NC	H-2	3	9/16	1-7/8	440-2026	1/4-20NC	H-5	4	1	2-1/2	440-2118	5/8-11NC	H-2	4	1-13/16	3-13/16	440-2330
4-40NC	H-3	3	9/16	1-7/8	440-2027	1/4-20NC	H-6	4	1	2-1/2	440-2120	5/8-11NC	H-3	4	1-13/16	3-13/16	440-2332
4-40NC	H-4	4	9/16	1-7/8	440-2028	1/4-20NC	H-7	4	1	2-1/2	440-2122	5/8-11NC	H-5	4	1-13/16	3-13/16	440-2334
4-40NC	H-5	5	9/16	1-7/8	440-2029	1/4-20NC	H-11	4	1	2-1/2	440-2124	5/8-11NC	H-11	4	1-13/16	3-13/16	440-2336
4-48NF	H-2	2	9/16	1-7/8	440-2030	1/4-28NF	H-3	2	1	2-1/2	440-2132	5/8-18NF	H-1	4	1-13/16	3-13/16	440-2338
4-48NF	H-1	3	9/16	1-7/8	440-2031	1/4-28NF	H-3	3	1	2-1/2	440-2133	5/8-18NF	H-2	4	1-13/16	3-13/16	440-2340
4-48NF	H-2	3	9/16	1-7/8	440-2032	1/4-28NF	H-3	3	1	2-1/2	440-2134	5/8-18NF	H-3	4	1-13/16	3-13/16	440-2342
5-40NC	H-2	2	5/8	1-15/16	440-2033	1/4-28NF	H-1	4	1	2-1/2	440-2136	5/8-18NF	H-5	4	1-13/16	3-13/16	440-2343
5-40NC	H-1	3	5/8	1-15/16	440-2034	1/4-28NF	H-2	4	1	2-1/2	440-2138	11/16-11NS	H-3	4	1-13/16	4-1/32	440-2344
5-40NC	H-2	3	5/8	1-15/16	440-2035	1/4-28NF	H-3	4	1	2-1/2	440-2140	11/16-16NS	H-3	4	1-13/16	4-1/32	440-2345
5-44NF	H-1	3	5/8	1-15/16	440-2036	1/4-28NF	H-4	4	1	2-1/2	440-2142	3/4-10NC	H-1	4	2	4-1/4	440-2346
5-44NF	H-2	3	5/8	1-15/16	440-2037	5/16-18NC	H-3	2	1-1/8	2-23/32	440-2144	3/4-10NC	H-2	4	2	4-1/4	440-2348
6-32NC	H-1	2	11/16	2	440-2038	5/16-18NC	H-1	3	1-1/8	2-23/32	440-2146	3/4-10NC	H-3	4	2	4-1/4	440-2350
6-32NC	H-2	2	11/16	2	440-2039	5/16-18NC	H-3	3	1-1/8	2-23/32	440-2148	3/4-10NC	H-5	4	2	4-1/4	440-2352
6-32NC	H-3	2	11/16	2	440-2040	5/16-18NC	H-5	3	1-1/8	2-23/32	440-2150	3/4-16NF	H-1	4	2	4-1/4	440-2354
6-32NC	H-1	3	11/16	2	440-2041	5/16-18NC	H-1	4	1-1/8	2-23/32	440-2152	3/4-16NF	H-2	4	2	4-1/4	440-2356
6-32NC	H-2	3	11/16	2	440-2042	5/16-18NC	H-2	4	1-1/8	2-23/32	440-2154	3/4-16NF	H-3	4	2	4-1/4	440-2358
6-32NC	H-3	3	11/16	2	440-2043	5/16-18NC	H-3	4	1-1/8	2-23/32	440-2156	3/4-16NF	H-4	4	2	4-1/4	440-2359
6-32NC	H-7	3	11/16	2	440-2044	5/16-18NC	H-4	4	1-1/8	2-23/32	440-2157	3/4-16NF	H-5	4	2	4-1/4	440-2360
6-32NC	H-4	4	11/16	2	440-2045	5/16-18NC	H-5	4	1-1/8	2-23/32	440-2158	7/8-9NC	H-2	4	2-7/32	4-11/16	440-2362
6-32NC	H-5	5	11/16	2	440-2046	5/16-18NC	H-6	4	1-1/8	2-23/32	440-2160	7/8-9NC	H-3	4	2-7/32	4-11/16	440-2364
6-40NF	H-2	2	11/16	2	440-2047	5/16-18NC	H-7	4	1-1/8	2-23/32	440-2162	7/8-9NC	H-4	4	2-7/32	4-11/16	440-2366
6-40NF	H-1	3	11/16	2	440-2048	5/16-18NC	H-11	4	1-1/8	2-23/32	440-2164	7/8-9NC	H-6	4	2-7/32	4-11/16	440-2367
6-40NF	H-2	3	11/16	2	440-2049	5/16-24NF	H-3	2	1-1/8	2-23/32	440-2165	7/8-14NF	H-1	4	2-7/32	4-11/16	440-2368
8-32NC	H-1	2	3/4	2-1/8	440-2050	5/16-24NF	H-1	3	1-1/8	2-23/32	440-2166	7/8-14NF	H-2	4	2-7/32	4-11/16	440-2370
8-32NC	H-2	2	3/4	2-1/8	440-2051	5/16-24NF	H-3	3	1-1/8	2-23/32	440-2168	7/8-14NF	H-3	4	2-7/32	4-11/16	440-2372
8-32NC	H-3	2	3/4	2-1/8	440-2052	5/16-24NF	H-1	4	1-1/8	2-23/32	440-2170	7/8-14NF	H-4	4	2-7/32	4-11/16	440-2374
8-32NC	H-1	3	3/4	2-1/8	440-2053	5/16-24NF	H-2	4	1-1/8	2-23/32	440-2172	7/8-14NF	H-6	4	2-7/32	4-11/16	440-2375
8-32NC	H-2	3	3/4	2-1/8	440-2054	5/16-24NF	H-3	4	1-1/8	2-23/32	440-2174	1-8NC	H-1	4	2-1/2	5-1/8	440-2376
8-32NC	H-3	3	3/4	2-1/8	440-2055	5/16-24NF	H-4	4	1-1/8	2-23/32	440-2176	1-8NC	H-2	4	2-1/2	5-1/8	440-2378
8-32NC	H-7	3	3/4	2-1/8	440-2056	5/16-24NF	H-5	4	1-1/8	2-23/32	440-2177	1-8NC	H-4	4	2-1/2	5-1/8	440-2380
8-32NC	H-1	4	3/4	2-1/8	440-2057	3/8-16NC	H-1	3	1-1/4	2-15/16	440-2180	1-8NC	H-6	4	2-1/2	5-1/8	440-2382
8-32NC	H-2	4	3/4	2-1/8	440-2058	3/8-16NC	H-3	3	1-1/4	2-15/16	440-2182	1-12NF	H-1	4	2-1/2	5-1/8	440-2384
8-32NC	H-3	4	3/4	2-1/8	440-2059	3/8-16NC	H-5	3	1-1/4	2-15/16	440-2183	1-12NF	H-2	4	2-1/2	5-1/8	440-2386
8-32NC	H-4	4	3/4	2-1/8	440-2060	3/8-16NC	H-1	4	1-1/4	2-15/16	440-2184	1-12NF	H-3	4	2-1/2	5-1/8	440-2387
8-32NC	H-5	4															

Hand Taps-Bottoming Style 高速钢美标手用丝锥(三攻)磨制

High Speed Steel, Ground Thread

- Used for tapping blind holes requiring full threads near the bottom of the hole.
- Featured for hand tapping general machine or CNC tapping in a wide variety of materials.
- One to two thread chamfer.



Thread No. of Thread Overall						Thread No. of Thread Overall						Thread No. of Thread Overall					
Size	Limit	Flute	Length	Length	Order No.	Limit	Flute	Length	Length	Order No.	Size	Limit	Flute	Length	Length	Order No.	
0-80NF	H-1	2"	5/16"	1-5/8"	440-3000	10-32NF	H-1	4	7/8	2-3/8	440-3083	7/16-20NF	H-2	4	1-7/16	3-5/32	440-3256
0-80NF	H-2	2	5/16	1-5/8	440-3002	10-32NF	H-2	4	7/8	2-3/8	440-3084	7/16-20NF	H-3	4	1-7/16	3-5/32	440-3258
1-64NC	H-1	2	3/8	1-11/16	440-3004	10-32NF	H-3	4	7/8	2-3/8	440-3085	7/16-20NF	H-5	4	1-7/16	3-5/32	440-3260
1-64NC	H-2	2	3/8	1-11/16	440-3006	10-32NF	H-7	4	7/8	2-3/8	440-3087	1/2-13NC	H-3	3	1-21/32	3-3/8	440-3262
1-72NF	H-1	2	3/8	1-11/16	440-3008	10-32NF	H-7	4	7/8	2-3/8	440-3088	1/2-13NC	H-5	3	1-21/32	3-3/8	440-3264
1-72NF	H-2	2	3/8	1-11/16	440-3009	12-24NC	H-2	4	15/16	2-3/8	440-3089	1/2-13NC	H-1	4	1-21/32	3-3/8	440-3266
2-56NC	H-2	2	7/16	1-3/4	440-3011	12-24NC	H-3	4	15/16	2-3/8	440-3090	1/2-13NC	H-2	4	1-21/32	3-3/8	440-3268
2-56NC	H-1	3	7/16	1-3/4	440-3012	12-28NF	H-1	4	15/16	2-3/8	440-3091	1/2-13NC	H-3	4	1-21/32	3-3/8	440-3270
2-56NC	H-2	3	7/16	1-3/4	440-3013	12-28NF	H-3	4	15/16	2-3/8	440-3092	1/2-13NC	H-5	4	1-21/32	3-3/8	440-3272
2-64NF	H-1	3	7/16	1-3/4	440-3014	12-28NF	H-2	4	15/16	2-3/8	440-3092	1/2-20NF	H-3	3	1-21/32	3-3/8	440-3276
2-64NF	H-2	3	7/16	1-3/4	440-3015	14-24	H-3	4	1-1/4	2-5/8	440-3094	1/2-20NF	H-5	3	1-21/32	3-3/8	440-3278
3-48NC	H-2	2	1/2	1-13/16	440-3016	14-24	H-1	4	1-1/4	2-5/8	440-3096	1/2-20NF	H-1	4	1-21/32	3-3/8	440-3280
3-48NC	H-1	3	1/2	1-13/16	440-3017	14-24	H-3	4	1-1/4	2-5/8	440-3097	1/2-20NF	H-2	4	1-21/32	3-3/8	440-3282
3-48NC	H-2	3	1/2	1-13/16	440-3018	1/4-20NC	H-3	2	1	2-1/2	440-3102	1/2-20NF	H-3	4	1-21/32	3-3/8	440-3284
3-56NF	H-1	3	1/2	1-13/16	440-3019	1/4-20NC	H-5	2	1	2-1/2	440-3103	1/2-20NF	H-5	4	1-21/32	3-3/8	440-3286
3-56NF	H-2	3	1/2	1-13/16	440-3020	1/4-20NC	H-2	3	1	2-1/2	440-3106	9/16-12NC	H-2	4	1-21/32	3-19/16	440-3314
4-36	H-2	3	9/16	1-7/8	440-3022	1/4-20NC	H-3	3	1	2-1/2	440-3108	9/16-12NC	H-3	4	1-21/32	3-19/16	440-3316
4-40NC	H-1	2	9/16	1-7/8	440-3023	1/4-20NC	H-5	3	1	2-1/2	440-3110	9/16-12NC	H-5	4	1-21/32	3-19/16	440-3318
4-40NC	H-2	2	9/16	1-7/8	440-3024	1/4-20NC	H-1	4	1	2-1/2	440-3112	9/16-18NF	H-2	4	1-21/32	3-19/16	440-3322
4-40NC	H-1	3	9/16	1-7/8	440-3025	1/4-20NC	H-2	4	1	2-1/2	440-3114	9/16-18NF	H-3	4	1-21/32	3-19/16	440-3324
4-40NC	H-2	3	9/16	1-7/8	440-3026	1/4-20NC	H-3	4	1	2-1/2	440-3116	9/16-18NF	H-5	4	1-21/32	3-19/16	440-3326
4-48NF	H-2	2	9/16	1-7/8	440-3030	1/4-20NC	H-5	4	1	2-1/2	440-3118	5/8-11NC	H-1	4	1-13/16	3-13/16	440-3328
4-48NF	H-1	3	9/16	1-7/8	440-3031	1/4-28NF	H-3	2	1	2-1/2	440-3132	5/8-11NC	H-2	4	1-13/16	3-13/16	440-3330
4-48NF	H-2	3	9/16	1-7/8	440-3032	1/4-28NF	H-3	3	1	2-1/2	440-3134	5/8-11NC	H-3	4	1-13/16	3-13/16	440-3332
5-40NC	H-2	2	5/8	1-15/16	440-3033	1/4-28NF	H-1	4	1	2-1/2	440-3136	5/8-11NC	H-5	4	1-13/16	3-13/16	440-3334
5-40NC	H-7	3	5/8	1-15/16	440-3034	1/4-28NF	H-2	4	1	2-1/2	440-3138	5/8-18NF	H-1	4	1-13/16	3-13/16	440-3338
5-40NC	H-2	3	5/8	1-15/16	440-3035	1/4-28NF	H-3	4	1	2-1/2	440-3140	5/8-18NF	H-2	4	1-13/16	3-13/16	440-3340
5-44NF	H-1	3	5/8	1-15/16	440-3036	1/4-28NF	H-4	4	1	2-1/2	440-3142	5/8-18NF	H-3	4	1-13/16	3-13/16	440-3342
5-44NF	H-2	3	5/8	1-15/16	440-3037	5/16-18NC	H-3	2	1-1/8	2-23/32	440-3144	5/8-18NF	H-5	4	1-13/16	3-13/16	440-3343
6-32NC	H-1	2	11/16	2	440-3038	5/16-18NC	H-5	2	1-1/8	2-23/32	440-3145	3/4-10NC	H-1	4	2	4-1/4	440-3346
6-32NC	H-2	2	11/16	2	440-3039	5/16-18NC	H-3	3	1-1/8	2-23/32	440-3148	3/4-10NC	H-3	4	2	4-1/4	440-3350
6-32NC	H-3	2	11/16	2	440-3040	5/16-18NC	H-5	3	1-1/8	2-23/32	440-3150	3/4-10NC	H-5	4	2	4-1/4	440-3352
6-32NC	H-1	3	11/16	2	440-3041	5/16-18NC	H-1	4	1-1/8	2-23/32	440-3152	3/4-16NF	H-1	4	2	4-1/4	440-3354
6-32NC	H-2	3	11/16	2	440-3042	5/16-18NC	H-2	4	1-1/8	2-23/32	440-3154	3/4-16NF	H-2	4	2	4-1/4	440-3356
6-32NC	H-3	3	11/16	2	440-3043	5/16-18NC	H-3	4	1-1/8	2-23/32	440-3156	3/4-16NF	H-3	4	2	4-1/4	440-3358
6-32NC	H-7	3	11/16	2	440-3044	5/16-18NC	H-4	4	1-1/8	2-23/32	440-3157	3/4-16NC	H-5	4	2	4-1/4	440-3360
6-40NF	H-2	2	11/16	2	440-3047	5/16-18NC	H-5	4	1-1/8	2-23/32	440-3158	7/8-9NC	H-1	4	2-7/32	4-11/16	440-3361
6-40NF	H-1	3	11/16	2	440-3048	5/16-24NF	H-3	3	1-1/8	2-23/32	440-3168	7/8-9NC	H-2	4	2-7/32	4-11/16	440-3362
6-40NF	H-2	3	11/16	2	440-3049	5/16-24NF	H-1	4	1-1/8	2-23/32	440-3170	7/8-9NC	H-3	4	2-7/32	4-11/16	440-3364
6-40NF	H-3	3	11/16	2	440-3050	5/16-24NF	H-2	4	1-1/8	2-23/32	440-3172	7/8-9NC	H-4	4	2-7/32	4-11/16	440-3366
8-32NC	H-2	2	3/4	2-1/8	440-3051	5/16-24NF	H-3	4	1-1/8	2-23/32	440-3174	7/8-9NC	H-6	4	2-7/32	4-11/16	440-3367
8-32NC	H-3	2	3/4	2-1/8	440-3052	5/16-24NF	H-4	4	1-1/8	2-23/32	440-3176	7/8-14NF	H-2	4	2-7/32	4-11/16	440-3372
8-32NC	H-2	3	3/4	2-1/8	440-3054	5/16-24NF	H-5	4	1-1/8	2-23/32	440-3177	7/8-14NF	H-3	4	2-7/32	4-11/16	440-3373
8-32NC	H-3	3	3/4	2-1/8	440-3055	3/8-16NC	H-1	3	1-1/4	2-15/16	440-3180	7/8-14NF	H-4	4	2-7/32	4-11/16	440-3374
8-32NC	H-7	3	3/4	2-1/8	440-3056	3/8-16NC	H-3	3	1-1/4	2-15/16	440-3182	7/8-14NF	H-6	4	2-7/32	4-11/16	440-3375
8-32NC	H-1	4	3/4	2-1/8	440-3057	3/8-16NC	H-5	3	1-1/4	2-15/16	440-3183	1-8NC	H-1	4	2-1/2	5-1/8	440-3376
8-32NC	H-2	4	3/4	2-1/8	440-3058	3/8-16NC	H-1	4	1-1/4	2-15/16	440-3184	1-8NC	H-4	4	2-1/2	5-1/8	440-3380
8-32NC	H-3	4	3/4	2-1/8	440-3059	3/8-16NC	H-2	4	1-1/4	2-15/16	440-3186	1-12NF	H-3	4	2-1/2	5-1/8	440-3386
8-32NC	H-7	4	3/4	2-1/8	440-3062	3/8-16NC	H-3	4	1-1/4	2-15/16	440-3188	1-12NF	H-4	4	2-1/2	5-1/8	440-3388
8-36NF	H-2	2	3/4	2-1/8	440-3063	3/8-16NC	H-4	4	1-1/4	2-15/16	440-3189	1-14NS	H-4	4	2-1/2	5-1/8	440-3394
8-36NF	H-1	4	3/4	2-1/8	440-3064	3/8-16NC	H-5	4	1-1/4	2-15/16	440-3190	1-1/8-7NC	H-4	4	2-9/16	5-3/4	440-3398
8-36NF	H-2	4	3/4	2-1/8	440-3065	3/8-24NF	H-3	3	1-1/4	2-15/16	440-3224	1-1/8-12NF	H-4	4	2-9/16	5-3/4	440-3400
10-24NCH-2	2	7/8	2-3/8		440-3066	3/8-24NF	H-1	4	1-1/4	2-15/16	440-3226	1-1/4-7NC	H-4	4	2-9/16	5-3/4	440-3402
10-24NCH-3	2	7/8	2-3/8		440-3067	3/8-24NF	H-2	4	1-1/4	2-15/16	440-3228	1-1/4-12NF	H-4	6	2-9/16	5-3/4	440-3404
8-36NF	H-3	4	3/4	2-1/8	440-3068	3/8-24NF	H-3	4	1-1/4	2-15/16	440-3230	1-3/8-6NC	H-4	4	3	6-1/16	440-3406
10-24NCH-3	3	7/8	2-3/8		440-3069	3/8-24NF	H-4	4	1-1/4	2-15/16	440-3232	1-3/8-12NF	H-4	6	3	6-1/16	440-3408
10-24NCH-7	3	7/8	2-3/8		440-3070	3/8-24NF	H-5	4	1-1/4	2-15/16	440-3233	1-1/2-6NC	H-4	4	3	6-3/8	440-3410
10-24NCH-1	4	7/8	2-3/8		440-3071	7/16-14NC	H-3	3	1-7/16	3-5/32	440-3234	1-1/2-1					

Carbon Steel Hand Taps

NEW

磨制美标碳钢手用丝锥



Ground Thread

Tap Size	Taper Order No.	Plug Order No.	Bottoming Order No.
0-80NF	312-1002	312-2002	312-3002
1-64NC	312-1012	312-2012	312-3012
1-72NF	312-1022	312-2022	312-3022
2-56NC	312-1030	312-2030	312-3030
2-64NF	312-1032	312-2032	312-3032
3-48NC	312-1042	312-2042	312-3042
3-56NF	312-1052	312-2052	312-3052
4-36	312-1062	312-2062	312-3062
4-40NC	312-1065	312-2065	312-3065
4-48NF	312-1072	312-2072	312-3072
5-40NC	312-1082	312-2082	312-3082
5-44NF	312-1092	312-2092	312-3092
5-56	312-1102	312-2102	312-3102
6-32NC	312-1112	312-2112	312-3112
6-36NF	312-1115	312-2115	312-3115
6-40	312-1122	312-2122	312-3122
8-32NC	312-1125	312-2125	312-3125
8-36NF	312-1132	312-2132	312-3132
10-24NC	312-1142	312-2142	312-3142
10-32NF	312-1152	312-2152	312-3152
12-24NC	312-1155	312-2155	312-3155
12-28NF	312-1162	312-2162	312-3162
1/4"-20 NC	312-1183	312-2183	312-3183
1/4"-24	312-1184	312-2184	312-3184
1/4"-28NF	312-1185	312-2185	312-3185
1/4"-32	312-1187	312-2187	312-3187
5/16"-18NC	312-1192	312-2192	312-3192
5/16"-24NF	312-1202	312-2202	312-3202
5/16"-32	312-1205	312-2205	312-3205
3/8"-16NC	312-1212	312-2212	312-3212
3/8"-24NF	312-1222	312-2222	312-3222
7/16"-14NC	312-1232	312-2232	312-3232
7/16"-20NF	312-1235	312-2235	312-3235
1/2"-12	312-1238	312-2238	312-3238
1/2"-13NC	312-1242	312-2242	312-3242
1/2"-20NF	312-1252	312-2252	312-3252
9/16"-12NC	312-1262	312-2262	312-3262
9/16"-18NF	312-1272	312-2272	312-3272
5/8"-11NC	312-1282	312-2282	312-3282
5/8"-18NF	312-1292	312-2292	312-3292
11/16"-11NS	312-1293	312-2293	312-3293
11/16"-16NS	312-1294	312-2294	312-3294
3/4"-10NC	312-1295	312-2295	312-3295
3/4"-16NF	312-1296	312-2296	312-3296
3/4"-19	312-1297	312-2297	312-3297
7/8"-9NC	312-1298	312-2298	312-3298
7/8"-14	312-1299	312-2299	312-3299
1"-8NC	312-1300	312-2300	312-3300
1"-12NF	312-1301	312-2301	312-3301
1"-14	312-1302	312-2302	312-3302
1-1/8"-7 NC	312-1305	312-2305	312-3305
1-1/8"-12NF	312-1312	312-2312	312-3312
1-1/4"-7NC	312-1315	312-2315	312-3315
1-1/4"-12NF	312-1322	312-2322	312-3322
1-3/8"-6 NC	312-1332	312-2332	312-3332
1-3/8"-12NF	312-1342	312-2342	312-3342
1-1/2"-6 NC	312-1352	312-2352	312-3352
1-1/2"-12NF	312-1353	312-2353	312-3353

Left Hand Taps & Sets 左旋丝锥

HSS, Ground Thread

NEW

- Use in wide variety of materials to create left hand threaded holes

- Set Includes: 1 Each of same available tap size:taper, plug and bottoming



Size	Taper Order No.	Plug Order No.	Bottoming Order No.	3pc Set Order No.
0-80NF	313-1002	311-5002	313-2002	313-5002
1-64NC	313-1012	311-5012	313-2012	313-5012
1-72NF	313-1022	311-5022	313-2022	313-5022
2-56NC	313-1032	311-5032	313-2032	313-5032
2-64NF	313-1042	311-5042	313-2042	313-5042
3-48NC	313-1052	311-5052	313-2052	313-5052
3-56NF	313-1062	311-5062	313-2062	313-5062
4-40NC	313-1072	311-5072	313-2072	313-5072
4-48NF	313-1082	311-5082	313-2082	313-5082
5-40NC	313-1092	311-5092	313-2092	313-5092
5-44NF	313-1102	311-5102	313-2102	313-5102
6-32NC	313-1112	311-5112	313-2112	313-5112
6-40NF	313-1122	311-5122	313-2122	313-5122
8-32NC	313-1132	311-5132	313-2132	313-5132
8-36NF	313-1142	311-5142	313-2142	313-5142
10-24NC	313-1152	311-5152	313-2152	313-5152
10-32NF	313-1162	311-5162	313-2162	313-5162
12-24NC	313-1172	311-5172	313-2172	313-5172
12-28NF	313-1182	311-5182	313-2182	313-5182
14-24	313-1192	311-5192	313-2192	313-5192
1/4"-20NC	313-1202	311-5202	313-2202	313-5202
1/4"-28NF	313-1212	311-5212	313-2212	313-5212
5/16"-18NC	313-1222	311-5222	313-2222	313-5222
5/16"-24NF	313-1232	311-5232	313-2232	313-5232
3/8"-16NC	313-1242	311-5242	313-2242	313-5242
3/8"-24NF	313-1252	311-5252	313-2252	313-5252
7/16"-14NC	313-1262	311-5262	313-2262	313-5262
7/16"-20NF	313-1272	311-5272	313-2272	313-5272
7/16"-28	313-1274	311-5274	313-2274	313-5274
1/2"-13NC	313-1282	311-5282	313-2282	313-5282
1/2"-20NF	313-1292	311-5292	313-2292	313-5292
9/16"-12NC	313-1302	311-5302	313-2302	313-5302
9/16"-18NF	313-1312	311-5312	313-2312	313-5312
5/8"-11NC	313-1322	311-5322	313-2322	313-5322
5/8"-18NF	313-1332	311-5332	313-2332	313-5332
11/16"-11NS	313-1336	311-5336		
11/16"-16NS	313-1338	311-5338		
3/4"-10NC	313-1342	311-5342	313-2342	313-5342
3/4"-16NF	313-1352	311-5352	313-2352	313-5352
7/8"-9NC	313-1362	311-5362	313-2362	313-5362
7/8"-14NF	313-1372	311-5372	313-2372	313-5372
7/8"-20	313-1375	311-5375		
1-8NC	313-1382	311-5382	313-2382	313-5382
1-12NF	313-1392	311-5392	313-2392	313-5392
1-14NS	313-1402	311-5402	313-2402	313-5402
1-1/8"-7NC	313-1412	311-5412	313-2412	313-5412
1-1/8"-12NF	313-1422	311-5422	313-2422	313-5422
1-1/4"-7NC	313-1432	311-5432	313-2432	313-5432
1-1/4"-10	313-1442	311-5442	313-2442	313-5442
1-1/4"-12NF	313-1452	311-5452	313-2452	313-5452
1-3/8"-6NC	313-1462	311-5462	313-2462	313-5462
1-3/8"-12NF	313-1472	311-5472	313-2472	313-5472
1-1/2"-6NC	313-1482	311-5482	313-2482	313-5482
1-1/2"-12NF	313-1492	311-5492	313-2492	313-5492

Metric Hand Taps

公制美标丝锥

High Speed Steel, Ground Thread



Size	Thread Limits	No. of Flute	Taper Order No.	Bottoming Order No.	3pc Set Order No.
2.00x0.20			311-4001	311-4003	311-4004
2.00x0.25			311-4011	311-4013	311-4014
2.00x0.40	D-3	3	311-4021	311-4023	311-4024
2.00x0.45	D-3	3	311-4031	311-4033	311-4034
2.20x0.45	D-2	3	311-4041	311-4043	311-4044
2.50x0.45	D-3	3	311-4051	311-4053	311-4054
3.00x0.35	D-3	3	311-4061	311-4063	311-4064
3.00x0.50	D-3	3	311-4071	311-4073	311-4074
3.50x0.35	D-3	3	311-4081	311-4083	311-4084
3.50x0.60	D-3	3	311-4091	311-4093	311-4094
4.00x0.50	D-4	4	311-4101	311-4103	311-4104
4.00x0.70	D-4	4	311-4111	311-4113	311-4114
4.00x0.75	D-4	4	311-4121	311-4123	311-4124
4.50x0.75	D-4	4	311-4131	311-4133	311-4134
5.00x0.50	D-4	4	311-4141	311-4143	311-4144
5.00x0.80	D-4	4	311-4161	311-4163	311-4164
5.00x0.90	D-3	4	311-4151	311-4153	311-4154
5.50x0.90		4	311-4171	311-4173	311-4174
6.00x0.50	D-4	4	311-4181	311-4183	311-4184
6.00x0.75	D-5	4	311-4191	311-4193	311-4194
6.00x1.00	D-5	4	311-4201	311-4203	311-4204
7.00x0.75	D-4	4	311-4211	311-4213	311-4214
7.00x1.00	D-5	4	311-4221	311-4223	311-4224
8.00x1.00	D-5	4	311-4231	311-4233	311-4234
8.00x1.25	D-5	4	311-4241	311-4243	311-4244
9.00x1.00	D-6	4	311-4251	311-4253	311-4254
9.00x0.25	D-6	4	311-4261	311-4263	311-4264
10.00x1.00	D-6	4	311-4271	311-4273	311-4274
10.00x1.25	D-6	4	311-4281	311-4283	311-4284
10.00x1.50	D-6	4	311-4291	311-4293	311-4294
10.00x1.75	D-6	4	311-4301	311-4303	311-4304
11.00x1.00	D-3	4	311-4311	311-4313	311-4314
11.00x1.50	D-6	4	311-4321	311-4323	311-4324
12.00x1.25	D-6	4	311-4331	311-4333	311-4334
12.00x1.50	D-6	4	311-4341	311-4343	311-4344
12.00x1.75	D-6	4	311-4351	311-4353	311-4354
14.00x1.25	D-7	4	311-4361	311-4363	311-4364
14.00x1.50	D-7	4	311-4371	311-4373	311-4374
14.00x2.00	D-7	4	311-4381	311-4383	311-4384
16.00x1.00	D-6	4	311-4391	311-4393	311-4394
16.00x1.50	D-7	4	311-4401	311-4403	311-4404
16.00x2.00	D-7	4	311-4411	311-4413	311-4414
18.00x1.50	D-7	4	311-4421	311-4423	311-4424
8.00x2.00	D-7	4	311-4431	311-4433	311-4434
18.00x2.50	D-7	4	311-4441	311-4443	311-4444
20.00x2.00	D-6	4	311-4451	311-4453	311-4454
20.00x2.50	D-7	4	311-4461	311-4463	311-4464
22.00x2.00	D-6	4	311-4471	311-4473	311-4474
22.00x2.50	D-7	4	311-4481	311-4483	311-4484
24.00x2.00	D-8	4	311-4491	311-4493	311-4494
24.00x3.00	D-8	4	311-4501	311-4503	311-4504
26.00x1.50	D-8	4	311-4511	311-4513	311-4514
28.00x2.00	D-8	4	311-4521	311-4523	311-4524
30.00x2.00	D-9	4	311-4531	311-4533	311-4534
30.00x3.50	D-9	4	311-4541	311-4543	311-4544
33.00x2.00	D-9	6	311-4551	311-4553	311-4554
39.00x3.00	D-8	6	311-4561	311-4563	311-4564
42.00x2.00			311-4571	311-4573	311-4574
48.00x2.00			311-4581	311-4583	311-4584
48.00x4.50	D-1	6	311-4585	311-4587	311-4588

Size(mm)	Thread Limits	Flute	Plug Order No.	Size(mm)	Thread Limits	Flute	Plug Order No.
1.50x0.35	D-1	2	411-2004	14.00x2.00	D-7	4	411-2190
1.60x0.35	D-1	2	411-2006	16.00x1.00	D-6	4	411-2198
1.60x0.35	D-3	2	411-2008	16.00x1.00	D-7	4	411-2199
1.80x0.35	D-1	2	411-2010	16.00x1.50	D-3	4	411-2202
1.80x0.35	D-2	2	411-2012	16.00x1.50	D-6	4	411-2204
1.80x0.35	D-3	2	411-2016	16.00x1.50	D-7	4	411-2205
2.00x0.40	D-1	3	411-2018	16.00x2.00	D-4	4	411-2206
2.00x0.40	D-3	3	411-2020	16.00x2.00	D-7	4	411-2208
2.00x0.45	D-2	3	411-2022	18.00x1.00	D-6	4	411-2214
2.20x0.45	D-1	3	411-2024	18.00x1.00	D-7	4	411-2215
2.20x0.45	D-2	3	411-2026	18.00x1.25	D-6	4	411-2216
2.20x0.45	D-3	3	411-2027	18.00x1.50	D-3	4	411-2218
2.20x0.45	D-3	3	411-2028	18.00x1.50	H-4	4	411-2220
2.30x0.40	D-3	3	411-2030	18.00x1.50	D-7	4	411-2221
2.50x0.45	D-1	3	411-2032	18.00x1.50	D-7	4	411-2222
2.50x0.45	D-3	3	411-2034	8.00x2.00	D-7	4	411-2223
2.60x0.45	D-2	3	411-2036	18.00x2.50	D-4	4	411-2224
2.60x0.45	D-3	3	411-2037	8.00x2.00	D-7	4	411-2225
3.00x0.35	D-3	3	411-2038	18.00x2.50	D-7	4	411-2226
3.00x0.35	D-6	3	411-2039	20.00x2.00	D-7	4	411-2229
3.00x0.50	D-1	3	411-2040	20.00x1.00	D-7	4	411-2230
3.00x0.50	D-3	3	411-2042	20.00x1.25	D-6	4	411-2232
3.00x0.60	D-2	3	411-2044	20.00x1.50	D-3	4	411-2234
3.00x0.60	D-3	3	411-2046	20.00x1.50	D-6	4	411-2236
3.50x0.35	D-3	3	411-2048	20.00x1.50	D-7	4	411-2237
3.50x0.60	D-1	3	411-2050	20.00x2.00	D-6	4	411-2238
3.50x0.60	D-4	3	411-2052	20.00x2.50	D-4	4	411-2240
4.00x0.50	D-4	4	411-2054	20.00x2.50	D-7	4	411-2242
4.00x0.70	D-1	4	411-2056	22.00x1.25	D-6	4	411-2243
4.00x0.70	D-4	4	411-2058	22.00x1.00	D-7	4	411-2244
4.00x0.75	D-4	4	411-2060	22.00x1.00	D-7	4	411-2245
4.50x0.75	D-2	4	411-2066	22.00x1.50	D-3	4	411-2246
4.50x0.75	D-4	4	411-2068	22.00x1.50	D-7	4	411-2247
5.00x0.50	D-4	4	411-2070	22.00x1.50	D-6	4	411-2248
5.00x0.75	D-6	4	411-2074	22.00x2.00	D-6	4	411-2249
5.00x0.80	D-2	4	411-2076	22.00x2.50	D-4	4	411-2250
5.00x0.80	D-4	4	411-2078	22.00x2.00	D-7	4	411-2251
5.00x0.90	D-4	4	411-2079	22.00x2.50	D-6	4	411-2252
5.00x0.90	D-3	4	411-2080	22.00x2.50	D-7	4	411-2254
6.00x0.50	D-5	4	411-2083	24.00x1.00	D-7	4	411-2256
6.00x0.50	D-4	4	411-2084	24.00x1.50	D-7	4	411-2258
6.00x0.75	D-5	4	411-2085	24.00x1.50	D-8	4	411-2259
6.00x0.75	D-3	4	411-2086	24.00x2.00	D-4	4	411-2260
6.00x0.75	D-4	4	411-2087	24.00x2.00	D-7	4	411-2262
6.00x1.00	D-3	4	411-2088	24.00x2.00	D-8	4	411-2263
6.00x1.00	D-5	4	411-2090	24.00x3.00	D-4	4	411-2264
6.30x1.00	D-5	4	411-2094	24.00x3.00	D-8	4	411-2266
7.00x0.50	D-6	4	411-2096	26.00x1.50	D-8	4	411-2271
7.00x0.75	D-4	4	411-2098	27.00x1.50	D-7	4	411-2272
7.00x0.75	D-6	4	411-2099	27.00x2.00	D-5	4	411-2274
7.00x1.00	D-3	4	411-2100	27.00x2.00	D-7	4	411-2276
7.00x1.00	D-5	4	411-2102	27.00x2.00	D-8	4	411-2277
8.00x0.75	D-4	4	411-2108	27.00x3.00	D-8	4	411-2278
8.00x0.80	D-4	4	411-2109	27.00x3.00	D-9	4	411-2279
8.00x1.00	D-3	4	411-2110	27.00x3.00	D-9	4	411-2280
8.00x1.00	D-5	4	411-2112	28.00x1.50	D-8	4	411-2282
8.00x1.25	D-3	4	411-2114	28.00x2.00	D-8	4	411-2283
8.00x1.25	D-5	4	411-2116	30.00x1.50	D-7	4	411-2284
9.00x1.00	D-6	4	411-2120	30.00x1.50	D-9	4	411-2285
9.00x1.25	D-4	4	411-2122	30.00x2.00	D-5	4	411-2286
9.00x1.25	D-5	4	411-2123	30.00x2.00	D-7	4	411-2288
10.00x0.75	D-5	4	411-2128	30.00x2.00	D-9	4	411-2289
10.00x0.75	D-6	4	411-2129	30.00x3.50	D-5	4	411-2292
10.00x1.00	D-5	4	411-2130	32.00x3.50	D-6	4	411-2293
10.00x1.00	D-6	4	411-2131	30.00x3.50	D-9	4	411-2294
10.00x1.25	D-3	4	411-2132	32.00x2.00	D-7	4	411-2296
10.00x1.25	D-5	4	411-2134	32.00x2.00	D-9	4	411-2297
10.00x1.25	D-6	4	411-2135	32.00x2.00	D-7	6	411-2298
10.00x1.50	D-3	4	411-2136	32.00x3.50	D-9	4	411-2299
10.00x1.50	D-6	4	411-2138	33.00x2.00	D-5	4	411-2300
11.00x1.00	D-3	4	411-2142	33.00x2.00	D-7	6	411-2301
11.00x1.00	D-6	4	411-2143	33.00x2.00	D-9	4	411-2302
11.00x1.50	D-5	4	411-2146	33.00x3.00	D-5	4	411-2303
11.00x1.50	D-6	4	411-2147	33.00x3.50	D-5	4	411-2304
12.00x1.00	D-5	4	411-2150	33.00x3.50	D-9	4	411-2306
12.00x1.00	D-6	4	411-2151	36.00x3.00	D-5	4	411-2308
12.00x1.25	D-3	4	411-2152	36.00x3.00	D-8	4	411-2310
12.00x1.25	D-5	4	411-2154	36.00x3.00	D-9	4	411-2311
12.00x1.25	D-6	4	411-2155	36.00x3.60	D-9	4	411-2312
12.00x1.50	D-5	4	411-2156	36.00x4.00	D-5	4	411-2314
12.00x1.50	D-6	4	411-2157	36.00x4.00	D-9	4	411-2316
12.00x1.75	D-3	4	411-2158	38.00x4.00	D-9	4	411-2317
12.00x1.75	D-6	4	411-2160	39.00x3.00	D-6	4	411-2318
14.00x1.00	D-6	4	411-2178	39.00x3.00	D-8	6	411-2320
14.00x1.00	D-7	4	411-2179	39.00x4.00	D-6	4	411-2322
14.00x1.25	H-4	4	411-2180	42.00x3.00	D-10	6	411-2325
14.00x1.25	D-6	4	411-2181	42.00x4.50	D-9	6	411-2326
14.00x1.50	D-3	4	411-2182	45.00x4.50	D-9	6	411-2328
14.00x1.50	D-6	4	411-2184	48.00x3.00	D-10	6	411-2329
14.00x1.50	D-7	4	411-2185	48.00x4.50	D-9	6	411-2330
14.00x2.00	D-3	4	411-2188	48.00x5.00	D-9	6	411-2332

Spiral Point Taps

美标螺尖丝锥

High Speed Steel, Ground Thread



- Designed for greater strength which enables higher speeds and faster production.
- Shearing action of the point pushes chips ahead of the cutting action to reduce loading of the flutes.

No. of Size	Thread Flute	Limit	Plug Order No.	Bottoming Order No.	No. of Size	Thread Flute	Limit	Plug Order No.	Bottoming Order No.	No. of Size	Thread Flute	Limit	Plug Order No.	Bottoming Order No.
0-80NF	2	H-1	311-9002	311-9402	12-24NC	2	H-1	311-9059		1/2-13NC	3	H-1	311-9195	
0-80NF	2	H-2	311-9004	311-9404	12-24NC	2	H-3	311-9062	311-9462	1/2-20NF	3	H-3	311-9112	
1-64NC	2	H-1	311-9006	311-9406	12-24NC	2	H-2	311-9063		3/8-24NF	3	H-1	311-9198	
1-64NC	2	H-2	311-9008	311-9408	12-28NF	2	H-3	311-9064	311-9464	3/8-24NF	3	H-3	311-9113	
1-72NF	2	H-1	311-9010	311-9410	12-28NF	2	H-1	311-9185		3/8-32	3	H-3	311-9114	
1-72NF	2	H-2	311-9012	311-9412	12-28NF	2	H-2	311-9187		7/16-14NC	3	H-2	311-9115	
2-56NC	2	H-1	311-9013		12-32	2	H-3	311-9065		7/16-14NC	3	H-5	311-9116	
2-56NC	2	H-2	311-9014	311-9414	14-20NS	2	H-2	311-9188		7/16-14NC	3	H-4	311-9117	
2-64NF	2	H-1	311-9015		14-20NS	2	H-3	311-9189		7/16-14NC	3	H-1	311-9178	
2-64NF	2	H-2	311-9016	311-9416	14-24NS	2	H-2	311-9190		7/16-14NC	3	H-1	311-9179	
3-48NC	2	H-1	311-9017		14-24NS	2	H-3	311-9191		7/16-20NF	3	H-3	311-9118	311-9495
3-48NC	2	H-2	311-9018	311-9418	1/4-28NF	2	H-4	311-9192		7/16-20NF	3	H-2	311-9119	
3-56NF	2	H-1	311-9019		1/4-20NC	2	H-2	311-9066	311-9466	7/16-20NF	3	H-5	311-9120	
3-56NF	2	H-2	311-9020	311-9420	1/4-20NC	2	H-1	311-9067		7/16-20NF	3	H-4	311-9121	
4-36	2	H-2	311-9021		1/4-20NC	2	H-3	311-9068	311-9468	7/16-20NF	3	H-3	311-9122	
4-40NC	2	H-2	311-9022	311-9422	1/4-20NC	3	H-7	311-9069		1/2-13NC	3	H-2	311-9123	
4-40NC	2	H-1	311-9023		1/4-20NC	2	H-5	311-9070	311-9470	1/2-13NC	3	H-5	311-9124	
4-40NC	2	H-7	311-9024	311-9424	1/4-20NC	3	H-2	311-9072	311-9472	1/2-13NC	3	H-3	311-9126	311-9496
4-48NF	2	H-1	311-9025		1/4-20NC	3	H-3	311-9074	311-9474	1/2-20NF	3	H-1	311-9193	
4-48NF	2	H-2	311-9026	311-9426	1/4-20NC	3	H-5	311-9076	311-9476	1/2-20NF	3	H-2	311-9194	
5-40NC	2	H-1	311-9027		1/4-24	2	H-3	311-9077		1/2-20NF	3	H-5	311-9128	
5-40NC	2	H-2	311-9028	311-9428	1/4-32	2	H-3	311-9079		1/2-24	3	H-3	311-9127	
5-40NC	2	H-3	311-9029		1/4-28NF	2	H-3	311-9080	311-9480	1/2-28	3	H-3	311-9129	
5-40NC	2	H-7	311-9030	311-9430	1/4-28NF	2	H-2	311-9078	311-9478	9/16-12NC	3	H-3	311-9130	
5-44NF	2	H-1	311-9031		1/4-28NF	2	H-1	311-9081		9/16-12NC	3	H-5	311-9132	
5-44NF	2	H-2	311-9032	311-9433	1/4-28NF	3	H-2	311-9082	311-9482	9/16-18NF	3	H-3	311-9134	
5-44NF	2	H-3	311-9033		1/4-28NF	3	H-4	311-9083		9/16-18NF	3	H-5	311-9136	
6-32NC	2	H-2	311-9034	311-9435	1/4-28NF	3	H-3	311-9084	311-9484	5/8-11NC	3	H-3	311-9138	
6-32NC	2	H-1	311-9035		1/4-40	2	H-3	311-9085		5/8-11NC	3	H-5	311-9140	
6-32NC	2	H-3	311-9036	311-9436	5/16-18NC	2	H-2	311-9086	311-9486	5/8-18NF	3	H-3	311-9142	
6-32NC	2	H-7	311-9038	311-9438	5/16-18NF	2	H-1	311-9087		5/8-18NF	3	H-5	311-9144	
6-40NF	2	H-3	311-9039		5/16-18NC	2	H-3	311-9088	311-9488	11/16-11NS	3	H-3	311-9146	
6-40NF	2	H-2	311-9040	311-9440	5/16-18NC	2	H-5	311-9090		11/16-16NS	3	H-3	311-9148	
6-40NF	2	H-1	311-9182		5/16-18NC	2	H-7	311-9091		3/4-10NC	3	H-3	311-9150	
6-48	2	H-3	311-9041		5/16-18NC	3	H-2	311-9092		3/4-10NC	3	H-5	311-9152	
8-32NC	2	H-2	311-9042	311-9442	5/16-18NC	3	H-3	311-9094		3/4-16NF	3	H-3	311-9154	
8-32NC	2	H-1	311-9043		5/16-18NC	3	H-5	311-9096		3/4-16NF	3	H-5	311-9156	
8-32NC	2	H-3	311-9044	311-9444	5/16-24NF	2	H-2	311-9098		7/8-9NC	3	H-2	311-9157	
8-32NC	2	H-7	311-9046	311-9446	5/16-24NF	2	H-1	311-9099		7/8-9NC	3	H-4	311-9158	
8-36NF	2	H-3	311-9047		5/16-24NF	2	H-3	311-9100	311-9489	7/8-9NC	4	H-4	311-9160	
8-36NF	2	H-2	311-9048	311-9448	5/16-24NF	2	H-4	311-9101		7/8-14NF	3	H-2	311-9161	
8-36NF	2	H-1	311-9184		5/16-24NF	3	H-3	311-9102		7/8-14NF	3	H-4	311-9162	
8-40	2	H-3	311-9049		5/16-24NF	3	H-4	311-9196		7/8-14NF	3	H-3	311-9163	
10-24NC	2	H-2	311-9050	311-9450	5/16-24NF	3	H-1	311-9197		7/8-14NF	4	H-4	311-9164	
10-24NC	2	H-1	311-9051		5/16-32	2	H-3	311-9103		1-8NC	3	H-3	311-9165	
10-24NC	2	H-3	311-9052	311-9452	3/8-16NC	3	H-2	311-9104		1-8NC	3	H-4	311-9166	
10-24NC	2	H-7	311-9054	311-9454	3/8-16NC	3	H-1	311-9105		1-8NC	4	H-4	311-9168	
10-32NF	2	H-2	311-9056	311-9456	3/8-16NC	3	H-3	311-9106		1-12NF	4	H-4	311-9170	
10-32NF	2	H-1	311-9057		3/8-16NC	3	H-7	311-9107		1-12NF	3	H-4	311-9174	
10-32NF	2	H-3	311-9058	311-9458	3/8-16NC	3	H-5	311-9108		1-12NF	3	H-5	311-9175	
10-32NF	2	H-7	311-9060	311-9460	3/8-24NF	3	H-4	311-9109		1-14NS	4	H-4	311-9172	
10-40	2	H-3	311-9061		3/8-24NF	3	H-2	311-9110		1-14NS	3	H-4	311-9176	
					3/8-24NF	3	H-5	311-9111		1-14NS	3	H-3	311-9177	

Long Spiral Point Taps

长柄螺尖丝锥

High Speed Steel, Regular Shank

Size	Thread Limits	OAL	Order No.	Size	Thread Limits	OAL	Order No.	Size	Thread Limits	OAL	Order No.
4-40	GH3	6"	311-2160	1/4-20	GH3	6	311-2170	3/8-24	GH3	6	311-2170
6-32	GH3	6	311-2162	1/4-28	GH3	6	311-2172	7/16-14	GH3	6	311-2172
8-32	GH3	6	311-2164	5/16-16	GH3	6	311-2174	7/16-20	GH3	6	311-2174
10-24	GH3	6	311-2166	5/16-24	GH3	6	311-2176	1/2-13	GH3	6	311-2176
10-32	GH3	6	311-2168	3/8-16	GH3	6	311-2178	1/2-20	GH3	6	311-2178

HSS Long Spiral Point Taps-Plug

长柄螺尖丝锥(二攻)

NEW

Reduced Shank



Size	No. of Flutes	Thread Limits	OAL	Order No.
4-40	2	H-2	4"	311-2301
4-48	2	H-2	4	311-2302
5-40	2	H-2	4	311-2303
6-32	2	H-3	4	311-2305
6-32	2	H-3	5	311-2306
6-32	2	H-3	6	311-2307
6-40	2	H-3	4	311-2308
8-32	2	H-3	4	311-2309
8-32	2	H-3	5	311-2310
8-32	2	H-3	6	311-2311
10-24	2	H-3	4	311-2313
10-24	2	H-3	5	311-2314
10-24	2	H-3	6	311-2315
12-24	2	H-3	6	311-2316
10-32	2	H-3	4	311-2317
10-32	2	H-3	5	311-2318
10-32	2	H-3	6	311-2319
1/4-20	2	H-3	4	311-2320
1/4-20	2	H-3	6	311-2321
1/4-28	2	H-3	6	311-2323
5/16-18	2	H-3	4	311-2324
5/16-18	2	H-3	6	311-2325
5/16-24	2	H-3	6	311-2327
3/8-16	3	H-3	4	311-2328
3/8-16	3	H-3	6	311-2329
3/8-24	3	H-3	6	311-2331
7/16-14	3	H-3	6	311-2333
7/16-20	3	H-3	6	311-2335
1/2-13	3	H-3	6	311-2337
1/2-20	3	H-3	6	311-2339
5/8-11	3	H-3	6	311-2340

Regular Shank

Size	No. of Flutes	Thread Limits	OAL	Order No.
4-40	2	H-2	4"	311-2341
4-48	2	H-2	4	311-2342
5-40	2	H-2	4	311-2343
6-32	2	H-3	4	311-2345
6-32	2	H-3	5	311-2346
6-32	2	H-3	6	311-2347
6-40	2	H-3	4	311-2348
8-32	2	H-3	4	311-2349
8-32	2	H-3	5	311-2350
8-32	2	H-3	6	311-2351
10-24	2	H-3	4	311-2353
10-24	2	H-3	5	311-2354
10-24	2	H-3	6	311-2355
10-32	2	H-3	4	311-2357
10-32	2	H-3	5	311-2358
10-32	2	H-3	6	311-2359
1/4-20	2	H-3	4	311-2360
1/4-20	2	H-3	6	311-2361
1/4-28	2	H-3	6	311-2363
5/16-18	2	H-3	4	311-2364
5/16-18	2	H-3	6	311-2365
5/16-24	2	H-3	6	311-2367
3/8-16	3	H-3	4	311-2368
3/8-16	3	H-3	6	311-2369
3/8-24	3	H-3	6	311-2371
7/16-14	3	H-3	6	311-2373
7/16-20	3	H-3	6	311-2375
1/2-13	3	H-3	6	311-2377
1/2-20	3	H-3	6	311-2379

Left Hand Spiral Point Taps

HSS, Ground Thread

美标 HSS 磨制左旋螺尖枪式丝锥

Spiral point is designed to push the chips ahead of the cutting action, helping to reduce loading in the flutes



Tap Size	No. of Flutes	Thread Limits	Order No.	Tap Size	No. of Flutes	Thread Limits	Order No.
0-80NF	2	H-1	440-7002	5/16"-18NC	2	H-2	440-7086
0-80NF	2	H-2	440-7004	5/16"-18NC	2	H-3	440-7088
1-64NC	2	H-1	440-7006	5/16"-18NC	2	H-5	440-7090
1-64NC	2	H-2	440-7008	5/16"-18NC	3	H-2	440-7092
1-72NF	2	H-1	440-7010	5/16"-18NC	3	H-3	440-7094
1-72NF	2	H-2	440-7012	5/16"-18NC	3	H-5	440-7096
2-56NC	2	H-2	440-7014	5/16"-18NC	3	H-5	440-7097
2-64NF	2	H-2	440-7016	5/16"-24NF	2	H-2	440-7098
3-48NC	2	H-2	440-7018	5/16"-24NF	2	H-3	440-7100
3-56NF	2	H-2	413-7020	5/16"-24NF	3	H-3	440-7102
4-36	2	H-1	413-7021	5/16"-32	2	H-3	440-7103
4-40NC	2	H-2	440-7022	3/8"-16NC	3	H-2	440-7104
4-40NC	2	H-7	440-7024	3/8"-16NC	3	H-3	440-7106
4-48NF	2	H-2	440-7026	3/8"-16NC	3	H-5	440-7108
5-40NC	2	H-2	440-7028	3/8"-24NF	3	H-2	440-7110
5-40NC	2	H-7	440-7030	3/8"-24NF	3	H-3	440-7112
5-44NF	2	H-2	440-7032	3/8"-32	3	H-3	440-7113
6-32NC	2	H-2	440-7034	7/16"-14NC	3	H-3	440-7114
6-32NC	2	H-3	440-7036	7/16"-14NC	3	H-5	440-7116
6-32NC	2	H-7	440-7038	7/16"-20NF	3	H-3	440-7118
6-40NF	2	H-3	440-7039	7/16"-20NF	3	H-5	440-7120
6-40NF	2	H-2	440-7040	1/2"-13NC	3	H-3	440-7122
6-48	2	H-3	440-7041	1/2"-13NC	3	H-5	440-7124
8-32NC	2	H-2	440-7042	1/2"-20NF	3	H-3	440-7126
8-32NC	2	H-3	440-7044	1/2"-24	3	H-3	440-7127
8-32NC	3	H-3	440-7046	1/2"-20NF	3	H-5	440-7128
8-36NF	2	H-2	440-7047	1/2"-28	3	H-3	440-7129
8-36NF	3	H-3	440-7048	9/16"-12NC	3	H-3	440-7130
8-40	2	H-3	440-7049	9/16"-12NC	3	H-5	440-7132
10-24NC	2	H-2	440-7050	9/16"-18NF	3	H-3	440-7134
10-24NC	3	H-3	440-7052	9/16"-18NF	3	H-5	440-7136
10-24NC	2	H-7	440-7054	5/8"-11NC	3	H-3	440-7138
10-32NF	2	H-2	440-7056	5/8"-11NC	3	H-5	440-7140
10-32NF	3	H-2	440-7058	5/8"-18NF	3	H-3	440-7142
10-32NF	2	H-7	440-7060	5/8"-18NF	3	H-5	440-7144
10-40	2	H-3	440-7061	11/16"-11NS	3	H-3	440-7146
12-24NC	3	H-3	440-7062	11/16"-16NS	3	H-3	440-7148
12-28NF	3	H-3	440-7064	3/4"-10NC	3	H-3	440-7150
12-32	2	H-3	440-7065	3/4"-10NC	3	H-5	440-7152
1/4"-20NC	2	H-2	440-7066	3/4"-16NF	3	H-3	440-7154
1/4"-20NC	2	H-3	440-7068	3/4"-16NF	3	H-5	440-7156
1/4"-20NC	2	H-5	440-7070	7/8"-9NC	3	H-4	440-7158
1/4"-20NC	3	H-2	440-7072	7/8"-9NC	4	H-4	440-7160
1/4"-20NC	3	H-3	440-7074	7/8"-14NF	3	H-4	440-7162
1/4"-20NC	3	H-5	440-7076	7/8"-14NF	4	H-4	440-7164
1/4"-24	2	H-3	440-7077	1"-8NC	3	H-3	440-7165
1/4"-28NF	2	H-2	440-7078	1"-8NC	3	H-4	440-7166
1/4"-32	2	H-3	440-7079	1"-8NC	4	H-4	440-7168
1/4"-28NF	2	H-3	440-7080	1"-12NF	4	H-4	440-7170
1/4"-28NF	2	H-2	440-7082	1"-14NS	4	H-4	440-7172
1/4"-28NF	3	H-3	440-7084	1"-12NF	3	H-4	440-7174
1/4"-40	2	H-3	440-7085	1"-14NS	3	H-4	440-7176

Cobalt (M35) Spiral Point Taps

HSS, Ground Thread

M35 全磨制螺尖丝锥



Tap Size	No. of Flutes	Thread Limits	Order No.	Tap Size	No. of Flutes	Thread Limits	Order No.
0-80NF	2	H-1	413-9002	1/4"-28NF	2	H-3	413-9080
0-80NF	2	H-2	413-9004	1/4"-28NF	2	H-3	413-9084
1-64NC	2	H-1	413-9006	1/4"-28NF	2	H-4	413-9192
1-64NC	2	H-2	413-9008	1/4"-32	2	H-3	413-9079
1-72NF	2	H-1	413-9010	1/4"-40	2	H-3	413-9085
1-72NF	2	H-2	413-9012	5/16"-18NC	2	H-2	413-9086
2-56NC	2	H-1	413-9013	5/16"-18NC	2	H-3	413-9088
2-56NC	2	H-2	413-9014	5/16"-18NC	2	H-5	413-9090
2-64NF	2	H-1	413-9015	5/16"-18NC	3	H-2	413-9092
2-64NF	2	H-2	413-9016	5/16"-18NC	3	H-3	413-9094
3-48NC	2	H-1	413-9017	5/16"-18NC	3	H-5	413-9096
3-48NC	2	H-2	413-9018	5/16"-18NC	3	H-5	413-9097
3-56NF	2	H-1	413-9019	5/16"-24NF	2	H-2	413-9098
3-56NF	2	H-2	413-9020	5/16"-24NF	2	H-3	413-9100
4-36	2	H-1	413-9021	5/16"-24NF	2	H-4	413-9101
4-36	2	H-2	413-9180	5/16"-24NF	3	H-3	413-9102
4-40NC	2	H-1	413-9023	5/16"-32	2	H-3	413-9103
4-40NC	2	H-2	413-9022	3/8"-16NC	3	H-2	413-9104
4-40NC	2	H-7	413-9024	3/8"-16NC	3	H-3	413-9106
4-48NF	2	H-1	413-9025	3/8"-16NC	3	H-5	413-9108
4-48NF	2	H-2	413-9026	3/8"-24NF	3	H-2	413-9110
5-40NC	2	H-1	413-9027	3/8"-24NF	3	H-3	413-9112
5-40NC	2	H-2	413-9028	3/8"-24NF	3	H-4	413-9109
5-40NC	2	H-3	413-9029	3/8"-24NF	3	H-5	413-9111
5-40NC	2	H-7	413-9030	3/8"-32	3	H-3	413-9113
5-44NF	2	H-1	413-9031	7/16"-14NC	3	H-2	413-9115
5-44NF	2	H-2	413-9032	7/16"-14NC	3	H-3	413-9114
5-44NF	2	H-3	413-9033	7/16"-14NC	3	H-4	413-9117
6-32NC	2	H-1	413-9035	7/16"-14NC	3	H-5	413-9116
6-32NC	2	H-2	413-9034	7/16"-20NF	3	H-2	413-9119
6-32NC	2	H-3	413-9036	7/16"-20NF	3	H-3	413-9118
6-32NC	2	H-7	413-9038	7/16"-20NF	3	H-4	413-9121
6-40NF	2	H-1	413-9182	7/16"-20NF	3	H-5	413-9120
6-40NF	2	H-2	413-9040	1/2"-13NC	3	H-2	413-9123
6-40NF	2	H-3	413-9039	1/2"-13NC	3	H-3	413-9122
6-48	2	H-3	413-9041	1/2"-13NC	3	H-4	413-9125
8-32NC	2	H-1	413-9043	1/2"-13NC	3	H-5	413-9124
8-32NC	2	H-2	413-9042	1/2"-13NC	3	H-5	413-9195
8-32NC	2	H-3	413-9044	1/2"-20NF	3	H-1	413-9193
8-32NC	2	H-7	413-9046	1/2"-20NF	3	H-2	413-9194
8-36NF	2	H-1	413-9184	1/2"-20NF	3	H-3	413-9126
8-36NF	2	H-2	413-9048	1/2"-20NF	3	H-5	413-9128
8-36NF	2	H-3	413-9047	1/2"-24	3	H-3	413-9127
8-40	2	H-3	413-9049	1/2"-28	3	H-3	413-9129
10-24NC	2	H-1	413-9051	9/16"-12NC	3	H-3	413-9130
10-24NC	2	H-2	413-9050	9/16"-12NC	3	H-5	413-9132
10-24NC	2	H-3	413-9052	9/16"-18NF	3	H-3	413-9134
10-24NC	2	H-7	413-9054	9/16"-18NF	3	H-5	413-9136
10-32NF	2	H-1	413-9057	5/8"-11NC	3	H-3	413-9138
10-32NF	2	H-2	413-9056	5/8"-11NC	3	H-5	413-9140
10-32NF	2	H-3	413-9058	5/8"-18NF	3	H-3	413-9142
10-32NF	2	H-7	413-9060	5/8"-18NF	3	H-5	413-9144
10-40	2	H-3	413-9061	11/16"-11NS	3	H-3	413-9146
12-24NC	2	H-1	413-9186	3/4"-10NC	3	H-3	413-9150
12-24NC	2	H-2	413-9063	3/4"-10NC	3	H-5	413-9152
12-24NC	2	H-3	413-9062	3/4"-16NF	3	H-3	413-9154
12-28NF	2	H-2	413-9187	3/4"-16NF	3	H-5	413-9156
12-28NF	2	H-3	413-9064	7/8"-14NF	3	H-2	413-9161
12-32	2	H-3	413-9065	7/8"-14NF	3	H-3	413-9163
14-20NS	2	H-2	413-9188	7/8"-14NF	3	H-4	413-9162
14-20NS	2	H-3	413-9189	7/8"-14NF	4	H-4	413-9164
14-24NS	2	H-2	413-9190	7/8"-9NC	3	H-2	413-9157
14-24NS	2	H-3	413-9191	7/8"-9NC	3	H-4	413-9158
1/4"-20NC	2	H-1	413-9067	7/8"-9NC	4	H-4	413-9160
1/4"-20NC	2	H-2	413-9066	1"-8NC	3	H-3	413-9165
1/4"-20NC	2	H-3	413-9068	1"-8NC	3	H-4	413-9166
1/4"-20NC	2	H-5	413-9070	1"-8NC	4	H-4	413-9168
1/4"-20NC	3	H-2	413-9072	1"-12NF	3	H-3	413-9173
1/4"-20NC	3	H-3	413-9074	1"-12NF	3	H-4	413-9174
1/4"-20NC	3	H-5	413-9076	1"-12NF	3	H-5	413-9175
1/4"-24	2	H-3	413-9077	1"-12NF	4	H-4	413-9170
1/4"-28NF	2	H-1	413-9081	1"-14NS	3	H-3	413-9177
1/4"-28NF	2	H-2	413-9078	1"-14NS	3	H-4	413-9176
1/4"-28NF	2	H-2	413-9082	1"-14NS	4	H-4	413-9172

Metric Spiral Point Taps-Plug Style

HSS, Ground Thread

公制 HSS 螺尖丝锥 (二攻)

Spiral point is designed to push the chips ahead of the cutting action, helping to reduce loading in the flutes



No. of Thread					No. of Thread				
Size	Pitch	Flute	Limit	Order No.	Size	Pitch	Flute	Limit	Order No.
1.6	.35	2	D-2	311-8009	9.0	1.00	3	D-5	311-8192
1.6	.35	2	D-3	311-8010	9.0	1.25	2	D-5	311-8193
1.8	.35	2	D-2	311-8020	9.0	1.25	3	D-5	311-8194
2.0	.40	2	D-3	311-8030	9.0	.75	4	D-3	311-8195
2.0	.45	2	D-2	311-8034	9.0	1.00	4	D-3	311-8196
2.2	.45	2	D-2	311-8040	10.0	1.00	3	D-5	311-8200
2.2	.45	3	D-2	311-8041	10.0	1.00	3	D-6	311-8202
2.5	.45	2	D-2	311-8049	10.0	1.25	3	D-3	311-8209
2.5	.45	2	D-3	311-8050	10.0	1.25	3	D-5	311-8210
2.6	.45	2	D-2	311-8052	10.0	1.50	3	D-6	311-8220
3.0	.35	2	D-3	311-8055	11.0	1.50	3	D-5	311-8222
3.0	.50	2	D-3	311-8060	11.0	1.50	4	D-3	311-8223
3.0	.60	2	D-2	311-8064	12.0	11.25	3	D-5	311-8230
3.5	.50	2	D-4	311-8069	12.0	11.50	3	D-6	311-8240
3.5	.60	2	D-4	311-8070	12.0	11.75	3	D-6	311-8250
4.0	.50	2	D-4	311-8080	12.5	11.75	3	D-6	311-8252
4.0	.70	2	D-4	311-8090	14.0	1.00	3	D-6	311-8260
4.0	.75	2	D-4	311-8094	14.0	1.00	4	D-3	311-8262
4.0	.80	2	D-4	311-8096	14.0	1.25	3	D-5	311-8270
4.5	.75	2	D-4	311-8100	14.0	1.25	3	D-7	311-8272
5.0	.50	2	D-4	311-8110	14.0	1.50	3	D-3	311-8278
5.0	.80	2	D-2	311-8118	14.0	1.50	3	D-6	311-8280
5.0	.80	2	D-4	311-8120	14.0	1.50	3	D-7	311-8282
5.0	.90	2	D-3	311-8122	14.0	2.00	3	D-7	311-8290
5.0	.90	4	D-3	311-8123	16.0	1.50	3	D-6	311-8300
5.0	1.00	2	D-4	311-8125	16.0	1.00	4	D-4	311-8301
6.0	.50	4	D-3	311-8128	16.0	1.50	3	D-7	311-8302
6.0	.75	2	D-3	311-8129	16.0	2.00	3	D-7	311-8310
6.0	.75	2	D-4	311-8130	18.0	1.00	4	D-4	311-8317
6.0	1.00	2	D-5	311-8140	18.0	2.00	4	D-4	311-8319
6.3	1.00	2	D-5	311-8150	18.0	2.50	3	D-7	311-8320
7.0	.75	2	D-5	311-8152	20.0	2.00		D-4	311-8329
7.0	1.00	2	D-5	311-8155	20.0	2.50	3	D-7	311-8330
8.0	.75	2	D-5	311-8170	22.0	1.25	4	D-4	311-8333
8.0	.75	4	D-3	311-8172	24.0	1.50	4	D-4	311-8341
8.0	1.00	2	D-3	311-8178	26.0	1.50	4	D-4	311-8346
8.0	1.00	2	D-5	311-8180	27.0	3.00	4	D-5	311-8349
8.0	1.00	3	D-5	311-8182	30.0	1.50	4	D-5	311-8351
8.0	1.25	2	D-3	311-8188	30.0	2.00	4	D-5	311-8352
8.0	1.25	2	D-5	311-8190	30.0	3.50	4	D-5	311-8353

Fluteless X-PressTaps

High Speed Steel

无刃美标挤压丝锥

These taps have no flutes or cutting edges. The X-Press Tap cold forms internal threads in ductile metals such as copper, zinc, lead, leaded steels, magnesium, die castings and aluminum. Used where chip removal is a problem.



Size	Thread Length	OAL	Order No.
1-64NC	3/8"	1-11/16"	311-7104
1-72NF	3/8	1-11/16	311-7106
2-64NF	7/16	1-3/4	311-7108
3-48NC	1/2	1-13/16	311-7112
3-56NF	1/2	1-13/16	311-7114
4-40NC	9/16	1-7/8	311-7116
4-48NF	9/16	1-7/8	311-7118
5-40NC	5/8	1-15/16	311-7120
5-44NF	5/8	1-15/16	311-7122
6-32NC	11/16	2	311-7124
6-40NF	11/16	2	311-7126
8-32NC	3/4	2-1/8	311-7128
8-36NF	3/4	2-1/8	311-7130
10-24NC	7/8	2-3/8	311-7132
10-32NF	7/8	2-3/8	311-7134
12-24NC	15/16	2-3/8	311-7136
12-28NF	15/16	2-3/8	311-7138
1/4-20NC	1	2-1/2	311-7148
1/4-28NF	1	2-1/2	311-7150
5/16-18NC	1-1/8	2-23/32	311-7156
5/16-24NF	1-1/8	2-23/32	311-7158
3/8-16NC	1-1/4	2-15/16	311-7160
3/8-24NF	1-1/4	2-15/16	311-7162
7/16-14NC	1-7/16	3-5/32	311-7166
7/16-20NF	1-7/16	3-5/32	311-7168
1/2-13NC	1-21/32	3-3/8	311-7170
1/2-20NF	1-21/32	3-3/8	311-7172
9/16-12NC	1-21/32	3-19/32	311-7176
5/8-11NC	1-13/16	3-13/16	311-7180
5/8-18NF	1-13/16	3-13/16	311-7182
3/4-10NC	2	4-1/4	311-7184
3/4-16NF	2	4-1/4	311-7186

Fluteless Spiral Point Assembly Taps

High Speed Steel

无刃美标螺尖丝锥

Recommended for High Speed Steel Taping Thin Materials Available while supplies Last.



Size	Thread Length	OAL	Order No.
3-48NC	1/2"	1-13/16"	311-7006
3-56NF	1/2	1-13/16	311-7008
4-40NC	9/16	1-7/8	311-7010
4-48NF	9/16	1-7/8	311-7012
5-40NC	5/8	1-15/16	311-7016
5-44NF	5/8	1-15/16	311-7018
6-32NF	11/16	2	311-7022
6-40NF	11/16	2	311-7024
8-32NC	3/4	2-1/8	311-7028
8-36NF	3/4	2-1/8	311-7030
10-24NC	7/8	2-3/8	311-7034
10-32NF	7/8	2-3/8	311-7036
12-28NF	15/16	2-3/8	311-7040
5/16-24NF	1-1/8	2-23/32	311-7044
3/8-16NC	1-1/4	2-15/16	311-7050
3/8-24NF	1-1/4	2-15/16	311-7052
7/16-14NC	1-7/16	3-5/32	311-7056
7/16-20NF	1-7/16	3-5/32	311-7058
1/2-13NC	1-21/32	3-3/8	311-7062

+ .005" Oversized Taps

High Speed Steel, Ground Thread

高速钢+.005 丝锥

Plug Type



Size	No. of Flute	Order No.	Size	No. of Flute	Order No.
1-8	4	312-7023	5/16-18	4	312-7007
1-12	4	312-7024	5/16-24	4	312-7008
1-14	4	312-7025	3/8-16	4	312-7009
4-40	3	312-7030	3/8-24	4	312-7010
5-40	3	312-7035	7/16-14	4	312-7011
6-32	3	312-7001	7/16-20	4	312-7012
6-32	3	312-7037	1/2"-13	4	312-7013
6-40	3	312-7038	1/2-20	4	312-7014
8-32	4	312-7002	9/16-12	4	312-7015
8-36	4	312-7040	9/16-18	4	312-7016
10-24	4	312-7003	5/8-11	4	312-7017
10-32	4	312-7004	5/8-18	4	312-7018
12-24	4	312-7042	3/4-10	4	312-7019
12-28	4	312-7044	3/4-16	4	312-7020
1/4-20	4	312-7005	7/8-9	4	312-7021
1/4-28	4	312-7006	7/8-14	4	312-7022

Spiral Point Plug Type



Size	No. of Flute	Order No.	Size	No. of Flute	Order No.
1-8	3	312-7150	5/16-24	2	312-7120
1-12	3	312-7152	3/8-16	3	312-7122
1-24	3	312-7154	3/8-24	3	312-7124
4-40	2	312-7102	7/16-14	3	312-7126
5-40	2	312-7104	7/16"-20	3	312-7128
6-32	2	312-7106	1/2-13	3	312-7130
6-40	2	312-7107	1/2-20	3	312-7132
8-32	2	312-7108	9/16-12	3	312-7134
8-36	2	312-7109	9/16-18	3	312-7136
10-24	2	312-7110	5/8-11	3	312-7138
12-24	2	312-7111	5/8-18	3	312-7140
10-32	2	312-7112	3/4-10	3	312-7142
12-28	2	312-7113	3/4-16	3	312-7144
1/4-20	2	312-7114	7/8-9	3	312-7146
1/4-28	2	312-7116	7/8-14	3	312-7148
5/16-18	2	312-7118			

TiN Coated Hand Taps-Plug Style

美标涂钛丝锥(二攻)

Machine Screw Sizes



Size	No. of Flute	Thread Length	Order No.	Size	No. of Flute	Thread Length	Order No.
0-80	2	5/16"	311-1979	5-40	3	5/8"	311-2009
1-64	2	3/8	311-1982	5-44	3	5/8	311-2012
1-72	2	3/8	311-1985	6-32	3	11/16	311-2015
2-56	3	7/16	311-1988	6-40	3	11/16	311-2018
2-64	3	7/16	311-1993	8-32	4	3/4	311-2023
3-48	3	1/2	311-1994	8-36	4	3/4	311-2024
3-56	3	1/2	311-1997	10-24	4	7/8	311-2027
4-36	3	9/16	311-2001	10-32	4	7/8	311-2030
4-40	3	5/8	311-2003	12-24	4	15/16	311-2033
4-48	3	9/16	311-2006	12-28	4	15/16	311-2036

Fractional Sizes

Size	No. of Flute	Thread Length	Order No.	Size	No. of Flute	Thread Length	Order No.
1/4"-20	4	1"	311-2039	3/4"-16	4	2	311-2078
1/4-28	4	1	311-2042	7/8-9	4	2-7/32	311-2083
5/16-18	4	1-1/8	311-2045	7/8-14	4	2-7/32	311-2084
5/16-24	4	1-1/8	311-2048	1-8	4	2-1/2	311-2087
3/8-16	4	1-1/4	311-2053	1-12	4	2-1/2	311-2090
3/8-24	4	1-1/4	311-2054	1"-14	4		311-2091
7/16-14	4	1-7/16	311-2057	1-1/8-7	4	2-9/16	311-2093
7/16-20	4	1-7/16	311-2060	1-1/8-12	4	2-9/16	311-2096
1/2-13	4	1-21/32	311-2063	1-1/4-7	4	2-9/16	311-2099
1/2-20	4	1-21/32	311-2066	1-1/4-12	4	2-9/16	311-2102
9/16-12	4	1-21/32	311-2067	1-1/4"-12	6	2-9/16	311-2103
9/16-18	4	1-21/32	311-2068	1-3/8"-6	4	3	311-2104
5/8-11	4	1-13/16	311-2069	1-3/8-6	6	3	311-2105
5/8-18	4	1-13/16	311-2072	1-3/8-12	6	3	311-2108
3/4"-10	4	2"	311-2074	1-1/2-6	4	3	311-2113
11/16-16	4		311-2075	1-1/2-12	6	3	311-2114
3/4"-10	4	2	311-2077				

Special Thread Hand Taps 美标手用高速钢特细牙丝锥磨制

High Speed Steel, Ground Thread

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
#000-120	312-6402	311-3402	
#00-90	312-6404	311-3404	
#00-96	312-6403	311-3403	
#0-72	312-6405	311-3405	313-3405
#1-56	312-6410	311-3410	313-3847
#1-80	312-6415	311-3415	
#2-48	312-6420	311-3420	
#2-72	312-6425	311-3425	
#2-80	312-6430	311-3430	
#3-64	312-6435	311-3435	
#3-80	312-6440	311-3440	
#4-32	312-6500	311-3500	313-3500
#4-36	312-6501	311-3501	313-3501
#4-44	312-6503	311-3503	313-3503
#4-56	312-6506	311-3506	313-3506
#4-60	312-6509	311-3509	313-3509
#4-64	312-6510	311-3510	313-3510
#4-72	312-6508	311-3508	
#4-80	312-6511	311-3511	313-3511
#5-32	312-6512	311-3512	313-3512
#5-36	312-6515	311-3515	313-3515
#5-48	312-6518	311-3518	313-3518
#5-50	312-6517	311-3517	
#5-56	312-6519	311-3519	
#5-60	312-6521	311-3521	313-3521
#5-80	312-6523	311-3523	313-3523
#5-100	312-6522	311-3522	
#6-36	312-6524	311-3524	313-3524
#6-48	312-6527	311-3527	313-3527
#6-56	312-6530	311-3530	313-3530
#6-60	312-6533	311-3533	313-3533
#6-64	312-6534	311-3534	313-3534
#6-72	312-6532	311-3532	
#6-80	312-6535	311-3535	313-3535
#7-30		311-4591	
#7-32		311-4592	
#7-36		311-4593	
#7-40		311-4594	
#8-24	312-6536	311-3536	313-3536
#8-30	312-6539	311-3539	313-3539
#8-40	312-6542	311-3542	313-3542
#8-48	312-6545	311-3545	313-3545
#8-56	312-6548	311-3548	313-3548
#8-60	312-6551	311-3551	313-3551
#8-64	312-6552	311-3552	313-3552
#8-72	312-6550	311-3550	
#8-80	312-6553	311-3553	313-3553
#9-30		311-3555	
#9-36		311-3556	
#10-20	312-6558	311-3558	313-3558
#10-28	312-6554	311-3554	313-3554
#10-30	312-6557	311-3557	313-3557
#10-36	312-6560	311-3560	313-3560
#10-40	312-6563	311-3563	313-3563
#10-44	312-6564	311-3564	
#10-46	312-6566	311-3566	313-3566
#10-48	312-6569	311-3569	313-3569
#10-56	312-6572	311-3572	313-3572
#10-60	312-6575	311-3575	313-3575
#10-64	312-6576	311-3576	313-3576
#10-72	312-6574	311-3574	
#10-80	312-6577	311-3577	313-3577
#11-24	312-6582		313-3582
#11-32	312-6583		313-3583
#12-20	312-6579	311-3579	
#12-30	312-6578	311-3578	313-3578
#12-32	312-6581	311-3581	313-3581
#12-36	312-6584	311-3584	313-3584
#12-40	312-6587	311-3587	313-3587
#12-48	312-6590	311-3590	313-3590
#12-56	312-6593	311-3593	313-3593
#12-64	312-6594	311-3594	
#14-26			313-3597
#14-28	312-6595	311-3595	
1/16-72	312-6596	311-3596	313-3596
3/32-36	312-6599	311-3599	313-3599
3/32-42	312-6601	311-3601	
3/32-48	312-6602	311-3602	313-3602
3/32-50	312-6605	311-3605	313-3605

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
3/32-56	312-6608	311-3608	313-3608
1/8-36	312-6611	311-3611	313-3611
1/8-40	312-6614	311-3614	313-3614
1/8-48		311-3615	
5/32-24	312-6617	311-3617	313-3617
5/32-26	312-6620	311-3620	313-3620
5/32-32	312-6623	311-3623	313-3623
5/32-36	312-6626	311-3626	313-3626
5/32-38	312-6629	311-3629	313-3629
5/32-40	312-6632	311-3632	313-3632
5/32-56	312-6633	311-3633	313-3633
5/32-64	312-6635	311-3635	313-3635
3/16-20	312-6638	311-3638	313-3638
3/16-24	312-6641	311-3641	313-3641
3/16-28	312-6644	311-3644	313-3644
3/16-32	312-6647	311-3647	313-3647
3/16-36	312-6650	311-3650	313-3650
3/16-48		311-3651	
7/32-18	312-6652	311-3652	
7/32-24	312-6653	311-3653	313-3653
7/32-28	312-6656	311-3656	313-3656
7/32-32	312-6659	311-3659	313-3659
7/32-40	312-6662	311-3662	313-3662
7/32-48	312-6665	311-3665	313-3665
1/4-8			313-3805
1/4-14	312-6668	311-3668	313-3668
1/4-16	312-6671	311-3671	313-3671
1/4-18	312-6674	311-3674	313-3674
1/4-22	312-7601	311-4601	313-4601
1/4-24	312-7600	311-4600	313-4600
1/4-26	312-6675	311-3675	313-3675
1/4-27	312-6700	311-3700	313-3700
1/4-30	312-6702	311-3702	313-3702
1/4-32	312-7602	311-4602	313-4602
1/4-36	312-6704	311-3704	313-3704
1/4-38	312-6705	311-3705	
1/4-40	312-7604	311-4604	313-4604
1/4-46	312-6707	311-3707	313-3707
1/4-48	312-6706	311-3706	313-3706
1/4-50	312-6703	311-3703	
1/4-54		311-4599	313-4599
1/4-56	312-6708	311-3708	313-3708
1/4-60	312-6709	311-3709	313-3710
1/4-64	312-6710	311-3710	313-3709
1/4-72	312-7605	311-4605	
1/4-80	312-6711	311-3711	313-3711
9/32-18	312-6712	311-3712	313-3712
9/32-20	312-6713	311-3713	313-3713
9/32-24	312-6714	311-3714	313-3714
9/32-26		311-4598	313-4598
9/32-32	312-6716	311-3716	313-3716
9/32-40	312-6717	311-3717	313-3717
9/32-48		311-3715	
5/16-12	312-6718	311-3718	313-3718
5/16-14	312-6719	311-3719	313-3719
5/16-16	312-6720	311-3720	313-3720
5/16-20	312-7606	311-4606	313-4606
5/16-22	312-7607	311-4607	313-4607
5/16-26	312-6721	311-3721	313-3721
5/16-27	312-6722	311-3722	313-3722
5/16-28	312-6724	311-3724	313-3724
5/16-30	312-6726	311-3726	313-3726
5/16-32	312-7608	311-4608	313-4608
5/16-36	312-6728	311-3728	313-3728
5/16-40	312-7610	311-4610	313-4610
5/16-48	312-6730	311-3730	313-3730
5/16-56	312-6732	311-3732	313-3732
5/16-64	312-7611	311-4611	313-4611
5/16-72		311-3731	
5/16-80	312-6733	311-3733	313-3733
11/32-18	312-7613	311-4613	
11/32-20	312-7609	311-4609	313-4609
11/32-32	312-7615	311-4615	313-4615
11/32-36	312-7617	311-4617	
3/8-14	312-7612	311-4612	313-4612
3/8-18	312-7614	311-4614	313-4614
3/8-20	312-7616	311-4616	313-4616
3/8-26	312-6734	311-3734	313-3734
3/8-27	312-6736	311-3736	313-3736

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
3/8-28	312-6738	311-3738	313-3738
3/8-30	312-6739	311-3739	313-3739
3/8-32	312-7618	311-4618	313-4618
3/8-36	312-6740	311-3740	313-3740
3/8-40	312-6742	311-3742	313-3742
3/8-48	312-6744	311-3744	313-3744
3/8-56	312-6746	311-3746	313-3746
3/8-60	312-6445	311-3745	
3/8-64	312-6743	311-3743	313-3743
3/8-72	312-6747	311-3747	313-3747
3/8-80	312-6748	311-3748	313-3748
13/32-20	312-7623	311-4623	313-4623
13/32-24		311-4619	
13/32-32	312-7621	311-4621	313-4621
7/16-12	312-6749	311-3749	313-3749
7/16-16	312-6750	311-3750	313-3750
7/16-18	312-6752	311-3752	313-3752
7/16-24	312-7620	311-4620	313-4620
7/16-26	312-6753	311-3753	313-3753
7/16-27	312-7622	311-4622	313-4622
7/16-28	312-6754	311-3754	313-3754
7/16-32	312-6756	311-3756	313-3756
7/16-36	312-6758	311-3758	313-3758
7/16-40	312-6760	311-3760	313-3760
7/16-48	312-6762	311-3762	313-3762
7/16-56	312-6761	311-3761	
7/16-64		311-3759	313-3759
15/32-24		311-3757	
15/32-32	312-7624	311-4624	313-4624
15/32-36	312-6763	311-3763	
1/2-10	312-6767	311-3767	313-3767
1/2-11	312-7627	311-4627	313-4627
1/2-12	312-7626	311-4626	313-4626
1/2-14	312-7628	311-4628	313-4628
1/2-16	312-7630	311-4630	313-4630
1/2-18	312-7632	311-4632	313-4632
1/2-24	312-7634	311-4634	313-4634
1/2-26	312-6765	311-3765	313-3765
1/2-27	312-6764	311-3764	313-3764
1/2-28	312-7633	311-4633	313-4633
1/2-30	312-6766	311-3766	313-3766
1/2-32	312-7636	311-4636	313-4636
1/2-36	312-6768	311-3768	313-3768
1/2-40	312-6770	311-3770	313-3770
1/2-48	312-6772	311-3772	313-3772
1/2-56	312-6773	311-3773	313-3773
1/2-60	312-7635	311-4635	313-4635
1/2-64	312-7637	311-4637	313-4637
1/2-80	312-6769	311-3769	313-3769
9/16-10	312-7638	311-4638	313-4638
9/16-14	312-6774	311-3774	313-3774
9/16-16	312-7640	311-4640	313-4640
9/16-20	312-7642	311-4642	313-4642
9/16-24	312-7644	311-4644	313-4644
9/16-26	312-6775	311-3775	313-3775
9/16-27	312-6776	311-3776	313-3776
9/16-28	312-6778	311-3778	313-3778
9/16-30	312-6779	311-3779	313-3779
9/16-32	312-6780	311-3780	313-3780
9/16-36	312-6782	311-3782	313-3782
9/16-40	312-6784	311-3784	313-3784
5/8-10	312-6786	311-3786	313-3786
5/8-12	312-7646	311-4646	313-4646
5/8-14	312-6788	311-3788	313-3788
5/8-16	312-7648	311-4648	313-4648
5/8-20	312-7650	311-4650	313-4650
5/8-26	312-6789	311-3789	313-3789
5/8-27	312-6790	311-3790	313-3790
5/8-28	312-6791	311-3791	313-3791
5/8-30	312-7653	311-4653	313-4653
5/8-24	312-7652	311-4652	313-4652
5/8-32	312-7654	311-4654	313-4654
5/8-36	312-7656	311-4656	313-4656
5/8-40	312-6792	311-3792	313-3792
5/8-48	312-6794	311-3794	313-3794
5/8-64	312-6795	311-3795	
11/16-11	312-7658	311-4658	313-4658
11/16-12	312-6796	311-3796	313-3796
11/16-14		311-3797	

Special Thread Hand Taps continued

High Speed Steel, Ground Thread

美标手用高速钢特细牙丝锥磨制



Size	Taper Order No.	Plug Order No.	Bottoming Order No.
11/16-16	312-7660	311-4660	313-4660
11/16-18	312-7662	311-4662	313-4662
11/16-20	312-7664	311-4664	313-4664
11/16-24	312-7666	311-4666	313-4666
11/16-27	312-6798	311-3798	313-3798
11/16-28	312-6800	311-3800	313-3800
11/16-32	312-7668	311-4668	313-4668
11/16-36	312-6802	311-3802	313-3802
11/16-40	312-6804	311-3804	313-3804
11/16-48	312-6803	311-3803	313-3803
3/4-8	312-6805	311-3805	313-3807
3/4-11	312-6807	311-3807	
3/4-12	312-7670	311-4670	313-4670
3/4-14	312-6806	311-3806	313-3806
3/4-18	312-7672	311-4672	313-4672
3/4-20	312-7674	311-4674	313-4674
3/4-24	312-7676	311-4676	313-4676
3/4-26	312-6808	311-3808	313-3808
3/4-27	312-7678	311-4678	313-4678
3/4-28	312-7679	311-4679	313-4679
3/4-32	312-7680	311-4680	313-4680
3/4-36	312-6810	311-3810	313-3810
3/4-40	312-6812	311-3812	313-3812
3/4-48	312-6813	311-3813	313-3813
3/4-56	312-7681	311-4681	
13/16-10	312-6814	311-3814	313-3814
13/16-12	312-6816	311-3816	313-3816
13/16-14	312-6817	311-3817	313-3817
13/16-16	312-7682	311-4682	313-4682
13/16-18	312-6818	311-3818	313-3818
13/16-20	312-7684	311-4684	313-4684
13/16-24	312-6820	311-3820	313-3820
13/16-26	312-6819	311-3819	313-3819
13/16-27	312-7685	311-4685	313-3823
13/16-28	312-6821	311-3821	313-3821
13/16-30	312-6822	311-3822	313-3822
13/16-32	312-7686	311-4686	313-4686
13/16-36	312-7687	311-4687	313-4687
7/8-10	312-6824	311-3824	313-3824
7/8-12	312-7688	311-4688	313-4688
7/8-16	312-7690	311-4690	313-4690
7/8-18	312-7692	311-4692	313-4692
7/8-20	312-7694	311-4694	313-4694
7/8-24	312-6826	311-3826	313-3826
7/8-27	312-6827	311-3827	313-3827
7/8-28	312-6829	311-3829	313-3829
7/8-30	312-6828	311-3828	313-3828
7/8-32	312-6830	311-3830	313-3830
7/8-36	312-6832	311-3832	313-3832
7/8-40	312-6834	311-3834	313-3834
7/8-48	312-6835	311-3835	313-3835
29/32-24	312-7695	311-4695	
15/16-8	312-6836	311-3836	313-3836
15/16-10		311-3837	
15/16-12	312-7696	311-4696	313-4696
15/16-14		311-4697	313-4697
15/16-16	312-7698	311-4698	313-4698
15/16-18	312-7699	311-4699	313-4699
15/16-20	312-7700	311-4700	313-4700
15/16-24	312-6838	311-3838	313-3838
15/16-27	312-7702	311-4702	313-4702
15/16-30	312-6840	311-3840	313-3840
15/16-32	312-7704	311-4704	313-4704
31/32-32		311-4705	
1"-10	312-7706	311-4706	313-4706
1"-16	312-7708	311-4708	313-4708
1"-18	312-7710	311-4710	313-4710
1"-20	312-7712	311-4712	313-4712
1"-24	312-6842	311-3842	313-3842
1"-26	312-6841	311-3841	313-3841
1"-27	312-6843	311-3843	313-3843
1"-28	312-6845	311-3845	313-3845
1"-30	312-7713	311-4713	313-4713
1"-32	312-7714	311-4714	313-4714
1"-36	312-6844	311-3844	313-3844
1"-40	312-6846	311-3846	313-3846
1"-48	312-6848	311-3848	313-3848
1-1/32-20	312-7715	311-4715	

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
1-1/16-8	312-7716	311-4716	313-4716
1-1/16-10	312-7718	311-4718	313-4718
1-1/16-12	312-7720	311-4720	313-4720
1-1/16-14	312-7722	311-4722	313-4722
1-1/16-16	312-7724	311-4724	313-4724
1-1/16-18	312-7726	311-4726	313-4726
1-1/16-20	312-7728	311-4728	313-4728
1-1/16-24	312-7730	311-4730	313-4730
1-1/16-28	312-7731	311-4731	313-4731
1-1/16-32	312-7732	311-4732	313-4732
1-1/16-40	312-7733	311-4733	313-4733
1-1/16-48	312-6849		313-3849
1-1/8-8	312-7734	311-4734	313-4734
1-1/8-10	312-7736	311-4736	313-4736
1-1/8-14	312-6850	311-3850	313-3850
1-1/8-16	312-7738	311-4738	313-4738
1-1/8-18	312-7740	311-4740	313-4740
1-1/8-20	312-6852	311-3852	313-3852
1-1/8-24	312-6854	311-3854	313-3854
1-1/8-27	312-6856	311-3856	313-3856
1-1/8-30	312-6853		313-3853
1-1/8-32	312-7742	311-4742	313-4742
1-3/16-8	312-7744	311-4744	313-4744
1-3/16-10	312-7746	311-4746	313-4746
1-3/16-12	312-7748	311-4748	313-4748
1-3/16-14	312-7750	311-4750	313-4750
1-3/16-16	312-7752	311-4752	313-4752
1-3/16-18	312-7754	311-4754	313-4754
1-3/16-20	312-7756	311-4756	313-4756
1-3/16-24	312-7758	311-4758	313-4758
1-3/16-32	312-7760	311-4760	313-4760
1-1/4-8	312-7762	311-4762	313-4762
1-1/4-10	312-7764	311-4764	313-4764
1-1/4-14	312-7766	311-4766	313-4766
1-1/4-16	312-7768	311-4768	313-4768
1-1/4-18	312-7770	311-4770	313-4770
1-1/4-20	312-7772	311-4772	313-4772
1-1/4-24	312-7773	311-4773	313-4773
1-1/4-26	312-6857	311-3857	313-3857
1-1/4-27	312-6858	311-3858	313-3858
1-1/4-28	312-6860	311-3860	313-3860
1-1/4-32	312-7774	311-4774	313-4774
1-1/4-36	312-6861	311-3861	313-3861
1-1/4-40	312-7775	311-4775	313-4775
1-5/16-8	312-7776	311-4776	313-4776
1-5/16-12	312-7778	311-4778	313-4778
1-5/16-14	312-7779	311-4779	313-4779
1-5/16-16	312-7780	311-4780	313-4780
1-5/16-18	312-7782	311-4782	313-4782
1-5/16-20	312-7783	311-4783	313-4783
1-5/16-24	312-6862	311-3862	313-3862
1-5/16-32	312-6864	311-3864	313-3864
1-3/8-5		311-4785	
1-3/8-8	312-7784	311-4784	313-4784
1-3/8-10	312-7786	311-4786	313-4786
1-3/8-14	312-7788	311-4788	313-4788
1-3/8-16	312-7790	311-4790	313-4790
1-3/8-18	312-7792	311-4792	313-4792
1-3/8-20	312-7794	311-4794	313-4794
1-3/8-24	312-7795	311-4795	313-4795
1-3/8-27	312-6863	311-3863	313-3863
1-3/8-32	312-6866	311-3866	313-3866
1-3/8-40	312-6868	311-3868	313-3868
1-7/16-8	312-7796	311-4796	313-4796
1-7/16-12	312-7797	311-4797	313-4797
1-7/16-14		311-4799	
1-7/16-16	312-7798	311-4798	313-4798
1-7/16-18	312-7800	311-4800	313-4800
1-7/16-20	312-6869	311-3869	313-3869
1-7/16-24	312-7801	311-4801	
1-7/16-27	312-6871		313-3871
1-7/16-36	312-6870	311-3870	313-3870
1-15/32-40	312-6865		313-3865
1-1/2-8	312-7802	311-4802	313-4802
1-1/2-10	312-7804	311-4804	313-4804
1-1/2-14	312-7805	311-4805	313-4805
1-1/2-16	312-7806	311-4806	313-4806
1-1/2-18	312-7808	311-4808	313-4808

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
1-1/2-20	312-7810	311-4810	313-4810
1-1/2-24	312-7811	311-4811	313-4811
1-1/2-28	312-6872	311-3872	313-3872
1-1/2-32	312-6874	311-3874	313-3874
1-1/2-40	312-6873	311-3873	
1-9/16-8	312-6876	311-3876	313-3876
1-9/16-10	312-6875	311-3875	
1-9/16-12	312-7812	311-4812	313-4812
1-9/16-16	312-7813	311-4813	313-4813
1-9/16-18	312-7814	311-4814	313-4814
1-9/16-20	312-7816	311-4816	313-4816
1-9/16-24	312-7815	311-4815	313-4815
1-9/16-32	312-6877	311-3877	313-3877
1-5/8-5	312-6878	311-3878	313-3878
1-5/8-5-1/2	312-7818	311-4818	313-4818
1-5/8-8	312-7820	311-4820	313-4820
1-5/8-10	312-7822	311-4822	313-4822
1-5/8-12	312-7824	311-4824	313-4824
1-5/8-14	312-7826	311-4826	313-4826
1-5/8-16	312-7828	311-4828	313-4828
1-5/8-18	312-7830	311-4830	313-4830
1-5/8-20	312-7832	311-4832	313-4832
1-5/8-24	312-7834	311-4834	313-4834
1-21/32-24	312-6881		313-3881
1-21/32-32	312-6882		313-3882
1-11/16-12	312-7836	311-4836	313-4836
1-11/16-16	312-7837	311-4837	313-4837
1-11/16-18	312-7838	311-4838	313-4838
1-11/16-20	312-7839	311-4839	313-4839
1-11/16-24	312-7835	311-4835	
1-11/16-32	312-6879		313-4879
1-11/16-36	312-6880	311-3880	313-3880
1-3/4-5	312-7840	311-4840	313-4840
1-3/4-6	312-7842	311-4842	313-4842
1-3/4-7	312-7843	311-4843	
1-3/4-8	312-7844	311-4844	313-4844
1-3/4-10	312-7846	311-4846	313-4846
1-3/4-12	312-7848	311-4848	313-4848
1-3/4-14	312-6884	311-3884	313-3884
1-3/4-16	312-7850	311-4850	313-4850
1-3/4-18	312-7852	311-4852	313-4852
1-3/4-20	312-7854	311-4854	313-4854
1-3/4-24	312-7856	311-4856	313-4856
1-3/4-32	312-6885		313-3885
1-13/16-8	312-7858	311-4858	313-4858
1-13/16-12	312-7859	311-4859	313-4859
1-13/16-16	312-7860	311-4860	313-4860
1-13/16-18	312-7862	311-4862	313-4862
1-13/16-20	312-7863	311-4863	313-4863
1-13/16-28	312-6890	311-3890	313-3890
1-13/16-32	312-6889		313-3889
1-27/32-32	312-6891	311-3891	
1-7/8-5	312-7864	311-4864	313-4864
1-7/8-7	312-7866	311-4866	313-4866
1-7/8-8	312-7868	311-4868	313-4868
1-7/8-10	312-7870	311-4870	313-4870
1-7/8-12	312-7872	311-4872	313-4872
1-7/8-16	312-7874	311-4874	313-4874
1-7/8-18	312-7876	311-4876	313-4876
1-7/8-20	312-7878	311-4878	313-4878
1-29/32-32	312-7879	311-4879	
1-15/16-12	312-7880	311-4880	313-4880
1-15/16-16	312-7882	311-4882	313-4882
1-15/16-18	312-6892	311-3892	313-3892
1-15/16-20	312-6894	311-3894	313-3894
1-15/16-32	312-6893		313-3893
2"-4-1/2	312-7884	311-4884	313-4884
2"-6	312-7886	311-4886	313-4886
2"-8	312-7888	311-4888	313-4888
2"-10	312-7890	311-4890	313-4890
2"-12	312-7892	311-4892	313-4892
2"-14	312-7894	311-4894	313-4894
2"-16	312-7896	311-4896	313-4896
2"-18	312-6896	311-3896	313-3896
2"-20	312-7898	311-4898	313-4898
2"-24		311-4895	
2"-32		311-4899	
2-1/16-12	312-6897	311-3897	313-3897

Special Thread Hand Taps continued

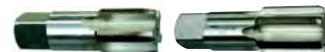
美标手用高速钢特细牙丝锥磨制

Size	Taper Order No.	Plug Order No.	Bottoming Order No.
2-1/16-32	312-6899	311-4897	
2-1/8-6		311-4909	
2-1/8-8	312-7900	311-4900	313-4900
2-1/8-10	312-7901	311-4901	313-4901
2-1/8-12	312-7902	311-4902	313-4902
2-1/8-14	312-7907	311-4907	
2-1/8-16	312-7903	311-4903	313-4903
2-1/8-18	312-7904	311-4904	313-4904
2-1/8-20	312-7905	311-4905	313-4905
2-3/16-12		311-4911	
2-3/16-20	312-7906	311-4906	313-4906
2-1/4-4-1/2	312-7908	311-4908	313-4908
2-1/4-6	312-6898	311-3898	313-3898
2-1/4-8	312-7910	311-4910	313-4910
2-1/4-10	312-6900	311-3900	313-3900
2-1/4-12	312-7912	311-4912	313-4912
2-1/4-14	312-7914	311-4914	313-4914
2-1/4-16	312-7915	311-4915	313-4915
2-1/4-18	312-7916	311-4916	313-4916
2-1/4-20	312-7917	311-4917	313-4917
2-5/16-12		311-3903	313-3903
2-5/16-14		311-3904	313-3904
2-5/16-18	312-6901	311-3901	
2-3/8-10	312-6902	311-3902	313-3902
2-3/8-12	312-7922	311-4922	313-4922
2-3/8-14	312-7924	311-4924	313-4924
2-3/8-16	312-6906	311-3906	313-3906
2-3/8-18	312-6908	311-3908	313-3908
2-3/8-20	312-6910	311-3910	313-3910
2-3/8-4-1/2	312-7918	311-4918	313-4918
2-3/8-8	312-7920	311-4920	313-4920
2-1/2-10		311-4931	
2-1/2-12	312-7932	311-4932	313-4932
2-1/2-16	312-7934	311-4934	313-4934
2-1/2-18	312-7936	311-4936	313-4936
2-1/2-20	312-6914	311-3914	313-3914
2-1/2-4	312-7926	311-4926	313-4926
2-1/2-6	312-7928	311-4928	313-4928
2-1/2-8	312-7930	311-4930	313-4930
2-5/8-8	312-7938	311-4938	313-4938
2-5/8-12	312-7940	311-4940	313-4940
2-5/8-14		311-3915	
2-5/8-16	312-7942	311-4942	313-4942
2-5/8-18	312-7944	311-4944	313-4944
2-3/4-4	312-7946	311-4946	313-4946
2-3/4-8	312-7948	311-4948	313-4948
2-3/4-12	312-7950	311-4950	313-4950
2-3/4-16	312-7952	311-4952	313-4952
2-3/4-18	312-7954	311-4954	313-4954
2-7/8-8	312-7956	311-4956	313-4956
2-7/8-12	312-7958	311-4958	313-4958
2-7/8-14	312-6916	311-3916	313-3916
2-7/8-16	312-7960	311-4960	313-4960
2-7/8-18	312-6918	311-3918	313-3918
3"-4	312-7962	311-4962	313-4962
3"-8	312-7964	311-4964	313-4964
3"-12	312-7966	311-4966	313-4966
3"-14	312-6919	311-3919	
3"-16	312-6920	311-3920	313-3920
3"-18	312-6922	311-3922	313-3922
3-1/8-12	312-6923	311-3923	
3-3/16"-12	312-7967	311-4967	
3-1/4-4	312-7968	311-4968	313-4968
3-1/4-8	312-7970	311-4970	313-4970
3-1/4-12	312-7972	311-4972	313-4972
3-1/2-4	312-7974	311-4974	313-4974
3-1/2-8	312-7976	311-4976	313-4976
3-1/2-12	312-7978	311-4978	313-4978
3-5/8-12	312-7979	311-4979	
3-3/4-4	312-7980	311-4980	313-4980
3-3/4-8	312-7981	311-3924	313-3924
3-3/4-12	312-7982	311-4982	313-4982
4"-4	312-6926	311-3926	313-3926
4"-8	312-7984	311-4984	313-4984
4"-12	312-7986	311-4986	313-4986
4"-16	312-6928	311-3928	313-3928
4-1/2-16	312-6929	311-3929	

Metric Special Hand Taps

HSS, Ground Thread

公制手用特细牙丝锥



Size	Plug Order No.	Bottoming Order No.	Size	Plug Order No.	Bottoming Order No.
1.4x0.30	411-6014	411-7014	18x1.25	411-6183	411-7183
1.7x0.20	411-6017	411-7017	18x1.75	411-6184	411-7184
1.7x0.35	411-6018	411-7018	19x0.50	411-6191	411-7191
2.0x0.25	411-6020	411-7020	19x1.00	411-6192	411-7192
2.0x0.45	411-6022	411-7022	19x1.50	411-6193	411-7193
2.3x0.40	411-6023	411-7023	19x2.00	411-6194	411-7194
2.5x0.20	411-6025	411-7025	20x1.00	411-6201	411-7201
2.6x0.35	411-6026	411-7026	20x1.25	411-6202	411-7202
2.6x0.45	411-6027	411-7027	20x2.00	411-6203	411-7203
3.0x0.35	411-6030	411-7030	21x1.00	411-6211	411-7211
3.0x0.60	411-6031	411-7031	21x1.25	411-6212	411-7212
3.5x0.50	411-6035	411-7035	21x1.50	411-6213	411-7213
4.0x0.50	411-6040	411-7040	21x2.00	411-6214	411-7214
4.5x0.50	411-6045	411-7045	21x2.50	411-6215	411-7215
5.0x0.50	411-6050	411-7050	22x1.00	411-6221	411-7221
5x0.75	411-6051	411-7051	22x2.00	411-6222	411-7222
5x0.90	411-6052	411-7052	23x1.00	411-6231	411-7231
5.5x0.70	411-6055	411-7055	23x1.50	411-6232	411-7232
5.5x0.90	411-6056	411-7056	23x2.00	411-6233	411-7233
6.0x0.50	411-6060	411-7060	23x2.50	411-6234	411-7234
6.0x0.75	411-6061	411-7061	23x3.00	411-6235	411-7235
7x0.50	411-6071	411-7071	24x1.00	411-6241	411-7241
7x0.75	411-6072	411-7072	25x1.00	411-6251	411-7251
7x1.25	411-6073	411-7073	25x1.50	411-6252	411-7252
8x0.50	411-6080	411-7080	25x2.00	411-6253	411-7253
8x0.75	411-6081	411-7081	25x3.00	411-6254	411-7254
8x1.50	411-6083	411-7083	26x1.50	411-6261	411-7261
9.0x0.50	411-6090	411-7090	26x2.00	411-6262	411-7262
9x0.75	411-6091	411-7091	27x1.00	411-6271	411-7271
9x1.00	411-6092	411-7092	27x2.50	411-6272	411-7272
9x1.25	411-6093	411-7093	28x1.50	411-6281	411-7281
10x0.50	411-6101	411-7101	28x2.00	411-6282	411-7282
10x0.75	411-6102	411-7102	30x1.00	411-6301	411-7301
10x1.00	411-6103	411-7103	30x2.50	411-6302	411-7302
11x0.50	411-6111	411-7111	30x3.00	411-6303	411-7303
11x0.75	411-6112	411-7112	32x1.50	411-6321	411-7321
11x1.00	411-6113	411-7113	32x2.00	411-6322	411-7322
11x1.25	411-6114	411-7114	33x1.50	411-6331	411-7331
11x1.50	411-6115	411-7115	33x2.00	411-6332	411-7332
12x0.50	411-6121	411-7121	34x1.50	411-6341	411-7341
12x0.75	411-6122	411-7122	35x1.50	411-6351	411-7351
12x1.00	411-6123	411-7123	38x1.50	411-6381	411-7381
12x1.50	411-6124	411-7124	39x1.50	411-6391	411-7391
13x0.50	411-6131	411-7131	40x1.50	411-6401	411-7401
13x0.75	411-6132	411-7132	42x1.50	411-6421	411-7421
13x1.00	411-6133	411-7133	42x3.00	411-6422	411-7422
13x1.25	411-6136	411-7136	42x4.50	411-6423	411-7423
13x1.50	411-6134	411-7134	45x1.50	411-6451	411-7451
13x2.00	411-6135	411-7135	45x3.00	411-6452	411-7452
14x0.50	411-6141	411-7141	45x4.50	411-6454	411-7454
14x0.75	411-6142	411-7142	46x4.50	411-6461	411-7461
14x1.00	411-6143	411-7143	48x1.50	411-6481	411-7481
14x1.50	411-6144	411-7144	48x3.00	411-6483	411-7483
14x1.75	411-6145	411-7145	48x4.50	411-6484	411-7484
15x0.50	411-6151	411-7151	48x5.00	411-6485	411-7485
15x1.00	411-6152	411-7152	50x1.50	411-6501	411-7501
15x1.50	411-6153	411-7153	50x3.00	411-6503	411-7503
15x2.00	411-6154	411-7154	52x1.50	411-6521	411-7521
16x0.50	411-6161	411-7161	52x3.00	411-6523	411-7523
16x0.75	411-6162	411-7162	52x5.00	411-6525	411-7525
16x1.00	411-6163	411-7163	56x3.00	411-6563	411-7563
16x1.25	411-6164	411-7164	56x4.00	411-6564	411-7564
16x1.75	411-6165	411-7165	56x5.50	411-6565	411-7565
17x0.50	411-6171	411-7171	64x1.50	411-6641	411-7641
17x1.00	411-6172	411-7172	64x3.00	411-6643	411-7643
17x1.50	411-6173	411-7173	64x6.00	411-6646	411-7646
17x0.20	411-6174	411-7174	72x3.00	411-6723	411-7723
18x0.50	411-6181	411-7181	72x6.00	411-6726	411-7726
18x1.00	411-6182	411-7182			

Screw Thread Insert Taps (S.T.I.)

High Speed Steel, Ground Thread, Straight Flute

STI 直槽丝锥



Tap Size	Plug Order No.	Bottom Order No.	Tap Size	Plug Order No.	Bottom Order No.
2-56 NC	311-9200	311-9300	1-8 NC	311-9234	311-9334
3-48 NC	311-9202	311-9302	3-56 NF	311-9250	311-9350
4-40NC	311-9204	311-9304	4-48 NF	311-9252	311-9352
5-40 NC	311-9206	311-9306	6-40 NF	311-9254	311-9354
6-32 NC	311-9208	311-9308	8-36 NF	311-9256	311-9356
8-32 NC	311-9210	311-9310	10-32 NF	311-9258	311-9358
10-24 NC	311-9212	311-9312	1/4-28 NF	311-9260	311-9360
12-24 NC	311-9214	311-9314	5/16-24 NF	311-9262	311-9362
1/4-20 NC	311-9216	311-9316	3/8-24 NF	311-9264	311-9364
5/16-18 NC	311-9218	311-9318	7/16-20 NF	311-9266	311-9366
3/8-16 NC	311-9220	311-9320	1/2-20 NF	311-9268	311-9368
7/16-14 NC	311-9222	311-9322	9/16-18 NF	311-9270	311-9370
1/2-13 NC	311-9224	311-9324	5/8-18 NF	311-9272	311-9372
9/16-12 NC	311-9226	311-9326	3/4-16 NF	311-9274	311-9374
5/8-11 NC	311-9228	311-9328	7/8-14 NF	311-9276	311-9376
3/4-10 NC	311-9230	311-9330	1-12 NF	311-9278	311-9378
7/8-9 NC	311-9232	311-9332	1-14 NF	311-9280	311-9380

Acme TandemTaps 梯形丝锥

High Speed Steel,

Chamfer: 3-5 Threads

Ground Thread,

Class 2G



Size	Thread Length	Overall length	Max. Depth of Bronze or Steel Nut	Max. Depth of Brass or Cast Iron Nut	Order No.
3/8"-12	2-9/16"	5"			312-0302
7/16-12	2-9/16	5			312-0304
1/2-10	2-9/16	2-9/16	1"	1-1/2"	312-0306
5/8-8	3-3/16	6-1/4	1-1/4	1-7/8	312-0308
3/4-6	4-5/16	7-15/16	1-1/2	2-1/4	312-0310
7/8-6	4-3/8	8-5/8	1-3/4	2-5/8	312-0312
1-5	5-1/4	10-1/8	2	3	312-0314
1-1/8-5	5-1/4	10-3/4	2-1/4	3-3/8	312-0316
1-1/4-5	5-1/4	11-1/8	2-1/2	3-3/4	312-0318
1-3/8-4	5-7/8	12-1/4	2-3/4	4-1/8	312-0320
1-1/2-4	5-7/8	12-5/8	3	4-1/2	312-0322
2"-4	6-1/2	14-7/8			312-0328

Left Hand

Size	Thread Length	Overall length	Max. Depth of Bronze or Steel Nut	Max. Depth of Brass or Cast Iron Nut	Order No.
3/8"-12	2-9/16"	5"			312-9017
7/16-12	2-9/16	5			312-9018
1/2-10	2-9/16	2-9/16	1"	1-1/2"	312-9019
5/8"-8	3-3/16	6-1/4	1-1/4	1-7/8	312-9020
3/4-6	4-5/16	7-15/16	1-1/2	2-1/4	312-9021
7/8-6	4-3/8	8-5/8	1-3/4	2-5/8	312-9022
1-5	5-1/4	10-1/8	2	3	312-9023
1-1/8-5	5-1/4	10-3/4	2-1/4	3-3/8	312-9024
1-1/4-5	5-1/4	11-1/8	2-1/2	3-3/4	312-9025

HSS Ground Pulley Taps

高速钢磨牙皮带轮丝锥



Size	No. of Flute	H limit	OAL	Order No.	Size	No. of Flute	H limit	OAL	Order No.
1/4"-20NC	4	H-3	4	312-0402	1/2-13NC	4	H-3	8	312-0618
5/16-18NC	4	H-3	4	312-0404	1/2-20NF	4	H-3	8	312-0620
3/8-16NC	4	H-3	4	312-0406	5/8-11NC	4	H-3	8	312-0622
4-40NC	3	H-3	6	312-0500	9/16-12	4	H-3	8	312-0623
6-32NC	4	H-3	6	312-0502	5/8-18NF	4	H-3	8	312-0624
6-40NC	4	H-2	6	312-0504	3/4-10NC	4	H-3	8	312-0626
8-32NC	4	H-3	6	312-0506	3/4-16	4	H-3	8	312-0627
8-32NC	4	H-3	6	312-0507	7/8-9NC	4	H-4	8	312-0628
8-36NF	4	H-3	6	312-0508	1-8NC	4	H-4	8	312-0630
10-24NC	4	H-3	6	312-0510	1-1/8-7NC			8	312-0631
10-32NC	4	H-3	6	312-0512	1-1/4-7NC			8	312-0632
12-24NC	4	H-3	6	312-0513	1/4-28	4	H-3	10	312-0700
1/4-20NC	4	H-3	6	312-0514	5/16-18	4	H-3	10	312-0701
1/4-28NF	4	H-3	6	312-0516	3/8-16NC	4	H-3	10	312-0702
5/16-18NC	4	H-3	6	312-0518	5/16-24	4	H-3	10	312-0703
5/16-24NF	4	H-3	6	312-0520	3/8-24NF	4	H-3	10	312-0704
3/8-16NC	4	H-3	6	312-0522	7/16-14NC	4	H-3	10	312-0706
3/8-24NF	4	H-3	6	312-0524	1/2-20	4	H-3	10	312-0707
7/16-14NC	4	H-3	6	312-0526	7/16-20NF	4	H-3	10	312-0708
7/16-20NF	4	H-3	6	312-0528	1/2-13NC	4	H-3	10	312-0709
1/2-13NC	4	H-3	6	312-0530	5/8-11NC	4	H-3	10	312-0710
1/2-20NF	4	H-3	6	312-0532	5/8-18	4	H-3	10	312-0711
5/8-11NC	4	H-3	6	312-0534	3/4-10NC	4	H-3	10	312-0712
5/8-18NF	4	H-3	6	312-0536	3/4-16	4	H-3	10	312-0713
3/4-10NC	4	H-3	6	312-0538	7/8-9NC	4	H-4	10	312-0714
3/4-16	4	H-3	6	312-0539	1-8NC	4	H-3	10	312-0716
7/8-9NC	4	H-4	6	312-0540	1/4-20	4	H-3	12	312-0800
1-1/4-7NC	4	H-3	6	312-0542	3/8-16NC	4	H-3	12	312-0802
10-24	4		8	312-0600	7/16-14NC	4	H-3	12	312-0804
10-32	4		8	312-0601	1/2-13NC	4	H-3	12	312-0806
1/4-20NC	4	H-3	8	312-0602	1/2-20NF	4	H-3	12	312-0807
1/4-28NF	4	H-3	8	312-0604	5/8-11NC	4	H-3	12	312-0808
5/16-18NC	4	H-3	8	312-0606	5/8-18NF	4	H-3	12	312-0810
5/16-24NF	4	H-3	8	312-0608	7/8-9	4	H-3	12	312-0811
3/8-16NC	4	H-3	8	312-0610	3/4-10NC	4	H-3	12	312-0812
3/8-24NF	4	H-3	8	312-0612	3/4-16NF	4	H-3	12	312-0813
7/16-14NC	4	H-3	8	312-0614	1-8NC	4	H-4	12	312-0814
7/16-20NF	4	H-3	8	312-0616					

HSS Ground Pulley Taps ,Spiral point

高速钢磨牙皮带轮螺尖丝锥



Size	No. of Flute	H limit	OAL	Order No.	Size	No. of Flute	H limit	OAL	Order No.
4-40NC	2	H-2	4	312-4402	5/16"-24NF2		H-3	8	312-4608
6-32NC	2	H-3	4	312-4404	3/8-16NC	3	H-3	8"	312-4610
8-32NC	2	H-3	4	312-4406	3/8-24NF	3	H-3	8	312-4612
10-24NC	2	H-3	4	312-4408	7/16-14NC3		H-3	8	312-4614
10-32NF	2	H-3	4	312-4409	7/16-20NF3		H-3	8	312-4616
1/4-20NC	2	H-3	4	312-4410	1/2-13NC	3	H-3	8	312-4618
5/16-18NC	2	H-3	4	312-4412	1/2-20NF	3	H-3	8	312-4620
3/8-16NC	3	H-3	4	312-4414	5/8-11NC	3	H-3	8	312-4622
8-32NC	2	H-3	6	312-4506	5/8-18NF	3	H-3	8	312-4624
8-36NF	2	H-3	6	312-4508	3/4-10NC	3	H-3	8	312-4626
10-24NC	2	H-3	6	312-4510	7/8-9NC	3	H-4	8	312-4628
10-32NF	2	H-3	6	312-4512	1-8NC	3	H-4	8	312-4630
1/4-20NC	2	H-3	6	312-4514	3/8-16NC	3	H-3	10	312-4702
1/4-28NF	2	H-3	6	312-4516	3/8-24NF	3	H-3	10	312-4704
5/16-18NC	2	H-3	6	312-4518	7/16-14NC3		H-3	10	312-4706
5/16-24NF	2	H-3	6	312-4520	7/16-20NF3		H-3	10	312-4708
3/8-16NC	3	H-3	6	312-4522	1/2-13NC	3	H-3	10	312-4709
3/8-24NF	3	H-3	6	312-4524	5/8-11NC	3	H-3	10	312-4710
7/16-14NC	3	H-3	6	312-4526	3/4-10NC	3	H-3	10	312-4712
7/16-20NF	3	H-3	6	312-4528	7/8-9NC	3	H-4	10	312-4714
1/2-13NC	3	H-3	6	312-4530	3/8-16NC	3	H-3	12	312-4802
1/2-20NF	3	H-3	6	312-4532	7/16-14NC3		H-3	12	312-4804
5/8-11NC	3	H-3	6	312-4534	1/2-13NC	3	H-3	12	312-4806
5/8-18NF	3	H-3	6	312-4536	5/8-11NC	3	H-3	12	312-4808
3/4-10NC	3	H-3	6	312-4538	5/8-18NF	3	H-3	12	312-4810
7/8-9NC	3	H-4	6	312-4540	3/4-10NC	3	H-3	12	312-4812
1/4-20NC	2	H-3	8	312-4602	3/4"-16NF	3	H-3	12	312-4813
1/4-28NF	2	H-3	8	312-4604	1-8NC	4	H-4	12	312-4814
5/16-18NC	2	H-3	8	312-4606					

Single Pass Combination Drill Taps

HSS, Ground Thread

美式复合丝锥钻



Size	Thread Limit	Thread Length	Drill Length	Drill Size	Overall Length	H.S.S Order No.	TiN-Coated Order No.
4-40NC	H-2	9/16"	1/4"	.0890"	1-7/8"	312-0102	312-0202
4-48NF	H-2	9/16	1/4	.0930	1-7/8	312-0104	312-0204
5-40NC	H-2	5/8	9/32	.1015	1-15/16	312-0106	312-0206
5-44NF	H-2	5/8	9/32	.1040	1-15/16	312-0108	312-0208
6-32NC	H-3	11/16	5/16	.1095	2	312-0110	312-0210
6-40NF	H-2	11/16	5/16	.1150	2	312-0112	312-0212
8-32NC	H-3	3/4	3/8	.1360	2-1/8	312-0114	312-0214
8-36NF	H-3	3/4	3/8	.1385	2-1/8	312-0116	312-0216
10-24NC	H-3	7/8	13/32	.1520	2-3/8	312-0118	312-0218
10-32NF	H-3	7/8	13/32	.1610	2-3/8	312-0120	312-0220
12-24NC	H-3	7/8	15/32	.1770	2-3/8	312-0122	312-0222
12-28NF	H-3	7/8	15/32	.1835	2-3/8	312-0124	312-0224
1/4-20NC	H-3	15/16	17/32	.2010	2-1/2	312-0126	312-0226
1/4-28NF	H-3	15/16	17/32	.2175	2-1/2	312-0128	312-0228
5/16-18NC	H-3	1-1/8	11/16	.2570	3	312-0130	312-0230
5/16-24NF	H-3	1-1/8	11/16	.2720	3	312-0132	312-0232
3/8-16NC	H-3	1-1/4	13/16	.3125	3-1/2	312-0134	312-0234
3/8-24NF	H-3	1-1/4	13/16	.3345	3-1/2	312-0136	312-0236
7/16-14NC	H-3	1-7/16	1	.3680	3-7/8	312-0138	312-0238
7/16-20NF	H-3	1-7/16	1	.3890	3-7/8	312-0140	312-0240
1/2-13NC	H-3	1-21/32	1-1/8	.4250	4-1/4	312-0142	312-0242
1/2-20N	H-3	1-21/32	1-1/8	.4510	4-1/4	312-0144	312-0244

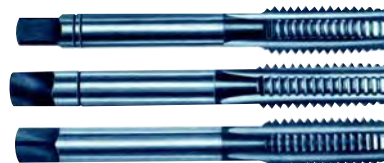
Size	Thread Limit	Thread Length	Drill Length	Drill Size	Overall Length	H.S.S Order No.	TiN-Coated Order No.
3x.5mm	D-3	13/32"	9/32"	.1015"	1-15/16"	312-0162	312-0262
3.5x.6mm	D-4	7/16	5/16	.1180	2	312-0164	312-0264
4x.7mm	D-4	1/2	3/8	.1340	2-1/8	312-0166	312-0266
4.5x.75mm	D-4	5/8	13/32	.1520	2-3/8	312-0168	312-0268
5x.8mm	D-4	5/8	13/32	.1700	2-3/8	312-0170	312-0270
6x1.00mm	D-5	25/32	17/32	.2030	2-1/2	312-0172	312-0272
7x1.00mm	D-5	15/16	11/16	.2420	2-27/32	312-0174	312-0274
8x1.25mm	D-5	15/16	11/16	.2735	2-27/32	312-0176	312-0276
10x1.5mm	D-6	1-1/16	13/16	.3440	3-3/8	312-0178	312-0278
12x1.75mm	D-6	1-3/8	1-1/8	.4140	4-1/16	312-0180	312-0280

Metric Hand Taps 德标 352 丝锥

DIN 352

3 Piece

High Speed Steel



Size	Taper Order No.	Plug Order No.	Bottoming Order No.	Set Order No.
M1.6-.35mm			324-3016	
M2-.4mm	324-1020	324-2020	324-3020	311-1219
M2.5-.45mm	324-1025	324-2025	324-3025	311-1221
M2.6-.45mm	324-1026	324-2026	324-3026	311-1226
M3-.5mm	324-1030	324-2030	324-3030	311-1203
M3.5-.6mm	324-1035	324-2035	324-3035	311-1235
M4-.7mm	324-1040	324-2040	324-3040	311-1204
M5-.8mm	324-1050	324-2050	324-3050	311-1205
M6-1.0mm	324-1060	324-2060	324-3060	311-1206
M7-1.0mm	324-1070	324-2070	324-3070	311-1207
M8-1.25mm	324-1080	324-2080	324-3080	311-1208
M9-1.25mm	324-1090	324-2090	324-3090	311-1209
M10-1.50mm	324-1100	324-2100	324-3100	311-1210
M12-1.75mm	324-1120	324-2120	324-3120	311-1212
M14-2.0mm	324-1140	324-2140	324-3140	311-1214
M16-2.0mm	324-1160	324-2160	324-3160	311-1216
M18-2.5mm	324-1180	324-2180	324-3180	311-1218
M20-2.5mm	324-1200	324-2200	324-3200	311-1220
M22-2.5mm	324-1220	324-2220	324-3220	311-1222
M24-3.0mm	324-1240	324-2240	324-3240	311-1224
M27-3.0mm	324-1270	324-2270	324-3270	311-1227
M30-3.5mm	324-1300	324-2300	324-3300	311-1230
M33-3.5mm	324-1330	324-2330	324-3330	311-1233
M36-4.0mm	324-1360	324-2360	324-3360	311-1236
M39-4.0mm	324-1390	324-2390	324-3390	311-1239
M42-4.5mm	324-1420	324-2420	324-3420	311-1242
M45-4.5mm	324-1450	324-2450	324-3450	311-1245
M48-5.0mm	324-1480	324-2480	324-3480	311-1248
M52-5.0mm	324-1520	324-2520	324-3520	311-1252
M56-5.5mm	324-1560	324-2560	324-3560	311-1256
M60-5.5mm	324-1600	324-2600	324-3600	311-1260
M64-6.0mm	324-1640	324-2640	324-3640	311-1264
M68-6.0mm	324-1680	324-2680	324-3680	311-1268

Metric Hand Tap Sets

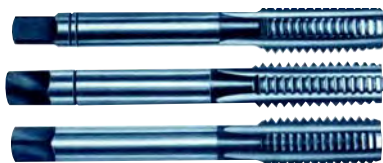
英制三支套丝锥

DIN 351

3 Piece

High Speed Steel

Right Hand



Size	Overall Length	Order No.	Size	Overall Length	Order No.
1/16"-60	32mm	311-3004	5/8"-11	90mm	311-3040
3/32-48	36mm	311-3006	3/8-10	105mm	311-3048
1/8-40	40mm	311-3008	7/8-9	110mm	311-3056
5/32-32	45mm	311-3010	1-8	110mm	311-3100
3/16-24	50mm	311-3012	1-1/8-7	132mm	311-3108
7/32-24	50mm	311-3014	1-1/4-7	132mm	311-3116
1/4-20	56mm	311-3016	1-3/8-6	150mm	311-3124
5/16-18	63mm	311-3020	1-1/2-6	150mm	311-3132
3/8-16	70mm	311-3024	1-5/8-5	160mm	311-3140
7/16-14	75mm	311-3028	1-3/4-5	160mm	311-3148
1/2-12	80mm	311-3032	1-7/8-4-1/2	190mm	311-3156
9/16-12	80mm	311-3036	2-4-1/2	190mm	311-3200

Metric Hand Tap Sets

德标 2181 两支套丝锥

MF DIN 2181

2 Piece

High Speed Steel



Size	Order No.	Size	Order No.	Size	Order No.
M3x.35mm	311-1302	M12x1.5mm	311-1324	M27x1.5mm	311-1344
M4x.35mm	311-1304	M14x1.0mm	311-1326	M27x2.5mm	311-1345
M4x.5mm	311-1306	M14x1.25mm	311-1328	M30x1.5mm	311-1346
M5x.5mm	311-1308	M14x1.5mm	311-1330	M30x2mm	311-1347
M6x.5mm	311-1309	M16x1.0mm	311-1332	M32x1.5mm	311-1348
M6x.75mm	311-1310	M16x1.5mm	311-1334	M32x2mm	311-1349
M8x.5mm	311-1311	M18x1.0mm	311-1335	M35x1.5mm	311-1356
M8x.75mm	311-1312	M18x1.5mm	311-1336	M36x2mm	311-1360
M8x1.0mm	311-1314	M20x1.0mm	311-1337	M39x2mm	311-1366
M10x.75mm	311-1315	M20x1.5mm	311-1338	M42x2mm	311-1370
M10x1.0mm	311-1316	M22x1.0mm	311-1339	M45x2mm	311-1376
M10x1.25mm	311-1318	M22x1.5mm	311-1340	M45x3mm	311-1377
M12x1.0mm	311-1320	M24x1.5mm	311-1342		
M12x1.25mm	311-1322	M24x2mm	311-1343		

Metric Hand Tap Sets

DIN 5157

德标 5157 两支套管丝锥

2 Piece, High Speed Steel,
Right Hand

Size	Overall Length	Order No.	Size	Overall Length	Order No.
1/8"-28	63mm	311-1008	5/8"-14	90mm	311-1040
1/4-19	70mm	311-1016	3/4-14	100mm	311-1048
3/8-19	70mm	311-1024	7/8-14	100mm	311-1056
1/2-14	80mm	311-1032	1-11	110mm	311-1064

Metric Single Pass Drill Taps

High Speed Steel,
Ground Thread,
German Pattern

复合丝锥钻, 德式



Size	Drill Length	Thread Length	Overall Length	H.S.S Order No.	TiN-Coated Order No.
M3	5mm	6	36	312-8003	312-8103
M4	6mm	8	39	312-8004	312-8104
M5	7mm	9	41	312-8005	312-8105
M6	8mm	11	44	312-8006	312-8106
M8	11mm	14	51	312-8008	312-8108
M10	15mm	17	59	312-8010	312-8110

Metric Machine Taps 德标 371 磨制丝锥

DIN 371

High Speed Steel
Thread Ground
Right Hand

High Speed Steel

Size	Straight Flute		Spiral Flute		Spiral Point
	Taper "A" Order No.	Bottom "C" Order No.	15° Flute Order No.	35° Flute Order No.	
M2-.4mm	311-1602	311-1702	311-1622	311-1722	311-1612
M3-.5mm	311-1603	311-1703	311-1623	311-1723	311-1613
M3.5-.6mm					311-1611
M4-.7mm	311-1604	311-1704	311-1624	311-1724	311-1614
M5-.8mm	311-1605	311-1705	311-1625	311-1725	311-1615
M6-1.0mm	311-1606	311-1706	311-1626	311-1726	311-1616
M8-1.25mm	311-1608	311-1708	311-1628	311-1728	311-1618
M10-1.5mm	311-1610	311-1710	311-1630	311-1730	311-1620

HSS, TiN Coated

Size	Straight Flute		Spiral Flute		Spiral Point
	Taper "A" Order No.	Bottom "C" Order No.	15° Flute Order No.	35° Flute Order No.	
M1.4-.3mm					311-1641
M2-.4mm	311-1632	311-1732	311-1652	311-1752	311-1642
M2.5-.45mm					311-1649
M3-.5mm	311-1633	311-1733	311-1653	311-1753	311-1643
M4-.7mm	311-1634	311-1734	311-1654	311-1754	311-1644
M5-.8mm	311-1635	311-1735	311-1655	311-1755	311-1645
M6-1.0mm	311-1636	311-1736	311-1656	311-1756	311-1646
M8-1.25mm	311-1638	311-1738	311-1658	311-1758	311-1648
M10-1.5mm	311-1640	311-1740	311-1660	311-1760	311-1650

Metric Nut Taps

德标 357 螺母丝锥

DIN 357

High Speed Steel
Right Hand

Size	Order No.	Size	Order No.
M3x.5mm	311-1503	M8x1.25mm	311-1508
M4x.7mm	311-1504	M10x1.50mm	311-1510
M5x.8mm	311-1505	M12x1.75mm	311-1512
M6x1.0mm	311-1506		

Metric Machine Taps

德标 376 磨制丝锥

DIN 376

High Speed Steel
Thread Ground
Right Hand

High Speed Steel

Size	Straight Flute		Spiral Flute		Spiral Point
	Taper "A" Order No.	Bottom "C" Order No.	15° Flute Order No.	35° Flute Order No.	
M3-0.5mm	311-1403	311-2403	311-1463	311-2463	311-1433
M4-0.7mm	311-1404	311-2404	311-1464	311-2464	311-1434
M5-0.8mm	311-1405	311-2405	311-1465	311-2465	311-1435
M6-1.0mm	311-1406	311-2406	311-1466	311-2466	311-1436
M8-1.25mm	311-1408	311-2408	311-1468	311-2468	311-1438
M10-1.5mm	311-1410	311-2410	311-1470	311-2470	311-1440
M12-1.75mm	311-1412	311-2412	311-1472	311-2472	311-1442
M14-2.0mm	311-1414	311-2414	311-1474	311-2474	311-1444
M16-2.0mm	311-1416	311-2416	311-1476	311-2476	311-1446
M18-2.5mm	311-1418	311-2418	311-1478	311-2478	311-1448
M20-2.5mm	311-1420	311-2420	311-1480	311-2480	311-1450
M22-2.5mm	311-1422	311-2422	311-1482	311-2482	311-1452
M24-3.0mm	311-1424	311-2424	311-1484	311-2484	311-1454
M27-3.0mm	311-1427	311-2427	311-1487	311-2487	311-1457
M30-3.5mm	311-1430	311-2430	311-1490	311-2490	311-1460

HSS, TiN Coated

Size	Straight Flute		Spiral Flute		Spiral Point
	Taper "A" Order No.	Bottom "C" Order No.	15° Flute Order No.	35° Flute Order No.	
M3-0.5mm	311-2503	311-2603	311-2563	311-2663	311-2633
M4-0.7mm	311-2504	311-2604	311-2564	311-2664	311-2634
M5-0.8mm	311-2505	311-2605	311-2565	311-2665	311-2635
M6-1.0mm	311-2506	311-2606	311-2566	311-2666	311-2636
M8-1.25mm	311-2508	311-2608	311-2568	311-2668	311-2638
M10-1.5mm	311-2510	311-2610	311-2570	311-2670	311-2640
M12-1.75mm	311-2512	311-2612	311-2572	311-2672	311-2642
M14-2.0mm	311-2514	311-2614	311-2574	311-2674	311-2644
M16-2.0mm	311-2516	311-2616	311-2576	311-2676	311-2646
M18-2.5mm	311-2518	311-2618	311-2578	311-2678	311-2648
M20-2.5mm	311-2520	311-2620	311-2580	311-2680	311-2650
M22-2.5mm	311-2522	311-2622	311-2582	311-2682	311-2652
M24-3.0mm	311-2524	311-2624	311-2584	311-2684	311-2654
M27-3.0mm	311-2527	311-2627	311-2587	311-2687	311-2657
M30-3.5mm	311-2530	311-2630	311-2590	311-2690	311-2660

NPT Taper Pipe Taps

Carbon Steel, Ground Thread

美标 NPT 碳钢圆锥管丝锥

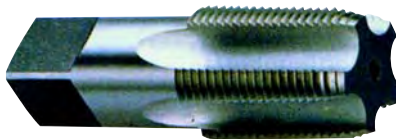


Size	Order No.	Size	Order No.	Size	Order No.
1/16"-27	312-6008	3/4-14	312-6030	2-1/2"-8	312-6055
1/8"-27	312-6010	1-11-1/2	312-6035	3-8	312-6060
1/4-18	312-6015	1-1/4"-11-1/2	312-6040	3-1/2"-8	312-6065
3/8-18	312-6020	1-1/2-11-1/2	312-6045	4"-8	312-6070
1/2"-14	312-6025	2-11-1/2	312-6050		

NPT & NPTF Taper Pipe Taps

HSS, Ground Thread

美标圆锥管丝锥



Size	No. of Flute	Flute Length	Overall Length	NPT Order No.	NPTF Order No.
1/16"-27	4	11/16"	2-1/8"	311-6005	311-6205
*1/8-27	4	3/4	2-1/8	311-6010	311-6208
1/8-27	4	3/4	2-1/8	311-6011	311-6210
1/4-18	4	1-1/16	2-7/16	311-6015	311-6215
3/8-18	4	1-1/16	2-9/16	311-6020	311-6220
3/8-18	5	1-1/16	2-9/16	311-6021	
1/2-14	4	1-3/8	3-1/8	311-6025	311-6225
1/2-14	5	1-3/8	3-1/8	311-6026	
3/4-14	5	1-3/8	3-1/4	311-6030	311-6230
1-11-1/2	5	1-3/4"	3-1/4"	311-6035	311-6235
1-1/4-11-1/2	5	1-3/4	4	311-6040	311-6240
1-1/2-11-1/2	7	1-3/4	4-1/4	311-6045	311-6245
2-11-1/2	7	1-3/4	4-1/2	311-6050	311-6250
2-1/2-8	8	2-9/16	5-1/2	311-6055	311-6255
2-1/2-8	8	2-3/4	5-1/2	311-6056	
3-8	8	2-5/8	6	311-6060	311-6260
3-8	8	2-3/4	6	311-6061	
3-1/2-8	8	2-11/16	6-1/2	311-6065	311-6265
4-8	8	2-7/8	7		311-6270

* Small Shank

NPS Straight Pipe Taps

美标 NPS 圆柱管丝锥

High Speed Steel,
Ground Thread



Size	Order No.	Size	Order No.	Size	Order No.
1/16-27	311-6305	3/4-14	311-6330	2-1/2"-8	311-6356
1/8-27	311-6308	1"-11-1/2	311-6335	3"-8	311-6360
1/8-27	311-6310	1-1/4-11-1/2	311-6340	3"-8	311-6361
1/4-18	311-6315	1-1/2-11-1/2	311-6345	3-1/2"-8	311-6365
3/8-18	311-6320	2"-11-1/2	311-6350	4"-8	311-6370
1/2-14	311-6325	2-1/2"-8	311-6355		

HSS NPT Long Taper Pipe Taps

美标 NPT 加长高速钢圆锥管丝锥



Threads Thread					Threads Thread				
Size	Per Inch	Length	OAL	Order No.	Size	Per Inch	Length	OAL	Order No.
1/16"	27		4	311-6700	1/4	18	1-1/16	8	311-6764
1/16	27		6	311-6701	3/8	18	1-1/16	8	311-6765
1/8	27	3/4	4	311-6702	1/2	14	1-3/8	8	311-6766
1/4	18	1-1/16	4	311-6707	1-1/2	11-1/2	1-3/4	8	311-6767
3/8	18	1-1/16	4	311-6712	3/4	14	1-3/8	8	311-6768
1/2	14	1-3/8	4	311-6717	1	11-1/2	1-3/4	8	311-6769
3/4	14	1-3/8	4	311-6722	1-1/4	11-1/2	2	8	311-6770
1	11-1/2	1-3/4	4	311-6727	1-1/2	11-1/2	2-1/2	8	311-6771
1/8	27	3/4	6	311-6732	1/2	14	1-3/8	10	311-6772
1/4	18	1-1/16	6	311-6737	3/4	14	1-3/8	10	311-6773
3/8	18	1-1/16	6	311-6742	1	11-1/2	1-3/4	10	311-6774
1/2	14	1-3/8	6	311-6747	1-1/4	11-1/2	2	10	311-6775
3/4	14	1-3/8	6	311-6752	1-1/2	11-1/2	2-1/2	10	311-6776
1	11-1/2	1-3/4	6	311-6757	1/4	18	1-1/16	12	311-6780
1-1/4	11-1/2	2	6	311-6758	3/8	18	1-1/16	12	311-6782
1-1/2	11-1/2	2-1/2	6	311-6759	1/2	14	1-3/8	12	311-6784
1-1/4	11-1/2	1-3/4	6	311-6762	3/4	14	1-3/8	12	311-6786
1/8	27	3/4	8	311-6763	1	11-1/2	1-3/4	12	311-6788

NPSF Straight Pipe Taps

美标 NPSF 圆柱管丝锥

High Speed Steel, Ground Thread

- Use for tapping holes to be used with tapered *0.4375"Shank, **0.3125"Shank threading pipe and fittings in low pressure applications when a sealer is used
- Adheres to be same specifications as taper pipe taps except the thread is straight



Size	Threads Per Inch	No. of Flutes	Thread Length	Overall Length	NPSF Order No.
1/16	27	4	11/16	2-1/8	311-6805
*1/8	27	4	3/4	2-1/8	311-6808
**1/8	27	4	3/4	2-1/8	311-6810
1/4	18	4	1-1/16	2-7/16	311-6815
3/8	18	4	1-1/16	2-9/16	311-6820
1/2	14	4	1-3/8	3-1/8	311-6825
3/4	14	5	1-3/8	3-1/4	311-6830
1	11-1/2	5	1-3/4	3-3/4	311-6835
1-1/4	11-1/2	5	1-3/4	4	311-6840
1-1/2	11-1/2	7	1-3/4	4-1/4	311-6845
2	11-1/2	7	1-3/4	4-1/2	311-6850
2-1/2	8	8	2-9/16	5-1/2	311-6855
3	8	8	2-5/8	6	311-6860
3-1/2	8	8	2-11/16	6-1/2	311-6865
4	8	8	2-3/4	6-3/4	311-6870

*0.4375"Shank, **0.3125"Shank

Interrupted NPS Straight Pipe Taps

High Speed Steel, Ground Thread

美标 NPS 跳牙圆柱管丝锥

- Use for tapping holes to be used with tapered *0.4375"Shank, **0.3125"Shank threading pipe and fittings in low pressure applications when a sealer is used
- Adheres to be same specifications as taper pipe taps except the threads straight



Size	Threads Per Inch	No. of Flutes	Thread Length	Overall Length	Interrupted NPS Order No.
1/16	27	4	11/16	2-1/8	311-6905
*1/8	27	4	3/4	2-1/8	311-6908
**1/8	27	4	3/4	2-1/8	311-6910
1/4	18	4	1-1/16	2-7/16	311-6915
3/8	18	4	1-1/16	2-9/16	311-6920
1/2	14	4	1-3/8	3-1/8	311-6925
3/4	14	5	1-3/8	3-1/4	311-6930
1	11-1/2	5	1-3/4	3-3/4	311-6935
1-1/4	11-1/2	5	1-3/4	4	311-6940
1-1/2	11-1/2	7	1-3/4	4-1/4	311-6945
2	11-1/2	7	1-3/4	4-1/2	311-6950
2-1/2	8	8	2-9/16	5-1/2	311-6955
3	8	8	2-5/8	6	311-6960
3-1/2	8	8	2-11/16	6-1/2	311-6965
4	8	8	2-3/4	6-3/4	311-6970

*0.3125"Shank, **0.4375"Shank

NPT Taper Pipe Taps

-Interrupted Thread 美标 NPT 跳牙丝锥

High Speed Steel,
Ground Thread



Size	No. of Flute	Thread Length	Overall Length	Order No.
1/16"-27	5	3/4"	2-1/8"	311-6105
*1/8"-27	5	3/4	2-1/8	311-6110
**1/8"-27	5	3/4	2-1/8	311-6111
1/4-18	5	1-1/16	2-7/16	311-6115
3/8-18	5	1-1/16	2-9/16	311-6120
1/2-14	5	1-3/8	3-1/8	311-6125
3/4"-14	5	1-3/8	3-1/4	311-6130
1-11-1/2	5	1-3/4	3-3/4	311-6135
1-1/4-11-1/2	5	1-3/4	4	311-6140
1-1/2-11-1/2	7	1-3/4	4-1/4	311-6145
2-11-1/2	7	1-3/4	4-1/2	311-6150

*0.3125"Shank, **0.4375"Shank

TiN Coated Taper Pipe Taps

涂钛锥管丝锥



Tap Size	No. of Flute	Thread Length	Overall Length	Order No.
1/16"-27	5	11/16"	2-1/8"	318-3305
1/8-27	5	3/4	2-1/8	318-3310
1/4-18	5	1-1/16	2-7/8	318-3315
3/8-18	5	1-1/16	2-9/16	318-3320
1/2"-14	5	1-3/8"	3-1/8"	318-3325
3/4-14	5	1-3/8	3-1/4	318-3330
1-11-1/2	5	1-3/4	3-3/4	318-3335

55° Whitworth Thread British Pipe Taps

英制 55 度全磨锥管螺纹丝锥

HSS,

Right Hand,

Ground Thread,

Bottoming



- 55° Whitworth thread form.
- BSPP: British standard parallel straight pipe.
- BSPT: British standard taper pipe.

Tap Size	BSPP Order No.	BSPT Order No.
1/8"-28	311-6530	311-6560
1/4-19	311-6531	311-6561
3/8-19	311-6532	311-6562
1/2-14	311-6533	311-6563
5/8-14	311-6534	311-6564
3/4-14	311-6535	311-6565
7/8-14	311-6536	311-6566
1-11	311-6537	311-6567
1-1/4-11	311-6538	311-6568
1-1/2-11	311-6539	311-6569
1-3/4-11	311-6540	311-6570
2-11	311-6541	311-6571
2-1/2-11	311-6542	311-6572
3-11	311-6543	311-6573

Interrupted NPTF Taper Pipe Taps

美标 NPTF 跳牙锥管丝锥

High Speed Steel



Thread Size	Thread length	OAL	No. of Flutes	Order No.
1/16"-27	11/16"	2-1/8"	4	312-6105
1/8"-27	3/4"	2-1/8"	4	312-6108
1/8"-27	3/4"	2-1/8"	4	312-6110
1/4"-18	1-1/16"	2-7/16"	4	312-6115
3/8"-18	1-1/16"	2-9/16"	4	312-6120
1/2"-14	1-3/8"	3-1/8"	4	312-6125
3/4"-14	1-3/8"	3-1/4"	5	312-6130
1"-11-1/2	1-3/4"	3-1/4"	5	312-4135
1-1/4"-11-1/2	1-3/4"	4"	5	312-6140
1-1/2"-11-1/2	1-3/4"	4-1/4"	7	312-6145
2"-11-1/2	1-3/4"	4-1/2"	7	312-6150
2-1/2"-8	2-9/16"	5-1/2"	8	312-6155
3"-8	2-5/8"	6"	8	312-6160
3-1/2"	2-11/16"	6-1/2"	8	312-6165

*0.3125"Shank, **0.4375"shank

TiN Coated Straight Pipe Taps

涂钛直管丝锥



Tap Size	No. of Flute	Thread Length	Overall Length	Order No.
1/8"-27	4	3/4"	2-1/8"	318-3403
1/4-18	4	1-1/16	2-1/8	318-3406
1/4-18	4	1-1/16	2-9/16	318-3409
3/8-18	4	1-1/16	2-9/16	318-3412
1/2-14	4	1-3/8	3-1/8	318-3415

30° Slow Spiral Flute Taps

HSS 磨制 30 度螺旋槽丝锥

HSS, Ground, Plug



Size	Threads Per Inch	Thread Type	Flutes Limits	No. of Flutes	Order No.	Size	Threads Per Inch	Thread Type	Flutes Limits	No. of Flutes	Order No.
3	48	NC	H2	2	311-8710	3/8	16	NC	H3	3	311-8746
3	56	NF	H2	2	311-8712	3/8	24	NF	H3	3	311-8748
4	48	NC	H2	2	311-8714	7/16	14	NC	H3	3	311-8750
4	40	NF	H2	2	311-8716	7/16	20	NF	H3	3	311-8752
5	48	NC	H2	2	311-8718	1/2	13	NC	H3	3	311-8754
5	44	NF	H2	2	311-8720	1/2	20	NF	H3	4	311-8756
6	32	NC	H3	2	311-8722	9/16	12	NC	H3	3	311-8758
6	40	NF	H3	2	311-8724	9/16	18	NF	H3	3	311-8760
8	32	NC	H3	3	311-8726	5/8	11	NC	H3	4	311-8762
8	36	NF	H3	3	311-8728	5/8	18	NF	H3	4	311-8764
10	24	NC	H3	3	311-8730	3/4	10	NC	H3	4	311-8766
10	32	NF	H3	3	311-8732	3/4	16	NF	H3	4	311-8768
12	24	NC	H3	3	311-8734	7/8	9	NC	H3	3	311-8770
12	28	NF	H3	3	311-8736	7/8	14	NF	H3	3	311-8772
1/4	20	NC	H3	3	311-8738	1	8	NC	H3	3	311-8774
1/4	28	NF	H3	3	311-8740	1	12	NF	H3	3	311-8776
5/16	18	NC	H3	3	311-8742	1	14	NS	H3	3	311-8778
5/16	24	NF	H3	3	311-8744						

45° Fast Spiral Flute Taps

HSS 磨制 45 度螺旋槽丝锥

- Fast spiral improves chip drawing action in relatively deep blind holes
- Suited for tapping aluminum, magnesium, brass, copper and zinc die cast materials
- Surface treated to resist loading and galling

HSS, Ground

Bottoming



Size	Threads Per Inch	Thread Type	Flutes Limits	No. of Flutes	Order No.
3	48	NC	H2	2	311-8510
3	56	NF	H2	2	311-8512
4	40	NC	H2	2	311-8514
4	48	NF	H2	2	311-8516
5	40	NC	H2	2	311-8518
5	44	NF	H2	2	311-8520
6	32	NC	H3	2	311-8522
6	40	NF	H3	2	311-8524
8	32	NC	H3	3	311-8526
8	36	NF	H3	3	311-8528
10	24	NC	H3	3	311-8530
10	24	NC	H3	2	311-8531
10	32	NF	H3	3	311-8532
10	32	NF	H3	2	311-8533
12	24	NC	H3	3	311-8534
12	28	NF	H3	3	311-8536
1/4	20	NC	H3	3	311-8538
1/4	28	NF	H3	3	311-8540
5/16	18	NC	H3	3	311-8542
5/16	24	NF	H3	3	311-8544
3/8	16	NC	H3	3	311-8546
3/8	24	NF	H3	3	311-8548
7/16	14	NC	H3	3	311-8550
7/16	20	NF	H3	3	311-8552
1/2	13	NC	H3	3	311-8554
1/2	20	NF	H3	4	311-8556
9/16	12	NC	H3	3	311-8558
9/16	18	NF	H3	3	311-8560
5/8	11	NC	H3	4	311-8562
5/8	18	NF	H3	4	311-8564
3/4	10	NC	H3	4	311-8566
3/4	16	NF	H3	4	311-8568

Plug



Size	Threads Per Inch	Thread Type	Flutes Limits	No. of Flutes	Order No.
3	48	NC	H2	2	311-8410
3	56	NF	H2	2	311-8412
4	40	NC	H2	2	311-8414
4	48	NF	H2	2	311-8416
5	40	NC	H2	2	311-8418
5	44	NF	H2	2	311-8420
6	32	NC	H3	2	311-8422
6	40	NF	H2	2	311-8423
6	40	NF	H3	2	311-8424
8	32	NC	H3	3	311-8426
8	32	NC	H3	2	311-8427
8	36	NF	H3	3	311-8428
10	24	NC	H3	3	311-8430
10	32	NF	H3	3	311-8432
10	32	NF	H3	2	311-8433
12	24	NC	H3	3	311-8434
12	28	NF	H3	3	311-8436
1/4	20	NC	H3	3	311-8438
1/4	28	NF	H3	3	311-8440
5/16	18	NC	H3	3	311-8442
5/16	24	NF	H3	3	311-8444
3/8	16	NC	H3	3	311-8446
3/8	24	NF	H3	3	311-8448
7/16	14	NC	H3	3	311-8450
7/16	20	NF	H3	3	311-8452
1/2	13	NC	H3	3	311-8454
1/2	20	NF	H3	3	311-8456
9/16	12	NC	H3	3	311-8458
9/16	18	NF	H3	3	311-8460
5/8	11	NC	H3	4	311-8462
5/8	18	NF	H3	3	311-8464
3/4	10	NC	H3	4	311-8466
3/4	16	NF	H3	3	311-8468
7/8	9	NC	H3	3	311-8470
7/8	14	NF	H3	3	311-8472
1	8	NC	H4	3	311-8474
1-1/2	12	NF	H4	3	311-8476
1-1/24	14	NS	H4	3	311-8478

Adjustable Round Dies 碳钢标准螺纹右旋可调圆扳牙

Carbon Steel, Standard Thread, Right Hand Cutting

13/16" O.D.

Size	Order No.
2-56	314-3000
5-40	314-3001
2-64	314-3002
8-32	314-3003
6-40	314-3004
8-36	314-3005
10-32	314-3006
10-24	314-3007
12-24	314-3008
12-28	314-3010
14-20	314-3012
14-24	314-3014
1/4-20	314-3016
1/4-28	314-3018
5/16-18	314-3019
5/16-24	314-3020
0-80	314-3030
1-64	314-3032
1-72	314-3034
3-48	314-3036
3-56	314-3038
4-36	314-3040
4-40	314-3042
4-48	314-3044
5-44	314-3046
6-32	314-3048



1" O.D.

Size	Order No.	Size	Order No.
5-40	314-3102	3/16-24	314-3120
5-44	314-3104	3/16"-18	314-3121
6-32	314-3106	1/4-20	314-3122
6-40	314-3107	1/4-28	314-3123
8-32	314-3108	5/16-18	314-3124
10-24	314-3109	5/16-24	314-3126
8-36	314-3110	3/8-16	314-3127
10-32	314-3111	3/8-24	314-3128
12-24	314-3112	7/16-14	314-3130
12-28	314-3114	7/16-20	314-3132
14-20	314-3116	1/2-13	314-3134
14-24	314-3118	1/2-20	314-3136

1-1/2" O.D.

Size	Order No.
12-24	314-3208
12-28	314-3210
14-20	314-3212
14-24	314-3214
1/4-20	314-3216
1/4-28	314-3218
5/16-18	314-3220
5/16-24	314-3222
3/8-16	314-3223
3/8-24	314-3224
7/16-14	314-3225
7/16-20	314-3226
1/2-13	314-3227
9/16-18	314-3228
5/8-11	314-3229
5/8-18	314-3230
3/4-10	314-3231
3/4-16	314-3232
1/2-20	314-3236
9/16-12	314-3240

2" O.D.

Size	Order No.
1/4"-20	314-3308
1/4-28	314-3310
14-20	314-3312
14-28	314-3314
5/16-24	314-3315
5/16-18	314-3316
3/8-24	314-3318
3/8-16	314-3319
7/16-20	314-3320
7/16-14	314-3321
7/16-28	314-3322
1/2-13	314-3324
1/2-20	314-3326
3/4-10	314-3328
3/4-16	314-3330
7/8-9	314-3331
7/8-14	314-3332
1-8	314-3334
1-12	314-3336
1-14	314-3338
9/16-12	314-3340
9/16-18	314-3342
5/8-11	314-3344
5/8-18	314-3346
11/16-11	314-3348
11/16-16	314-3350

2-1/2" O.D.

Size	Order No.
9/16-12	314-3428
9/16-18	314-3430
5/8-11	314-3432
5/8-18	314-3434
1-8	314-3435
1-12	314-3436
1-1/4-7	314-3438
1-1/4-12	314-3440
1-1/2-6	314-3441
1-1/2-12	314-3442
3/4-10	314-3446
3/4-16	314-3448
7/8-9	314-3450
7/8-14	314-3452

3" O.D.

Size	Order No.
1-1/4-12	314-3538
1-1/4-7	314-3539
1-1/8-7	314-3540
1-1/8-12	314-3541
1-3/8-6	314-3542
1-3/8-12	314-3544
1-1/2-6	314-3545
1-5/8-5	314-3546
1-1/2-12	314-3548

Adjustable Round Dies 高速钢标准螺纹右旋可调圆扳牙

High Speed Steel, Standard Thread, Right Hand Cutting



13/16" O.D.

Size	Order No.
0-80	314-1000
1-64	314-1002
1-72	314-1004
2-56	314-1006
2-64	314-1008
3-48	314-1010
3-56	314-1012
4-36	314-1025
4-40	314-1014
4-48	314-1016
5-40	314-1018
5-44	314-1020
6-32	314-1022
6-40	314-1024
8-32	314-1026
8-36	314-1028
10-24	314-1030
10-28	314-1029
10-32	314-1032
12-24	314-1034
12-28	314-1036
14-20	314-1037
14-24	314-1038
1/4-20	314-1040
1/4-28	314-1042
5/16-18	314-1044
5/16-24	314-1046

1" O.D.

Size	Order No.
0-80	314-1100
1-64	314-1102
1-72	314-1104
2-56	314-1106
2-64	314-1108
3-48	314-1110
3-56	314-1112
4-36	314-1151
4-40	314-1114
4-48	314-1116
5-40	314-1118
5-44	314-1120
6-32	314-1122
6-40	314-1124
6-80	314-1153
8-32	314-1126
8-36	314-1128
10-24	314-1130
10-32	314-1132
12-24	314-1134
12-28	314-1136
14-20	314-1166
14-24	314-1138
1/4-20	314-1140
1/4-28	314-1142
1/4-36	314-1149
1/4-80	314-1155
5/16-18	314-1144
5/16-24	314-1146
3/8-16	314-1148
3/8-24	314-1150
3/8-26	314-1157
7/16-14	314-1152
7/16-20	314-1154
7/16-24	314-1159
1/2-13	314-1156
1/2-20	314-1158

1-1/2" O.D.

Size	Order No.
1/4-20	314-1240
1/4-28	314-1242
5/16-18	314-1244
5/16-24	314-1246
3/8-16	314-1248
3/8-24	314-1250
7/16-14	314-1252
7/16-20	314-1256
1/2-13	314-1258
1/2-20	314-1260
1/2-28	314-1261
9/16-12	314-1262
9/16-18	314-1264
5/8-24	314-1265
5/8-11	314-1266
5/8-27	314-1267
5/8-18	314-1268
5/8-28	314-1269
3/4-10	314-1270
3/4-16	314-1272
11/16"-11	314-1274
11/16"-16	314-1276
11/16"-24	314-1277
3/4"-18	314-1278
3/4"-20	314-1279
3/4"-27	314-1280
13/16"-24	314-1281

2" O.D.

Size	Order No.
1/4-20	314-1340
1/4-28	314-1342
5/16-18	314-1344
5/16-24	314-1346
3/8-16	314-1348
3/8-24	314-1350
7/16-14	314-1352
7/16-20	314-1354
1/2-13	314-1356
1/2-20	314-1358
9/16-12	314-1360
9/16-18	314-1362
5/8-11	314-1364
5/8-18	314-1366
3/4-10	314-1368
3/4-16	314-1370
7/8-9	314-1372
7/8-14	314-1374
7/8-24	314-1375
7/8-27	314-1376
1-8	314-1378
1-12	314-1380
1-14	314-1384
1-24	314-1385
11/16"-11	314-1386
11/16"-16	314-1388
1-3/4"-24	314-1395

2-1/2" O.D.

Size	Order No.
3/4-10	314-1468
3/4-16	314-1470
5/8-11	314-1471
7/8-9	314-1472
1-3/16-12	314-1473
7/8-14	314-1474
1-3/16-20	314-1475
1-8	314-1476
1"-12	314-1477
1-14	314-1478
1-1/8-7	314-1480
1-1/8-12	314-1482
1-1/4-7	314-1484
1-1/4-8	314-1485
1-1/4-12	314-1486
1-1/4-16	314-1487
1-3/8-6	314-1488
1-5/16-18	314-1489
1-3/8-12	314-1490
1-3/8"-24	314-1491
1-1/2-6	314-1492
1-1/2"-8	314-1493
1-1/2-12	314-1494
1-3/4"-24	314-1495

3" O.D.

Size	Order No.
1"-8	314-1500
1-12	314-1501
1-14	314-1502
1-1/8-7	314-1503
1-1/8-12	314-1504
1-1/4-12	314-1505
1-1/4-7	314-1507
1-1/2-6	314-1509
1-1/2-12	314-1511
1-3/8-6	314-1513
1-3/8-12	314-1515
1-3/4-5	314-1517
1-3/4-12	314-1519
1-7/8-8	314-1520
2-4-1/2	314-1521
2-12	314-1523
2-18	314-1524

Left Hand Adjustable Round Dies

NC&NF Thread, High Speed Steel

高速钢标准螺纹左旋可调圆扳牙

13/16" O.D.

Size	Order No.
0-80	314-4000
1-64	314-4002
1-72	314-4004
2-56	314-4006
2-64	314-4008
3-48	314-4010
3-56	314-4012
4-40	314-4014
4-48	314-4016
5-40	314-4018
5-44	314-4020
6-32	314-4022
6-40	314-4024
8-32	314-4026
8-36	314-4028
10-24	314-4030
10-32	314-4032
12-24	314-4034
12-28	314-4036
1/4-20	314-4040
1/4-28	314-4042

1" O.D.

Size	Order No.
4-40	314-4115
4-48	314-4116
5-40	314-4119
5-44	314-4120
6-32	314-4122
6-40	314-4124
8-32	314-4126
8-36	314-4128
10-24	314-4130
10-32	314-4132
12-24	314-4134
12-28	314-4136
14-24	314-4138
1/4-20	314-4140
1/4-28	314-4142
5/16-18	314-4144
5/16-24	314-4146
3/8-16	314-4148
3/8-24	314-4150
7/16-14	314-4152
7/16-20	314-4154
1/2-13	314-4156
1/2-20	314-4158

1-1/2" O.D.

Size	Order No.
1/4"-20	314-4240
1/4-28	314-4242
5/16-18	314-4244
5/16-24	314-4246
3/8-16	314-4248
3/8-24	314-4252
3/8-32	314-4254
7/16-14	314-4256
7/16-20	314-4258
1/2-13	314-4260
1/2-20	314-4262
9/16-12	314-4264
9/16-18	314-4266
9/16-24	314-4267
5/8-11	314-4268
5/8-18	314-4270
3/4-10	314-4272
3/4-16	314-4274
11/16-11	314-4276
11/16-16	314-4278
11/16-18	314-4280

2" O.D.

Size	Order No.
5/8-11	314-4360
5/8-18	314-4362
3/4"-10	314-4370
3/4-16	314-4372
7/8-9	314-4374
7/8-14	314-4376
1-8	314-4378
1-12	314-4379
1-14	314-4380

2-1/2" O.D.

Size	Order No.
1-1/8"-7	314-4480
1-1/8-12	314-4482
1-3/16-12	314-4483
1-1/4-7	314-4484
1-1/4-12	314-4486
1-3/8-6	314-4488
1-3/8-12	314-4490
1-1/2-6	314-4492
1-1/2-12	314-4494
1-3/4-18	314-4496

NPT & NPS Adjustable Round Pipe Dies

High Speed Steel

高速钢可调管圆扳牙

Outside Dia.	Size	NPT Order No.	NPS Order No.
1"	1/16"-27	315-2110	315-2210
1	1/8-27	315-2115	315-2215
1-1/2	1/8-27	315-2120	315-2220
1-1/2	1/4-18	315-2122	315-2222
1-1/2	3/8-18	315-2124	315-2224
1-1/2	1/2-14	315-2126	315-2226
2	1/4-18	315-2130	315-2230
2	3/8-18	315-2132	315-2232
2	1/2-14	315-2134	315-2234
2	3/4-14	315-2136	315-2236
2-1/2	1-11-1/2	315-2140	315-2240
3	1-1/4-11-1/2	315-2150	315-2250
3	1-1/2-11-1/2	315-2152	315-2252
3-1/2	1-1/2-11-1/2	315-2156	315-2256
4	1-1/2-11-1/2	315-2162	315-2262
4	2-11-1/2	315-2160	315-2260
5	2-1/2-8	315-2170	315-2270
5	3-8	315-2171	315-2271
5	3-1/2-8	315-2172	315-2272

Left Hand Adjustable Round Dies 碳钢标准螺纹左旋可调圆扳牙

Carbon Steel,
NC&NF Threads

13/16" O.D.	13/16" O.D.
Size Order No.	Size Order No.
1-72 314-5002	8-32 314-5022
2-64 314-5004	8-36 314-5024
3-48 314-5006	10-24 314-5026
3-56 314-5008	10-32 314-5028
4-40 314-5010	12-24 314-5030
4-48 314-5012	12-28 314-5032
5-40 314-5014	1/4-20 314-5034
5-44 314-5016	1/4-28 314-5036
6-32 314-5018	5/16-18 314-5038
6-40 314-5020	5/16-24 314-5040

1-1/2" O.D.	1-1/2" O.D.
Size Order No.	Size Order No.
1/4-20 314-5140	1/2-13 314-5147
1/4-28 314-5141	1/2-20 314-5149
5/16-18 314-5142	9/16-12 314-5150
5/16-24 314-5144	9/16-16 314-5152
3/8-16 314-5143	5/8-11 314-5154
3/8-24 314-5145	5/8-18 314-5156
7/16-14 314-5146	3/4-10 314-5158
7/16-20 314-5148	3/4-16 314-5160

2" O.D.	2" O.D.
Size Order No.	Size Order No.
1/4"-20 314-5240	9/16-18 314-5260
1/4-24 314-5242	5/8-11 314-5262
3/8-16 314-5248	5/8-18 314-5264
3/8-24 314-5250	3/4-10 314-5266
7/16-14 314-5252	3/4-16 314-5268
7/16-20 314-5253	7/8-9 314-5270
1/2-13 314-5254	7/8-14 314-5272
1/2-20 314-5256	1-8 314-5274
9/16"-12 314-5258	1-12 314-5276

Metric Adjustable Round Dies 高速钢公制右旋可调圆扳牙

High Speed Steel
Right Hand

Outside Dia.	Size x Pitch(mm)	Order No.	Outside Dia.	Size x Pitch(mm)	Order No.	Outside Dia.	Size x Pitch(mm)	Order No.	Outside Dia.	Size x Pitch(mm)	Order No.
1	1.2x0.20	314-1602	1	8x1.0	314-1644	1-1/2	14x2.0	314-1734	2-1/2	24x2.0	314-1858
1	1.4x0.20	314-1603	1-1/2	8x1.0	314-1703	1-1/2	15x1.0	314-1739	2	24x3.0	314-1844
1	1.6x0.35	314-1604	1	8x1.25	314-1646	1-1/2	16x1.0	314-1736	2-1/2	24x3.0	314-1859
1	1.8x0.35	314-1606	1-1/2	8x1.25	314-1704	1-1/2	16x1.5	314-1738	2	25x1.5	314-1841
1	2x0.2	314-1608	1	9x0.75	314-1649	2	16x1.5	314-1808	2	25x2.0	314-1843
1	2x0.25	314-1609	1	9x1.0	314-1647	1-1/2	16x2.0	314-1740	2	26x1.5	314-1845
1	2x0.4	314-1610	1	9x1.25	314-1648	2	16x2.00	314-1809	2	26x3.0	314-1839
1	2x0.45	314-1611	1	10x0.75	314-1650	1-1/2	17x1.5	314-1741	2	27x1.5	314-1846
1	2.2x0.45	314-1612	1	10x1.0	314-1652	1-1/2	18x1.0	314-1742	2	27x2.0	314-1848
1	2.3x0.4	314-1614	1-1/2	10x1.0	314-1705	1-1/2	18x1.25	314-1743	2-1/2	27x2.0	314-1847
1	2.5x0.45	314-1616	1	10x1.25	314-1654	1-1/2	18x1.5	314-1744	2	27x3.0	314-1850
1	2.6x0.45	314-1618	1-1/2	10x1.25	314-1706	2	18x1.50	314-1810	2-1/2	27x3.0	314-1849
13/16	3x0.35	314-1619	1	10x1.5	314-1656	1-1/2	18x2.0	314-1746	2	28x1.5	314-1851
1	3x0.5	314-1620	1-1/2	10x1.5	314-1708	1-1/2	18x2.5	314-1748	2-1/2	28x2.0	314-1853
1	3x0.6	314-1622	1-1/2	11x1.0	314-1716	2	19x1.5	314-1813	2-1/2	28x3.0	314-1870
1	3.5x0.35	314-1623	1	11x1.25	314-1657	1-1/2	20x1.0	314-1750	2	30x1.5	314-1852
1	3.5x0.6	314-1624	1	11x1.5	314-1658	2	20x1.0	314-1811	2-1/2	30x1.5	314-1871
1	4x0.5	314-1626	1-1/2	11x1.5	314-1718	2	20x1.25	314-1812	2	30x2.0	314-1854
1	4x0.7	314-1628	1	12x0.5	314-1659	1-1/2	20x1.5	314-1752	2-1/2	30x2.0	314-1855
1	4.5x0.75	314-1629	1-1/2	12x0.75	314-1721	2	20x1.5	314-1815	2-1/2	30x3.0	314-1857
1	5x0.5	314-1630	1	12x1.0	314-1661	1-1/2	20x2.0	314-1754	2	30x3.5	314-1856
1	5x0.8	314-1632	1-1/2	12x1.0	314-1720	2	20x2.0	314-1816	2-1/2	30x3.5	314-1860
13/16	5x0.9	314-1631	1	12x1.25	314-1660	1-1/2	20x2.5	314-1756	2-1/2	32x2.0	314-1861
1	6x0.5	314-1634	1-1/2	12x1.25	314-1722	2	20x2.5	314-1817	2-1/2	33x2.0	314-1862
1	6x0.75	314-1636	1	12x1.5	314-1662	2	22x1.0	314-1830	2-1/2	33x3.0	314-1868
1	6x1.0	314-1638	1-1/2	12x1.50	314-1724	2	22x1.25	314-1831	2-1/2	33x3.5	314-1863
1-1/2	6x1.0	314-1701	1	12x1.75	314-1663	2	22x1.5	314-1832	2-1/2	34x3.5	314-1864
1	6.3x1.0	314-1637	1-1/2	12x1.75	314-1726	2	22x2.0	314-1834	2-1/2	35x1.5	314-1869
1	7x0.75	314-1639	1-1/2	13x1.0	314-1729	2	22x2.5	314-1836	2-1/2	36x2.0	314-1865
1	7x1.0	314-1640	1-1/2	13x1.25	314-1727	2	23x1.5	314-1837	2-1/2	36x3.0	314-1867
1-1/2	7x1.0	314-1702	1-1/2	14x1.0	314-1728	2	24x1.0	314-1838	2-1/2	36x4.0	314-1866
1	8x0.5	314-1641	1-1/2	14x1.25	314-1730	2	24x1.5	314-1840	2-1/2	38x4.0	314-1873
1	8x0.75	314-1642	1-1/2	14x1.5	314-1732	2	24x2.0	314-1842			

Special Pitch Adjustable Dies 高速钢特细牙右旋可调圆扳牙

High Speed Steel, Right Hand



Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.
2-56	13/16	315-1004	12-27	1	315-3070	3/8-40	1	315-1147	3/8-14	1-1/2	315-1217	11/16-14	1-1/2	315-1292
2-64	13/16	315-1005	12-30	1	315-1095	3/8-48	1	315-1148	3/8-18	1-1/2	315-3158	11/16-16	1-1/2	315-1262
3-48	13/16	315-3005	12-32	1	315-1096	3/8-56	1	315-1149	3/8-20	1-1/2	315-1218	11/16-18	1-1/2	315-1263
3-56	13/16	315-3006	12-36	1	315-1097	3/8-60	1	315-3103	3/8-22	1-1/2	315-3159	11/16-20	1-1/2	315-1264
4-32	13/16	315-1010	12-40	1	315-1098	3/8-64	1	315-3107	3/8-26	1-1/2	315-3160	11/16-24	1-1/2	315-1265
4-36	13/16	315-1012	12-48	1	315-1099	3/8-72	1	315-3111	3/8-27	1-1/2	315-3161	11/16-26	1-1/2	315-1270
4-40	13/16	315-1011	12-56	1	315-3046	3/8-80	1	315-1150	3/8-28	1-1/2	315-3162	11/16-27	1-1/2	315-1266
4-44	13/16	315-3013	14-24	1	315-1100	13/32-32	1	315-1184	3/8-30	1-1/2	315-1219	11/16-28	1-1/2	315-1267
4-48	13/16	315-3014	14-27	1	315-3047	7/16-12	1	315-1185	3/8-32	1-1/2	315-1220	11/16-30	1-1/2	315-3169
4-56	13/16	315-1014	14-28	1	315-3048	7/16-16	1	315-1151	3/8-36	1-1/2	315-1221	11/16-32	1-1/2	315-1268
4-60	13/16	315-1015	14-30	1	315-3049	7/16-18	1	315-1152	3/8-40	1-1/2	315-1227	11/16-36	1-1/2	315-1293
4-64	13/16	315-1013	14-32	1	315-3050	7/16-24	1	315-1153	3/8-48	1-1/2	315-3163	11/16-40	1-1/2	315-1269
4-72	13/16	315-3015	1/16-72	1	315-3069	7/16-26	1	315-3116	7/16-12	1-1/2	315-3142	3/4-11	1-1/2	315-3174
4-80	13/16	315-1016	3/32-36	1	315-3071	7/16-27	1	315-1154	7/16-16	1-1/2	315-3151	3/4-11-1/2	1-1/2	315-3175
5-32	13/16	315-1018	3/32-50	1	315-3072	7/16-28	1	315-1155	7/16-18	1-1/2	315-1222	3/4-12	1-1/2	315-1271
5-36	13/16	315-1019	1/8-36	1	315-3074	7/16-30	1	315-3119	7/16-22	1-1/2	315-3152	3/4-14	1-1/2	315-1272
5-48	13/16	315-1020	5/32-24	1	315-3076	7/16-32	1	315-1156	7/16-24	1-1/2	315-3153	3/4-18	1-1/2	315-1273
5-60	13/16	315-1021	5/32-26	1	315-1103	7/16-36	1	315-1157	7/16-27	1-1/2	315-1223	3/4-20	1-1/2	315-1274
5-56	13/16	315-3023	5/32-38	1	315-1101	7/16-40	1	315-1158	7/16-28	1-1/2	315-1224	3/4-24	1-1/2	315-1275
5-60	13/16	315-3027	5/32-36	1	315-1104	7/16-48	1	315-1159	7/16-30	1-1/2	315-3154	3/4-26	1-1/2	315-1282
5-64	13/16	315-3031	5/32-40	1	315-1102	7/16-56	1	315-1186	7/16-32	1-1/2	315-1225	3/4-27	1-1/2	315-1276
5-72	13/16	315-3035	5/32-64	1	315-1105	7/16-64	1	315-3127	7/16-36	1-1/2	315-1226	3/4-28	1-1/2	315-1277
5-80	13/16	315-1017	3/16-20	1	315-3080	15/32-32	1	315-1188	7/16-40	1-1/2	315-3143	3/4-30	1-1/2	315-1278
6-30	13/16	315-1022	3/16-28	1	315-3081	1/2-12	1	315-1160	7/16-48	1-1/2	315-3164	3/4-32	1-1/2	315-1279
6-36	13/16	315-1024	3/16-36	1	315-3082	1/2-14	1	315-1161	15/32-32	1-1/2	315-1228	3/4-36	1-1/2	315-1280
6-48	13/16	315-1026	7/32-24	1	315-1106	1/2-16	1	315-1162	15/32-40	1-1/2	315-3150	3/4-40	1-1/2	315-1281
6-56	13/16	315-1028	7/32-28	1	315-1107	1/2-18	1	315-1163	1/2-12	1-1/2	315-1205	3/4-48	1-1/2	315-3179
6-60	13/16	315-1030	7/32-32	1	315-1108	1/2-22	1	315-3130	1/2-14	1-1/2	315-1204	3/4-56	1-1/2	315-3183
6-64	13/16	315-3043	7/32-40	1	315-1109	1/2-24	1	315-1164	1/2-16	1-1/2	315-1206	3/4-64	1-1/2	315-3187
6-72	13/16	315-3044	7/32-48	1	315-1110	1/2-26	1	315-3131	1/2-18	1-1/2	315-1207	13/16-10	1-1/2	315-3188
6-80	13/16	315-1032	1/4-14	1	315-1112	1/2-27	1	315-1165	1/2-22	1-1/2	315-3168	13/16-12	1-1/2	315-1283
8-24	13/16	315-1034	1/4-16	1	315-1113	1/2-28	1	315-1166	1/2-24	1-1/2	315-1231	13/16-16	1-1/2	315-1285
8-30	13/16	315-1036	1/4-18	1	315-1120	1/2-30	1	315-1167	1/2-27	1-1/2	315-1229	13/16-20	1-1/2	315-1286
8-40	13/16	315-1038	1/4-22	1	315-3077	1/2-32	1	315-1168	1/2-28	1-1/2	315-1232	13/16-24	1-1/2	315-1284
8-48	13/16	315-1040	1/4-24	1	315-1121	1/2-36	1	315-1169	1/2-30	1-1/2	315-1233	13/16-28	1-1/2	315-1287
8-56	13/16	315-1042	1/4-26	1	315-3078	1/2-40	1	315-1170	1/2-32	1-1/2	315-1230	13/16-32	1-1/2	315-1288
8-60	13/16	315-1043	1/4-27	1	315-1122	1/2-48	1	315-1171	1/2-36	1-1/2	315-1234	7/16-18	2	315-1360
8-72	13/16	315-1044	1/4-30	1	315-1114	1/2-56	1	315-1172	1/2-40	1-1/2	315-1235	7/16-24	2	315-1361
8-64	13/16	315-1045	1/4-32	1	315-1123	1/2-60	1	315-3135	1/2-48	1-1/2	315-1236	1/2-12	2	315-1362
8-80	13/16	315-1046	1/4-36	1	315-1124	1/2-64	1	315-3139	1/2-56	1-1/2	315-1237	1/2-16	2	315-1363
10-28	13/16	315-1048	1/4-40	1	315-1125	1/2-72	1	315-3147	1/2-64	1-1/2	315-3155	1/2-18	2	315-1364
10-30	13/16	315-1050	1/4-48	1	315-1126	1/2-80	1	315-1173	1/2-72	1-1/2	315-3156	1/2-24	2	315-1365
10-36	13/16	315-1052	1/4-56	1	315-1127	4-32	1	315-3054	1/2-80	1-1/2	315-3157	1/2-27	2	315-1366
10-40	13/16	315-1054	1/4-60	1	315-1119	4-36	1	315-3055	9/16-10	1-1/2	315-1239	1/2-28	2	315-1367
10-46	13/16	315-1055	1/4-64	1	315-1128	4-40	1	315-3056	9/16-14	1-1/2	315-1238	1/2-30	2	315-1368
10-48	13/16	315-1056	1/4-72	1	315-3079	4-48	1	315-3057	9/16-16	1-1/2	315-1240	1/2-32	2	315-1369
10-56	13/16	315-1058	1/4-80	1	315-1129	4-56	1	315-3053	9/16-20	1-1/2	315-1241	9/16-14	2	315-1370
10-58	13/16	315-1057	9/32-18	1	315-1115	4-60	1	315-3058	9/16-22	1-1/2	315-3172	9/16-20	2	315-1371
10-60	13/16	315-1059	9/32-24	1	315-1116	4-64	1	315-3059	9/16-24	1-1/2	315-1242	9/16-24	2	315-1372
10-64	13/16	315-1060	9/32-32	1	315-1118	5-48	1	315-3061	9/16-26	1-1/2	315-3060	9/16-27	2	315-1373
10-80	13/16	315-1062	5/16-12	1	315-1130	5-56	1	315-3062	9/16-27	1-1/2	315-1243	9/16-28	2	315-1374
12-24	13/16	315-1063	5/16-16	1	315-1131	5-64	1	315-3063	9/16-28	1-1/2	315-1244	9/16-30	2	315-1375
12-28	13/16	315-1065	5/16-20	1	315-1132	6-30	1	315-3064	9/16-30	1-1/2	315-3176	9/16-32	2	315-1295
12-30	13/16	315-1064	5/16-22	1	315-3083	6-56	1	315-3065	9/16-32	1-1/2	315-1245	9/16-36	2	315-1376
12-32	13/16	315-1066	5/16-26	1	315-3084	10-26	1	315-3066	9/16-36	1-1/2	315-1246	5/8-10	2	315-1377
12-36	13/16	315-1068	5/16-27	1	315-1133	10-56	1	315-3067	9/16-40	1-1/2	315-1247	5/8-12	2	315-1378
12-40	13/16	315-1070	5/16-28	1	315-1134	12-26	1	315-3068	9/16-48	1-1/2	315-1248	5/8-14	2	315-1379
12-48	13/16	315-1072	5/16-30	1	315-3087	14-48	1	315-3052	5/8-10	1-1/2	315-1249	5/8-16	2	315-1380
12-56	13/16	315-1074	5/16-32	1	315-1135	1/4-22	1-1/2	315-1196	5/8-12	1-1/2	315-1250	5/8-20	2	315-1381
12-64	13/16	315-3045	5/16-36	1	315-1136	1/4-24	1-1/2	315-1197	5/8-14	1-1/2	315-1251	5/8-24	2	315-1382
14-24	13/16	315-1078	5/16-40	1	315-1137	1/4-27	1-1/2	315-1198	5/8-16	1-1/2	315-1252	5/8-27	2	315-1383
1/4-32	13/16	315-1080	5/16-48	1	315-1138	1/4-30	1-1/2	315-1199	5/8-20	1-1/2	315-1253	5/8-28	2	315-1384
2-64	1	315-3051	5/16-56	1	315-1139	1/4-32	1-1/2	315-1200	5/8-22	1-1/2	315-3165	5/8-30	2	315-1385
6-36	1	315-1082	5/16-64	1	315-3091	1/4-36	1-1/2	315-1201	5/8-24	1-1/2	315-1254	5/8-32	2	315-1386
6-48	1	315-1083	5/16-72	1	315-3095	1/4-48	1-1/2	315-1202	5/8-26	1-1/2	315-3166	5/8-40	2	315-1387
8-24	1	315-1085	5/16-80	1	315-3096	1/4-40	1-1/2	315-1203	5/8-27	1-1/2	315-1255	11/16-12	2	315-1390
8-30	1	315-1086	3/8-14	1	315-1140	5/16-16	1-1/2	315-1208	5/8-28	1-1/2	315-1256	11/16-14	2	315-1391
8-40	1	315-1087	3/8-18	1	315-1141	5/16-20	1-1/2	315-1209	5/8-30	1-1/2	315-1289	11/16-18	2	315-1297
8-48	1	315-1088	3/8-20	1	315-1142	5/16-22	1-1/2	315-1216	5/8-32	1-1/2	315-1257	11/16-20	2	315-1392
8-56	1	315-1084	3/8-22	1	315-3100	5/16-27	1-1/2	315-1211	5/8-36	1-1/2	315-1258	11/16-24	2	315-1393
10-27	1	315-1089	3/8-26	1	315-1180	5/16-28	1-1/2	315-1212	5/8-40	1-1/2	315-1259	11/16-27	2	315-1298
10-28	1	315-1090	3/8-27	1	315-1143	5/16-30	1-1/2	315-1213	5/8-48	1-1/2	315-1290	11/16-32	2	315-1299
10-30	1	315-1091	3/8-28	1	315-1144	5/16-32	1-1/2	315-1210	5/8-56	1-1/2	315-1260	11/16-36	2	315-1394</

Special Pitch Adjustable Dies Continued 高速钢特细牙右旋可调圆扳牙

High Speed Steel, Right Hand



Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.	Size	Outside Diameter	Order No.
3/4-18	2	315-1301	1-27	2-1/2	315-1407	1-7/16-12	2-1/2	315-1571	1-1/2-20	3	315-3330	2-18	3	315-1676
3/4-20	2	315-1302	1-28	2-1/2	315-1408	1-7/16-14	2-1/2	315-1576	1-1/2-24	3	315-3332	2-20	3	315-1679
3/4-24	2	315-1303	1-32	2-1/2	315-1409	1-7/16-16	2-1/2	315-1572	1-1/2-27	3	315-3323	2-24	3	315-1680
3/4-27	2	315-1304	1-1/16-7	2-1/2	315-3238	1-7/16-18	2-1/2	315-1573	1-1/2-28	3	315-3327	2-32	3	315-3387
3/4-28	2	315-3189	1-1/16-8	2-1/2	315-1410	1-7/16-20	2-1/2	315-1574	1-1/2-32	3	315-3331	2-1/16-14	3-1/2	315-1690
3/4-32	2	315-1306	1-1/16-10	2-1/2	315-3239	1-7/16-24	2-1/2	315-1575	1-9/16-6	3	315-1606	2-1/8-14	3-1/2	315-1699
3/4-36	2	315-3191	1-1/16-12	2-1/2	315-1411	1-7/16-32	2-1/2	315-1577	1-9/16-8	3	315-1607	2-1/8-16	3-1/2	315-1700
3/4-40	2	315-3192	1-1/16-14	2-1/2	315-1412	1-7/16-36	2-1/2	315-1578	1-9/16-10	3	315-1608	2-1/8-18	3-1/2	315-1702
3/4-48	2	315-1307	1-1/16-16	2-1/2	315-1413	1-1/2-7	2-1/2	315-1579	1-9/16-12	3	315-1610	2-1/8-8	4	315-1710
13/16-10	2	315-1309	1-1/16-18	2-1/2	315-1414	1-1/2-8	2-1/2	315-1580	1-9/16-14	3	315-1609	2-1/8-10	4	315-1711
13/16-12	2	315-1310	1-1/16-20	2-1/2	315-1415	1-1/2-10	2-1/2	315-1587	1-9/16-16	3	315-1611	2-1/8-12	4	315-1712
13/16-14	2	315-1311	1-1/16-24	2-1/2	315-1416	1-1/2-14	2-1/2	315-1581	1-9/16-18	3	315-1612	2-1/8-16	4	315-1714
13/16-16	2	315-1312	1-1/16-27	2-1/2	315-3243	1-1/2-16	2-1/2	315-1582	1-9/16-20	3	315-1613	2-1/8-18	4	315-1716
13/16-18	2	315-1313	1-1/16-28	2-1/2	315-1418	1-1/2-18	2-1/2	315-1583	1-9/16-24	3	315-1614	2-1/8-20	4	315-1718
13/16-20	2	315-1314	1-1/16-32	2-1/2	315-1417	1-1/2-20	2-1/2	315-1584	1-5/8-4	3	315-1618	2-1/4-4-1/2	4	315-1719
13/16-24	2	315-1315	1-1/8-8	2-1/2	315-1520	1-1/2-24	2-1/2	315-1585	1-5/8-5	3	315-1619	2-1/4-6	4	315-1725
13/16-27	2	315-3195	1-1/8-10	2-1/2	315-1527	1-1/2-27	2-1/2	315-3281	1-5/8-5-1/2	3	315-1620	2-1/4-8	4	315-1726
13/16-28	2	315-3199	1-1/8-14	2-1/2	315-1521	1-1/2-28	2-1/2	315-1588	1-5/8-6	3	315-1617	2-1/4-10	4	315-1727
13/16-30	2	315-1317	1-1/8-16	2-1/2	315-1522	1-1/2-30	2-1/2	315-3282	1-5/8-8	3	315-1621	2-1/4-12	4	315-1720
13/16-32	2	315-1316	1-1/8-18	2-1/2	315-1523	1-1/2-32	2-1/2	315-1589	1-5/8-10	3	315-1622	2-1/4-16	4	315-1722
13/16-36	2	315-3193	1-1/8-20	2-1/2	315-1524	1-1/2-40	2-1/2	315-1586	1-5/8-12	3	315-1623	2-1/4-18	4	315-1724
13/16-40	2	315-3194	1-1/8-24	2-1/2	315-1525	1-10	3	315-3285	1-5/8-14	3	315-1624	2-1/4-20	4	315-1728
7/8-10	2	315-1319	1-1/8-26	2-1/2	315-1517	1-16	3	315-3286	1-5/8-16	3	315-1625	2-5/16-14	4	315-3415
7/8-12	2	315-1320	1-1/8-27	2-1/2	315-1528	1-18	3	315-3287	1-5/8-18	3	315-1626	2-5/16-16	4	315-3419
7/8-16	2	315-1321	1-1/8-28	2-1/2	315-1518	1-20	3	315-3288	1-5/8-20	3	315-1627	2-3/8-8	4	315-1730
7/8-18	2	315-1322	1-1/8-30	2-1/2	315-1519	1-24	3	315-3289	1-5/8-24	3	315-1628	2-3/8-10	4	315-1731
7/8-20	2	315-1323	1-1/8-32	2-1/2	315-1526	1-1/16-8	3	315-1590	1-11/16-6	3	315-1629	2-3/8-12	4	315-1732
7/8-24	2	315-1324	1-3/16-7	2-1/2	315-1538	1-1/16-10	3	315-1591	1-11/16-8	3	315-1637	2-3/8-14	4	315-1733
7/8-27	2	315-1325	1-3/16-8	2-1/2	315-1535	1-1/16-12	3	315-1592	1-11/16-12	3	315-1633	2-3/8-16	4	315-1734
7/8-28	2	315-1326	1-3/16-10	2-1/2	315-1529	1-1/16-14	3	315-1593	1-11/16-14	3	315-1635	2-3/8-18	4	315-1736
7/8-30	2	315-1318	1-3/16-12	2-1/2	315-1530	1-1/16-16	3	315-1594	1-11/16-16	3	315-1630	2-3/8-20	4	315-1738
7/8-32	2	315-1327	1-3/16-14	2-1/2	315-1536	1-1/16-18	3	315-1595	1-11/16-18	3	315-1631	2-1/2-4	4	315-1740
7/8-36	2	315-1328	1-3/16-16	2-1/2	315-1531	1-1/16-20	3	315-1596	1-11/16-20	3	315-1632	2-1/2-8	4	315-1742
7/8-40	2	315-1329	1-3/16-18	2-1/2	315-1532	1-1/16-24	3	315-1597	1-11/16-24	3	315-1634	2-1/2-10	4	315-1743
7/8-48	2	315-3210	1-3/16-20	2-1/2	315-1533	1-1/8-8	3	315-1598	1-11/16-36	3	315-1636	2-1/2-12	4	315-1744
7/8-56	2	315-3211	1-3/16-24	2-1/2	315-1534	1-1/8-10	3	315-1599	1-3/4-5	3	315-1640	2-1/2-14	4	315-1745
7/8-64	2	315-3212	1-3/16-27	2-1/2	315-1539	1-1/8-14	3	315-1601	1-3/4-5-1/2	3	315-1639	2-1/2-16	4	315-1746
15/16-8	2	315-1339	1-3/16-28	2-1/2	315-3252	1-1/8-16	3	315-1602	1-3/4-6	3	315-3359	2-1/2-18	4	315-1748
15/16-9	2	315-1337	1-3/16-32	2-1/2	315-1537	1-1/8-18	3	315-1603	1-3/4-8	3	315-1641	2-1/2-20	4	315-1750
15/16-10	2	315-3219	1-1/4-8	2-1/2	315-1540	1-1/8-20	3	315-1600	1-3/4-10	3	315-1642	2-5/8-12	4	315-1755
15/16-12	2	315-1330	1-1/4-10	2-1/2	315-1541	1-1/8-24	3	315-1604	1-3/4-12	3	315-1643	2-3/4-16	4	315-1759
15/16-14	2	315-1338	1-1/4-14	2-1/2	315-1542	1-3/16-8	3	315-3290	1-3/4-14	3	315-1644	3-12	4	315-1768
15/16-16	2	315-1331	1-1/4-16	2-1/2	315-1543	1-3/16-12	3	315-3291	1-3/4-16	3	315-1645	2-5/8-8	5	315-1820
15/16-18	2	315-1332	1-1/4-18	2-1/2	315-1544	1-3/16-16	3	315-3292	1-3/4-18	3	315-1646	2-5/8-10	5	315-1821
15/16-20	2	315-1333	1-1/4-20	2-1/2	315-1545	1-1/4-6	3	315-3293	1-3/4-20	3	315-1647	2-5/8-12	5	315-1822
15/16-24	2	315-1334	1-1/4-24	2-1/2	315-1546	1-1/4-8	3	315-3294	1-3/4-24	3	315-1648	2-5/8-16	5	315-1824
15/16-27	2	315-1335	1-1/4-26	2-1/2	315-3274	1-1/4-10	3	315-3295	1-3/4-32	3	315-3363	2-5/8-18	5	315-1826
15/16-28	2	315-3218	1-1/4-27	2-1/2	315-1547	1-1/4-14	3	315-3296	1-13/16-8	3	315-1649	2-3/4-8	5	315-1830
15/16-30	2	315-3220	1-1/4-28	2-1/2	315-1548	1-1/4-16	3	315-3297	1-13/16-12	3	315-1650	2-3/4-10	5	315-1831
15/16-32	2	315-1336	1-1/4-30	2-1/2	315-1549	1-1/4-18	3	315-3298	1-13/16-16	3	315-1651	2-3/4-12	5	315-1832
1-10	2	315-1340	1-1/4-32	2-1/2	315-3275	1-1/4-20	3	315-3299	1-13/16-18	3	315-1652	2-3/4-14	5	315-1833
1-16	2	315-1341	1-1/4-36	2-1/2	315-3276	1-1/4-24	3	315-3300	1-13/16-20	3	315-1653	2-3/4-16	5	315-1834
1-18	2	315-1342	1-1/4-40	2-1/2	315-3279	1-5/16-8	3	315-3301	1-13/16-28	3	315-1655	2-3/4-18	5	315-1836
1-20	2	315-1343	1-5/16-8	2-1/2	315-1554	1-5/16-10	3	315-3302	1-7/8-5	3	315-1660	2-7/8-8	5	315-1840
1-24	2	315-1344	1-5/16-10	2-1/2	315-1555	1-5/16-12	3	315-3303	1-7/8-5-1/2	3	315-1659	2-7/8-10	5	315-1841
1-27	2	315-1345	1-5/16-12	2-1/2	315-1550	1-5/16-14	3	315-3304	1-7/8-6	3	315-1668	2-7/8-12	5	315-1842
1-28	2	315-1346	1-5/16-14	2-1/2	315-3284	1-5/16-16	3	315-3305	1-7/8-8	3	315-1667	2-7/8-14	5	315-1843
1-30	2	315-1351	1-5/16-16	2-1/2	315-1551	1-5/16-18	3	315-3306	1-7/8-10	3	315-1661	2-7/8-16	5	315-1844
1-32	2	315-1347	1-5/16-18	2-1/2	315-1552	1-5/16-20	3	315-3307	1-7/8-12	3	315-1662	2-7/8-18	5	315-1846
1-36	2	315-1349	1-5/16-20	2-1/2	315-1553	1-3/8-8	3	315-3308	1-7/8-14	3	315-1663	3-4	5	315-1849
1-40	2	315-1348	1-5/16-24	2-1/2	315-1557	1-3/8-10	3	315-3309	1-7/8-16	3	315-1664	3-8	5	315-1850
1-48	2	315-3227	1-5/16-27	2-1/2	315-3283	1-3/8-14	3	315-3310	1-7/8-18	3	315-1665	3-12	5	315-1852
1-56	2	315-1350	1-5/16-32	2-1/2	315-1558	1-3/8-16	3	315-3311	1-7/8-20	3	315-1666	3-16	5	315-1854
1-64	2	315-3235	1-3/8-7	2-1/2	315-1559	1-3/8-18	3	315-3312	1-7/8-24	3	315-3319	3-18	5	315-1856
1-1/16-12	2	315-1353	1-3/8-8	2-1/2	315-1560	1-3/8-20	3	315-3313	1-15/16-12	3	315-1681	3-1/4-8	5	315-1860
1-1/16-14	2	315-1354	1-3/8-10	2-1/2	315-1561	1-3/8-24	3	315-3314	1-15/16-16	3	315-1682	3-1/4-12	5	315-1862
1-1/16-16	2	315-1356	1-3/8-14	2-1/2	315-1566	1-7/16-6	3	315-3315	1-15/16-18	3	315-1684	3-1/2-4	5	315-1869
1-1/16-18	2	315-1357	1-3/8-16	2-1/2	315-1562	1-7/16-8	3	315-3316	1-15/16-20	3	315-1686	3-1/2-4-1/2	5	315-1874
3/4-20	2-1/2	315-1399	1-3/8-18	2-1/2	315-1563	1-7/16-12	3	315-3317	2-4	3	315-1669	3-1/2-8	5	315-1870
1-10	2-1/2	315-1400	1-3/8-20	2-1/2	315-1564	1-7/16-16	3	315-3318	2-4-1/2	3	315-1670	3-1/2-12	5	315-1872
1-12	2-1/2	315-1401	1-3/8-24	2-1/2	315-1565	1-7/16-18	3	315-1605	2-6	3	315-1677	3-3/4-8	6	315-1876
1-16	2-1/2	315-1402	1-3/8-27	2-1/2	3									

Round Solid Dies 高速钢 / 碳钢圆板牙

High Speed Steel & Carbon Steel

NEW

13/16"OD			1"OD			1-1/2"OD			2"OD		
Size	HSS Order No.	Carbon Steel Order No.	Size	HSS Order No.	Carbon Steel Order No.	Size	HSS Order No.	Carbon Steel Order No.	Size	HSS Order No.	Carbon Steel Order No.
0-80	314-6000	314-7000	4-40	314-6100	314-7100	1/8-27	314-6200	314-7296	9/16-12	314-6310	314-7310
1-64	314-6005	314-7005	4-48	314-6105	314-7105	1/4-18	314-6201	314-7297	9/16-18	314-6315	314-7315
1-72	314-6010	314-7010	6-32	314-6110	314-7110	1/4-20	314-6210	314-7210	5/8-11	314-6320	314-7320
2-56	314-6015	314-7015	6-40	314-6115	314-7115	1/4-28	314-6215	314-7215	5/8-18	314-6325	314-7325
2-64	314-6020	314-7020	8-32	314-6120	314-7120	5/16-18	314-6220	314-7220	3/4-10	314-6330	314-7330
3-48	314-6025	314-7025	8-36	314-6125	314-7125	5/16-24	314-6225	314-7225	3/4-16	314-6335	314-7335
3-56	314-6030	314-7030	10-24	314-6130	314-7130	3/8-16	314-6230	314-7230	7/8-9	314-6340	314-7340
4-40	314-6035	314-7035	10-32	314-6135	314-7135	3/8-24	314-6235	314-7235	7/8-14	314-6345	314-7345
4-48	314-6040	314-7040	12-24	314-6140	314-7140	7/16-14	314-6240	314-7240	1-8	314-6350	314-7350
5-40	314-6045	314-7045	12-28	314-6145	314-7145	7/16-20	314-6245	314-7245	1-12	314-6355	314-7355
5-44	314-6050	314-7050	1/8-27	314-6102	314-7196	1/2-13	314-6250	314-7250	1-14	314-6360	314-7360
6-32	314-6055	314-7055	1/4-20	314-6150	314-7150	1/2-20	314-6255	314-7255			
6-40	314-6060	314-7060	1/4-24	314-6152	314-7152	9/16-12	314-6260	314-7260			
8-32	314-6065	314-7065	1/4-28	314-6155	314-7155	9/16-18	314-6265	314-7265			
8-36	314-6070	314-7070	1/4-32	314-6157	314-7157	5/8-11	314-6270	314-7270			
10-24	314-6075	314-7075	5/16-18	314-6160	314-7160	5/8-18	314-6275	314-7275			
10-32	314-6080	314-7080	5/16-24	314-6165	314-7165	3/4-10	314-6280	314-7280			
12-24	314-6085	314-7085	3/8-16	314-6170	314-7170	3/4-16	314-6285	314-7285			
12-28	314-6090	314-7090	3/8-24	314-6175	314-7175						
			7/16-14	314-6180	314-7180						
			7/16-20	314-6185	314-7185						
			1/2-13	314-6190	314-7190						
			1/2-20	314-6195	314-7195						

Metric Round Solid Dies 公制高速钢圆板牙

1"OD		1-1/2"OD		1-1/2"OD		1-1/2"OD	
Size	HSS Order No.	Size	HSS Order No.	Size	HSS Order No.	Size	HSS Order No.
M2X0.4	314-6500	M10X1.0	314-6610	M14X1.5	314-6630	M20X1.5	314-6650
M2.5X0.45	314-6505	M10X1.25	314-6612	M14X2.0	314-6632	M20X2.0	314-6652
M3X0.5	314-6510	M10X1.5	314-6614	M16X1.0	314-6634	M20X2.5	314-6654
M4X0.7	314-6515	M11X1.5	314-6616	M16X1.5	314-6636		
M5X0.8	314-6520	M12X1.0	314-6618	M16X2.0	314-6638		
M6X1.0	314-6525	M12X1.25	314-6620	M18X1.0	314-6640		
M7X1.0	314-6530	M12X1.5	314-6622	M18X1.5	314-6642		
M8X1.25	314-6535	M12X1.75	314-6624	M18X2.0	314-6644		
M10X1.5	314-6540	M14X1.0	314-6626	M18X2.5	314-6646		
M12X1.75	314-6545	M14X1.25	314-6628	M20X1.0	314-6648		

British Standard Whitworth (B.S.W.) Round Adjustable Dies

55° Thread Angle carbon Steel

英标碳钢可调板牙 55 度 (BSW)

NEW

3/16"OD		1"OD		1-1/2"OD		2"OD		3"OD	
Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
3/16-24	365-0102	1/8"-28	365-0100	1/4"-19	365-0101	3/4-10 2"OD	365-0120	1-1/4"-7	365-0130
		1/4-20	365-0104	7/16-14	365-0110	7/8-9 2"OD	365-0122	1-3/8-6	365-0132
		5/16-18	365-0106	1/2-12	365-0112	1-8 2"OD	365-0124	1-1/2-6	365-0134
		3/8-16	365-0108	9/16-12	365-0114				
				5/8-11	365-0116				

Round Dies 德标公制圆扳牙

DIN 223 B

High Speed Steel

For ISO metric thread as per DIN 13



Thread	Pitch	Outside	Order No.	Thread	Pitch	Outside	Order No.	Thread	Pitch	Outside	Order No.
M2	.4	16x5mm	314-9001	M10	1.5	30x11mm	314-9019	M30	3.5	65x25mm	314-9037
M2.5	.45	16x5mm	314-9003	M12	1.75	38x14mm	314-9021	M33	2.0	65x25mm	314-9038
M3	.5	20x5mm	314-9005	M14	2.0	38x14mm	314-9023	M33	3.5	65x25mm	314-9039
M3.5	.6	20x5mm	314-9007	M16	2.0	45x14mm	314-9025	M36	4.0	65x25mm	314-9041
M4	.7	20x5mm	314-9009	M18	2.5	45x18mm	314-9027	M39	4.0	75x30mm	314-9043
M5	.8	20x7mm	314-9011	M20	2.5	45x18mm	314-9029	M42	4.5	75x30mm	314-9045
M6	1.0	20x7mm	314-9013	M22	2.5	55x22mm	314-9031	M45	4.5	90x36mm	314-9047
M7	1.0	25x9mm	314-9015	M24	3.0	55x22mm	314-9033	M48	5.0	90x36mm	314-9049
M8	1.25	25x9mm	314-9017	M27	3.0	65x25mm	314-9035	M52	5.0	90x36mm	314-9051

DIN 223 B

High Speed Steel

Thread	Pitch	Outside	Order No.	Thread	Pitch	Outside	Order No.
M3	0.5	25 x 9mm	314-9103	M8	1.25	25 x 9mm	314-9108
M4	0.7	25 x 9mm	314-9104	M10	1.5	25 x 9mm	314-9110
M5	0.8	25 x 9mm	314-9105	M12	1.75	25 x 9mm	314-9112
M6	1.0	25 x 9mm	314-9106				

DIN 223

High Speed Steel For B.S.W Thread as per DIN 11

Threads				Threads				Threads			
Thread	Per inch	Outside	Order No.	Thread	Per inch	Outside	Order No.	Thread	Per inch	Outside	Order No.
1/16"	60	16mm	314-1101	3/8"	16	30mm	314-1117	1-1/8"	7	65mm	314-1133
3/32	48	16mm	314-1103	7/16	14	30mm	314-1119	1-1/4	7	65mm	314-1135
1/8	40	20mm	314-1105	1/2	12	38mm	314-1121	1-3/8	6	65mm	314-1137
5/32	32	20mm	314-1107	9/16	12	38mm	314-1123	1-1/2	6	75mm	314-1139
3/16	24	20mm	314-1109	5/8	11	45mm	314-1125	1-5/8	5	75mm	314-1141
7/32	24	20mm	314-1111	3/4	10	45mm	314-1127	1-3/4	5	90mm	314-1143
1/4	20	20mm	314-1113	7/8	9	55mm	314-1129	1-7/8	4-1/2	90mm	314-1145
5/16	18	25mm	314-1115	1	8	55mm	314-1131	2	4-1/2	90mm	314-1147

DIN 5158

High Speed Steel For B.S.P. thread as per DIN 228

Threads				Threads				Threads			
Thread	Per Inch	Outside	Order No.	Thread	Per Inch	Outside	Order No.	Thread	Per Inch	Outside	Order No.
G1/16	28	25mm	314-1023	G1/2	14	45mm	314-1007	G1	11	65mm	314-1015
G1/8	28	30mm	314-1001	G5/8	14	55mm	314-1009	G1-1/8	11	75mm	314-1017
G1/4	19	38mm	314-1003	G3/4	14	55mm	314-1011	G1-1/4	11	75mm	314-1019
G3/8	19	45mm	314-1005	G7/8	14	65mm	314-1013	G1-1/2	11	90mm	314-1021

DIN 223 B

For ISO metric fine thread as per DIN 13

High Speed Steel

Thread (mm)	Pitch (mm)	Outside	Order No.	Thread (mm)	Pitch (mm)	Outside	Order No.	Thread (mm)	Pitch (mm)	Outside	Order No.
M3	.35	20x5mm	314-9201	M10	1.25	30x11mm	314-9215	M20	1.0	45x14mm	314-9234
M4	.35	20x5mm	314-9203	M12	1.0	30x11mm	314-9217	M20	1.5	45x14mm	314-9235
M4	.50	20x5mm	314-9205	M12	1.25	38x11mm	314-9219	M22	1.0	55x16mm	314-9236
M5	.50	20x5mm	314-9207	M12	1.5	38x10mm	314-9221	M22	1.5	55x16mm	314-9237
M6	.50	20x5mm	314-9208	M14	1.0	38x10mm	314-9223	M22	2.0	55x16mm	314-9238
M6	.75	25x7mm	314-9209	M14	1.25	38x10mm	314-9225	M24	1.5	55x16mm	314-9239
M8	.50	25x9mm	314-9210	M14	1.5	38x10mm	314-9227	M24	2.0	55x16mm	314-9241
M8	.75	25x9mm	314-9211	M16	1.0	45x14mm	314-9229	M27	1.5	65x18mm	314-9243
M8	1.0	25x9mm	314-9212	M16	1.5	45x14mm	314-9231	M27	2.0	65x18mm	314-9245
M10	1.0	30x11mm	314-9213	M18	1.0	45x14mm	314-9232	M30	1.5	65x18mm	314-9247
M10	.75	30x11mm	314-9214	M18	1.5	45x14mm	314-9233	M30	2.0	65x18mm	314-9249

Hexagon Rethreading Dies

六方板牙 (右旋)

High Speed Steel and Carbon Steel, Right Hand

- Used for repairing damaging or rusting threads.

Pipe Thread

Size	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.	Size	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.
1/8"-27 NPT	25/32"	3/8"	365-0005	367-0005	1/2"-14NPT	1-7/16"	3/4"	365-0020	367-0020
1/4"-18NPT	1-1/16	1/2	365-0010	367-0010	3/4"-14NPT	1-13/16	1	365-0025	367-0025
3/8"-18NPT	1-1/4	5/8	365-0015	367-0015	1"-11-1/2NPT	2-3/16	1	365-0030	367-0030



Standard Thread

Size	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.	Size	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.
1/4"-20NC	19/32"	1/4"	365-0161	367-0161	3/4"-10NC	1-7/16"	3/4"	365-0481	367-0481
1/4"-28NF	19/32	1/4	365-0162	367-0162	3/4"-16NF	1-7/16	3/4	365-0482	367-0482
5/16"-18NC	11/16	5/16	365-0201	367-0201	7/8"-9NC	1-5/8	7/8	365-0561	367-0561
5/16"-24NF	11/16	5/16	365-0202	367-0202	7/8"-14NF	1-5/8	7/8	365-0562	367-0562
3/8"-16NC	25/32	3/8	365-0241	367-0241	1"-8NC	1-13/16	1	365-0641	367-0641
3/8"-24NF	25/32	3/8	365-0242	367-0242	1"-12NF	1-13/16	1	365-0642	367-0642
7/16"-14NC	7/8	7/16	365-0281	367-0281	1"-14NS	1-13/16	1	365-0643	367-0643
7/16"-20NF	7/8	7/16	365-0282	367-0282	1-1/8"-7NC	2	1	365-1081	367-1081
1/2"-13NC	1-1/16	1/2	365-0321	367-0321	1-1/8"-12NF	2	1	365-1082	367-1082
1/2"-20NF	1-1/16	1/2	365-0322	367-0322	1-1/4"-7NC	2-3/16	1	365-1161	367-1161
9/16"-12NC	1-1/16	1/2	365-0361	367-0361	1-1/4"-12NF	2-3/16	1	365-1162	367-1162
9/16"-18NF	1-1/16	1/2	365-0362	367-0362	1-3/8"-6NC	2-3/8	1	365-1241	367-1241
5/8"-11NC	1-1/4	5/8	365-0401	367-0401	1-3/8"-12NF	2-3/8	1	365-1242	367-1242
5/8"-18NF	1-1/4	5/8	365-0402	367-0402	1-1/2"-6NC	2-9/16	1	365-1321	367-1321
11/16"-11NS	1-7/16	3/4	365-0441	367-0441	1-1/2"-12NF	2-9/16	1	365-1322	367-1322
11/16"-16NS	1-7/16	3/4	365-0442	367-0442					

Metric Hexagon Rethreading Dies

公制六方板牙 (右旋)

High Speed Steel and Carbon Steel, Right Hand

Uses for repairing damaging or rusting threads.



Size(mm)	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.	Size(mm)	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.	Size(mm)	Across Flats	Thickness	Carbon Steel Order No.	HSS Order No.
3.0x0.50	19/32	1/4	364-0032		11.0x1.0	25/32	7/16	364-0111		24.0x3.0	1-13/16	1	364-0243	367-6243
3.0x0.60	19/32	1/4	364-0034		11.0x1.5	25/32	7/16	364-0112		24.0x1.0	1-13/16	1	364-0240	
3.5x0.60	19/32	1/4	364-0036		11.0x1.5	7/8	7/16		367-6112	24.0x1.25	1-13/16	1	364-0244	
4.0x0.70	19/32	1/4	364-0001		11.0x1.25	25/32	7/16	364-0113		25.0x1.5	1-13/16	1	364-0251	
4.0x0.70	19/32	1/4	364-0042		12.0x1.0	1-1/16	1/2	364-0121		26.0x1.5	2	1	364-0261	367-6261
4.0x0.75	19/32	1/4	364-0044		12.0x1.25	1-1/16	1/2	364-0122		26.0x3.0	2	1	364-0263	
4.5x0.75	19/32	1/4	364-0046	367-6044	12.0x1.5	1-1/16	1/2	364-0123		27.0x1.5	2	1	364-0271	
5.0x0.80	19/32	1/4	364-0002	367-6053	12.0x1.75	1-1/16	1/2	364-0124	367-6124	27.0x2.0	2	1	364-0272	
5.0x0.50	19/32	1/4	364-0051		12.0x.75	1-1/16	1/2	364-0120		27.0x3.0	2	1	364-0273	
5.0x0.75	19/32	1/4	364-0052		12.0x1.25	1-1/16	1/2	364-0012		28.0x1.5	2	1	364-0281	
5.0x0.8	19/32	1/4	364-0053		12.0x1.50	1-1/16	1/2	364-0013		30x1.5	2-3/16	1	364-0301	
5.0x0.9	19/32	1/4	364-0054	367-6054	12.0x1.75	1-1/16	1/2	364-0014		30x2.0	2-3/16	1	364-0302	
5.5x0.9	19/32	1/4	364-0055	367-6055	14.0x1.0	1-1/16	1/2	364-0141		30x3.5	2-3/16	1	364-0304	367-6304
6.0x0.5	19/32	1/4	364-0061		14.0x1.25	1-1/16	1/2	364-0142		32x2.0	2-3/16	1	364-0321	367-6321
6.0x0.75	19/32	1/4	364-0062		14.0x1.5	1-1/16	1/2	364-0143		32x3.5	2-3/16	1	364-0322	367-6322
6.0x1.0	19/32	1/4	364-0063	367-6063	14.0x2.0	1-1/16	1/2	364-0144	367-6144	33x2.0	2-3/16	1	364-0331	367-6331
6.0x1.00	19/32	1/4	364-0003		15.0x1.0	1-1/4	5/8	364-0151		33x3.5	2-3/16	1	364-0332	367-6332
6.3x1.00			364-0065		16.0x1.0	1-1/4	5/8	364-0161		33x1.5	2-3/16	1	364-0330	
7.0x0.75	11/16	5/16	364-0072		16.0x1.5	1-1/4	5/8	364-0162	367-6162	36x3.0	2-3/8	1	364-0361	367-6361
7.0x1.0	11/16	5/16	364-0073		16.0x2.0	1-1/4	5/8	364-0163	367-6163	36x4.0	2-3/8	1	364-0362	367-6362
7.0x1.00	11/16	5/16	364-0004	367-6073	17.0x1.5	1-7/16	3/4	364-0172		36x1.5	2-3/8	1	364-0360	
8.0x0.75	11/16	5/16	364-0081		18.0x1.00	1-7/16	3/4	364-0181		36x2.0	2-3/8	1	364-0363	
8.0x1.0	11/16	5/16	364-0082		18.0x1.5	1-7/16	3/4	364-0183		38x2.0	2-9/16	1	364-0382	
8.0x1.25	11/16	5/16	364-0083	367-6083	18.0x2.0	1-7/16	3/4	364-0184		39x2.0	3-1/8	1	364-0391	
8.0x1.00	11/16	5/16	364-0008		18.0x2.5	1-7/16	3/4	364-0185		39x3.0	3-1/8	1	364-0393	
8.0x1.25	25/32	3/8	364-0009		20.0x1.0	1-7/16	3/4	364-0201	367-6201	39x4.0	2-9/16	1	364-0392	367-6392
9.0x0.75	25/32	3/8	364-0091		20.0x1.25	1-7/16	3/4	364-0202		39x1.5	3-1/8	1	364-0390	
9.0x1.0	25/32	3/8	364-0092		20.0x1.5	1-7/16	3/4	364-0203	367-6203	40x1.5	2-9/16	1	364-0401	
9.0x1.25	25/32	3/8	364-0093		20.0x2.0	1-7/16	3/4	364-0204		40x4.0	3-1/8	1	364-0411	
10.0x1.50	25/32	7/16	364-0104		20.0x2.5	1-5/8	7/8	364-0206		42x4.5	3-1/8	1	364-0421	367-6421
10.0x1.50	7/8	7/16	364-0105		20.0x2.5	1-7/16	3/4	364-0205	367-6205	45x4.5	3-1/8	1	364-0451	
10.0x0.75	25/32	7/16	364-0101		22.0x1.25	1-5/8	7/8	364-0221		48x5.0	3-1/8	1-1/4	364-0481	
10.0x1.0	25/32	7/16	364-0102		22.0x1.5	1-5/8	7/8	364-0222		48x1.5	3-1/8	1-1/4	364-0482	
10.0x1.25	25/32	7/16	364-0103		22.0x2.5	1-5/8	7/8	364-0223	367-6223	48x3.0	3-1/8	1-1/4	364-0483	
10.0x1.25	25/32	3/8	364-0010		22.0x2.0	1-5/8	7/8	364-0224		52x5.0	3-1/2	1-1/4	364-0521	
10.0x1.50	25/32	3/8	364-0011		24.0x1.5	1-13/16	1	364-0241		52x1.5	3-1/2	1-1/4	364-0520	
10.0x1.50	25/32	5/16		367-6104	24.0x2.0	1-13/16	1	364-0242	367-6242	52x3.0	3-1/2	1-1/4	364-0523	

Left Hand Hexagon Rethreading Dies 碳刚六方板牙（左旋）

Carbon Steel



Size	Across Flat	Thickness	Order No.	Size	Across Flat	Thickness	Order No.
1/4"-20NC	19/32"	1/4"	366-0161	3/4"-10NC	1-7/16"	3/4"	366-0481
1/4"-28NF	19/32	1/4	366-0162	3/4"-16NF	1-7/16	3/4	366-0482
5/16"-18NC	11/16	5/16	366-0201	7/8"-9NC	1-5/8	7/8	366-0561
5/16"-24NF	11/16	5/16	366-0202	7/8"-14NF	1-5/8	7/8	366-0562
3/8"-16NC	25/32	3/8	366-0241	1"-8NC	1-13/16	1	366-0641
3/8"-24NF	25/32	3/8	366-0242	1"-12NF	1-13/16	1	366-0642
7/16"-14NC	7/8	7/16	366-0281	1"-14NS	1-13/16	1	366-0643
7/16"-20NF	7/8	7/16	366-0282	1-1/8"-7NC	2	1	366-1081
1/2"-13NC	1-1/16	1/2	366-0321	1-1/8"-12NF	2	1	366-1082
1/2"-20NF	1-1/16	1/2	366-0322	1-1/4"-7NC	2-3/16	1	366-1161
9/16"-12NC	1-1/16	1/2	366-0361	1-1/4"-12NF	2-3/16	1	366-1162
9/16"-18NF	1-1/16	1/2	366-0362	1-3/8"-6NC	2-3/8	1	366-1241
5/8"-11NC	1-1/4	5/8	366-0401	1-3/8"-12NF	2-3/8	1	366-1242
5/8"-18NF	1-1/4	5/8	366-0402	1-1/2"-6NC	2-9/16	1	366-1321
11/16"-11NS	1-7/16	3/4	366-0441	1-1/2"-12NF	2-9/16	1	366-1322
11/16"-16NS	1-7/16	3/4	366-0442				

Special Thread Hexagon Rethreading Dies 六方特殊牙板牙（右旋）

High Speed Steel & Carbon Steel, Right Hand



Size	Across Flat	Thickness	Carbon Steel Order No.	HSS Order No.	Size	Across Flat	Thickness	Carbon Steel Order No.	HSS Order No.
1-1/8"-8	2"	1"	365-1084	367-1084	2-1/4"-8	3-1/2"	1-1/4"	365-2165	367-2165
1-1/8"-16	2	1	365-1085	367-1085	2-1/4"-12	3-1/2	1-1/4	365-2166	367-2166
1-1/8"-18	2	1	365-1086	367-1086	2-1/4"-16	3-1/2	1-1/4	365-2167	367-2167
1-1/4"-8	2-3/16	1	365-1164	367-1164	2-1/4"-18	3-1/2	1-1/4	365-2168	367-2168
1-1/4"-16	2-3/16	1	365-1165	367-1165	2-3/8"-8	4-1/2	1-1/2	365-2244	367-2244
1-1/4"-18	2-3/16	1	365-1166	367-1166	2-3/8"-12	4-1/2	1-1/2	365-2245	367-2245
1-3/8"-8	2-3/8	1	365-1244	367-1244	2-1/2"-4	4-1/2	1-1/2	365-2324	367-2324
1-3/8"-16	2-3/8	1	365-1245	367-1245	2-1/2"-8	4-1/2	1-1/2	365-2325	367-2325
1-3/8"-18	2-3/8	1	365-1246	367-1246	2-1/2"-12	4-1/2	1-1/2	365-2326	367-2326
1-1/2"-8	2-9/16	1	365-1324	367-1324	2-5/8"-8	4-1/2	1-1/2	365-2404	367-2404
1-1/2"-16	2-9/16	1	365-1325	367-1325	2-5/8"-12	4-1/2	1-5/8	365-2405	367-2405
1-1/2"-18	2-9/16	1	365-1326	367-1326	2-3/4"-4	4-1/2	1-5/8	365-2484	367-2484
1-5/8"-5-1/2	3-1/8	1	365-1404	367-1404	2-3/4"-8	4-1/2	1-5/8	365-2485	367-2485
1-5/8"-8	3-1/8	1	365-1405	367-1405	2-3/4"-12	4-1/2	1-5/8	365-2486	367-2486
1-5/8"-12	3-1/8	1	365-1406	367-1406	2-7/8"-8			365-2564	367-2564
1-5/8"-16	3-1/8	1	365-1407	367-1407	2-7/8"-12			365-2565	367-2565
1-5/8"-18	3-1/8	1	365-1408	367-1408	3"-4			365-3004	367-3004
1-3/4"-5	3-1/8	1	365-1484	367-1484	3"-8			365-3005	367-3005
1-3/4"-8	3-1/8	1	365-1485	367-1485	3"-12			365-3006	367-3006
1-3/4"-12	3-1/8	1	365-1486	367-1486	3-1/4"-4			365-3164	367-3164
1-3/4"-16	3-1/8	1	365-1487	367-1487	3-1/4"-8			365-3165	367-3165
1-3/4"-18	3-1/8	1	365-1488	367-1488	3-1/4"-12			365-3166	367-3166
1-7/8"-5	3-1/8	1-1/4	365-1564	367-1564	3-1/2"-4			365-3324	367-3324
1-7/8"-8	3-1/8	1-1/4	365-1565	367-1565	3-1/2"-8			365-3325	367-3325
1-7/8"-12	3-1/8	1-1/4	365-1566	367-1566	3-1/2"-12			365-3326	367-3326
1-7/8"-16	3-1/8	1-1/4	365-1567	367-1567	3-3/4"-4			365-3484	367-3484
1-7/8"-18	3-1/8	1-1/4	365-1568	367-1568	3-3/4"-8			365-3485	367-3485
2"-4-1/2	3-1/2	1-1/4	365-2004	367-2004	3-3/4"-12			365-3486	367-3486
2"-8	3-1/2	1-1/4	365-2005	367-2005	4"-8			365-4004	367-4004
2"-12	3-1/2	1-1/4	365-2006	367-2006	4"-12			365-4005	367-4005
2"-16	3-1/2	1-1/4	365-2007	367-2007	4-1/2"-8			365-4324	367-4324
2"-18	3-1/2	1-1/4	365-2008	367-2008	4-1/2"-12			365-4325	367-4325
2-1/8"-8	3-1/2	1-1/4	365-2084	367-2084	5"-8			365-5004	367-5004
2-1/8"-12	3-1/2	1-1/4	365-2085	367-2085	5"-12			365-5005	367-5005
2-1/4"-4-1/2	3-1/2	1-1/4	365-2164	367-2164					

British Standard Hexagon Rethreading Dies

55° Thread Angle carbon Steel

英标碳钢六方板牙 55 度

Use for rethreading applications.



Straight Pipe-BSP

Taper Pipe-BSPT

Size	Order No.
1/8"-28	365-2708
1/4"-19	365-2716
3/8"-19	365-2724
1/2"-14	365-2732
5/8"-14	365-2740
3/4"-14	365-2748
7/8"-14	365-2756
1"-11	365-2800
1-1/4"-11	365-2816
1-1/2"-11	365-2832
1-3/4"-11	365-2848
2"-11	365-2900

Size	Order No.
1/8"-28	365-3708
1/4"-19	365-3716
3/8"-19	365-3724
1/2"-14	365-3732
5/8"-14	365-3740
3/4"-14	365-3748
7/8"-14	365-3756
1"-11	365-3800
1-1/4"-11	365-3816
1-1/2"-11	365-3832
1-3/4"-11	365-3848
2"-11	365-3900

British Stand Whitworth (B.S.W.) Rethreading Hexagon Dies

55° Thread Angle carbon Steel

英标碳钢六方板牙 55 度 (BSW)

Use for rethreading applications.



Size	Order No.
3/16"-24	365-4712
1/4"-20	365-4716
5/16"-18	365-4720
7/16"-14	365-4728
1/2"-12	365-4732
9/16"-12	365-4736
5/8"-11	365-4740

Size	Order No.
3/4"-10	365-4748
7/8"-9	365-4756
1"-8	365-4800
1-1/4"-7	365-4816
1-3/8"-6	365-4820
1-1/2"-6	365-4832

Die Holders 板牙扳手

- Ideal for short or medium run threading at shafts.
- Used safely on lathes, milling machines and tapping heads.



Body	Shank	Die Dia.	Order No.
1- 1/2" D x 1"	1/2"D	13/16"	318-2031
1- 1/2D x1	1/2D x 2	1	318-2032
2D x1	3/4D x 2	1-1/2	318-2033
3Pcs/set, one each of above size			318-2333

Hand Tappers

手动攻丝机 (带卡头)

- Assures straight perpendicular tapped holes.
- Can be used vertical, horizontal or inverted.
- Equipped with tap guide, precision ground work table, tap spindle, wrench & nine steel tap adapters: 6, 8, 10, 1/4", 5/16", 3/8", 7/16", 1/2" & 5/8".



Adaptors & Set

Adaptor Sizes	Order No.
#6	318-0101
#8	318-0102
#10	318-0103
1/4"	318-0104
5/16"	318-0105
3/8"	318-0106
7/16"	318-0107
1/2"	318-0108
5/8"	318-0109
9Pcs/set	318-0119

Order No. 318-0001

Specifications

Descriptions	
Table Length	12-1/2"
Table Width	6-1/2"
Table Area	6-1/2 x 10
Height	13
Clearance Height	7
Depth of Throat	7-1/2"
Weight (Approx.)	37 lbs.

Die Adaptors 圆板牙转换架

- Easily converts round dies to hex dies.
- Great tool to use where conventional die stocks cannot swing due to lack of space.

4pcs/set includes: 13/16"-2"

Order No.318-2290



Die Dia.	Across Flats	Order No.
13/16"	1-1/16"	318-2250
1	1-1/4	318-2255
1-1/2	1-31/32	318-2260

Die Dia.	Across Flats	Order No.
2"	2-9/16"	318-2265
2-1/2	2-3/4	318-2270
3	3.63	318-2275

E-Z Hand Tappers

Mini Tapper

手动攻丝机 (带卡头)

Specifications



Descriptions	Order No.318-0003
Table Size	8-1/2x6"
Height	9"
Clearance Height	3-3/4"
Depth of Throat	4-1/2"
Approx. Weight	12 lbs
Tap Adaptors (318-0013)	7 (#0-5/16")

3 Screw Type Die Stocks

Die stocks for those dies with 1" outside diameter or under are single screw tightened design.

3 螺钉板牙架



Die Dia.	OAL	Order No.
5/8"	5"	318-2302
13/16	6-1/4	318-2304
*1	9	318-2306
*1-1/2"	12"	318-2308
*2	19-1/2	318-2310
2-1/2	20	318-2312
3"	22"	318-2314
3-1/2	24	318-2315
4	29	318-2316
5	33	318-2318

* use with round adjustable dies.

4pcs/set

includes 13/16, 1, 1-1/2, 2"

Order No. 318-2320

5pcs/set

includes 13/16, 1, 1-1/2, 2, 2-1/2"

Order No. 318-2321

DIN 225 Die Stocks 电镀杆板牙架

zinc die casting made



Size	Length	For Dies	Order No.
16 x 5mm	160	M 1-2.6	318-2025
20 x 5mm	200	M 3-4	318-2030
20 x 7mm	200	M 4.5-6	318-2035
25 x 9mm	224	M 7-9	318-2040
30 x 11mm	280	M 10-11	318-2045
38x10mm			318-2047
38x14mm	315	M 12-14	318-2050
45x14mm			318-2052
45x18mm	450	M 16-20	318-2055
55x22mm	560	M 22-24	318-2060
65x25mm	630	M 27-36	318-2065
75mm			318-2070
105mm			318-2080
120mm			318-2085

Tap Wrenches 电镀杆丝锥铰把

Adjustable zinc die casting made

DIN 1814



Size	Length	For Taps	Order No.
0	125mm	M 1-8	318-0200
1	188mm	M 1-10	318-0215
1-1/2	215mm	M 1-12	318-0220
2	280mm	M 3.5-12	318-0225
3	375mm	M 5-20	318-0230
4	500mm	M 11-27	318-0235
5	700mm	M 13-32	318-0240
6		M20-40	318-0246
7		M25-50	318-0247

Plain Die Stocks

简易板牙架

Hold both hex and round dies



Die Diameter	Order No.
5/8" for Hex Dies	318-2210
13/16 for Round Dies	318-2220
1 for Hex or Round Dies	318-2230
1-7/16" for Hex Dies	318-2240

Tap Wrenches 丝锥扳手

Extension Tap Wrenches

- Attractive finish.
- Made of steel.
- Precision tap extension.
- 4 jaw chuck.



Tap Capacity	Order No.
# 0-1/4" (1.5-6mm)	318-0140
# 12-1/2" (6-12mm)	318-0145

DIN377 Socket Extension Tap Wrenches

德标 377 镀铬套筒式丝锥扳手

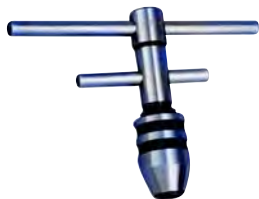


Size	Description	Order No.
2.1x60mm	for tap DIN352 M1-2.6	318-5021
2.4x70mm		318-5024
2.7x80mm	for tap DIN352 M3	318-5027
3.0x90mm	for tap DIN352 M3.5	318-5030
3.4x95mm	for tap DIN352 M4	318-5034
3.8x100mm		318-5038
4.3x105mm	for tap DIN351NO.10UNC	318-5043
4.9x110mm	for tap DIN352 M4.5-8	318-5049
5.5x115mm	for tap DIN352 M9-10	318-5055
6.2x120mm	for tap DIN352 M11	318-5062
7.0x125mm	for tap DIN352 M12	318-5070
8.0x125mm		318-5080
9.0x130mm	for tap DIN352 M13-16	318-5090
10.0x140mm		318-5100
11.0x150mm	for tap DIN352 M18	318-5110
12.0x155mm	for tap DIN352 M20	318-5120
13.0x160mm		318-5130
14.5x175mm	for tap DIN352 M22-24	318-5145
16.0x180mm	for tap DIN352 M27	318-5160
18.0x200mm	for tap DIN352 M30	318-5180
20.0x220mm	for tap DIN352 M32	318-5200
22.0x230mm	for tap DIN352 M36	318-5220

Tap Wrenches 丝锥扳手

Piloted Spindle Tap Wrenches

Used for threading a drilled hole manually at one machine location without moving the workpiece.



Tap Capacity	Order No.
#0-1/4" (1.5mm-6mm)	318-0180
#12-1/2" (6mm-12mm)	318-0182

Extra Long Tap Wrenches

- 13" long.
- Shiny ground finish.
- Jaws are hardened and tempered.
- Jaws are replaceable.



Tap Capacity	Plain Type Order No.	Ratchet Type Order No.
5/32-1/4" (4-6mm)	318-0131	318-0136
1/4-1/2" (6-12mm)	318-0132	318-0137
2 piece set	318-0130	318-0135

T-Handle Tap Wrenches

1/16 to 1/2"

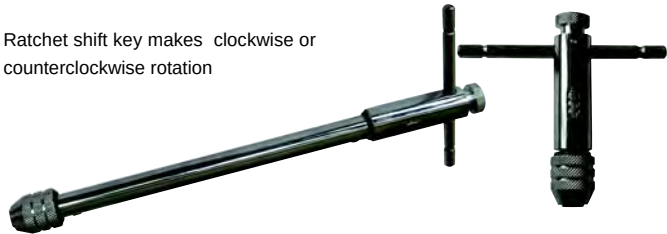
T-Handle tap wrenches are used for holding taps, reamers and other small tools to be turned by hand



Tap Capacity	Plain Order No.	Ratchet Order No.
(0-8#) 1/16-5/32" (1.5-4mm)	318-0010	318-0050
(0-14#) 5/32-1/4" (4-6mm)	318-0015	318-0055
(12-14#) 1/4-1/2" (6-12mm)	318-0020	318-0060
3 piece set	318-0030	318-0070

T-Handle Tap Wrenches European Style

Ratchet shift key makes clockwise or counterclockwise rotation



Description	Plain Order No.	Ratchet Order No.
Length 85mm, for tap DIN M3-10	318-5305	318-5315
Length 110mm, for tap DIN M5-12	318-5310	318-5320
length 117mm, for tap DIN M13-20	318-5307	
Length 250mm, for tap DIN M3-10	318-5306	318-5335
Length 300mm, for tap DIN M5-12	318-5311	318-5340

Tapping Fixture 丝锥定位器

Tap Holes up to 1/2" Diameter

- Eliminate tap Breakage.
- Perfect alignment for Tapping and Reaming.
- Including: 1 Tapping Guide, 1 Tap Wrench, and a Set of Jaws.



Order No. 318-0000

Tap Guide 丝锥导引手把

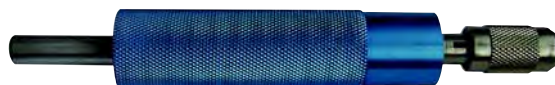
- 1/2" Dia. hardened shank
- 3/16" Dia. hardened tension Pin
- Adjustable tension spring
- Reversible tension pin for male and female hole centering
- With this tool you start every tap straight



Order No. 318-0090

Machine Taping Guide 丝锥导引手把

- Provide sensitive feel for hand tapping small holes on milling machines, drilling presses, and lathes.
- Starts every hole straight and prevents tap breakage
- Shank dia. 3/8" handle dia. 1"
- 0 to 12 tap capacity



Order No. 318-0095

Single End Mill Sets

Center Cutting, Ground

M2 HSS

单头中心切削套装立铣刀



Pieces	Flute	Description	Wooden Case		Plastic Case		End Mill Only	
			M2 Order No.	TiN-Coated Order No.	M2 Order No.	TiN-Coated Order No.	M2 Order No.	TiN-Coated Order No.
20	2&4	1 each of 3/16" to 3/4" by 16ths	320-1000	320-0000	329-1000	329-0000	320-1100	320-0100
10	2	1 each of 3/16" to 3/4" by 16ths	320-1001	320-0001	329-1001	329-0001	320-1101	320-0101
10	4	1 each of 3/16" to 3/4" by 16ths	320-1002	320-0002	329-1002	329-0002	320-1102	320-0102
10	2&4	1 each of 1/4", 3/8", 1/2", 5/8", 3/4"	320-1003	320-0003	329-1003	329-0003	320-1103	320-0103
3	2	1 each of 1/8, 1/4, 3/8"	320-1008	320-0008			320-1108	320-0108
3	4	1 each of 1/8, 1/4, 3/8"	320-1009	320-0009			320-1109	320-0109
20	4	2 each of 3/16" to 3/4" by 16ths	320-4001	320-3001	329-4001	329-3001	320-4101	320-3101
20	2&4	1 each of 3, 4, 5, 6, 8, 10, 12, 14, 18, 20mm	320-1004	320-0004	329-1004	329-0004	320-1104	320-0104
20	2&4	1 each of 3, 4, 5, 6, 8, 10, 12, 14, 16, 20mm	320-1005	320-0005	329-1005	329-0005	320-1105	320-0105
10	2	1 each of 3, 4, 5, 6, 8, 10, 12, 14, 18, 20mm	320-1006	320-0006	329-1006	329-0006	320-1106	320-0106
10	4	1 each of 3, 4, 5, 6, 8, 10, 12, 14, 18, 20mm	320-1007	320-0007	329-1007	329-0007	320-1107	320-0107
9	4	1 each of 4, 5, 6, 8, 10, 12, 14, 16, 18mm	320-1010					
20	2&4	1 each of 3/16-3/4" by 16ths		320-0010				
20	2&4	1 each of 3, 4, 5, 6, 8, 10, 12, 14, 18, 20mm		320-0014				

Double End Mill Sets

Center Cutting, Ground

M2 HSS

双头中心切削套装立铣刀



Pieces	Flute	Description	Wooden Case		Plastic Case		End Mill Only	
			M2 Order No.	TiN-Coated Order No.	M2 Order No.	TiN-Coated Order No.	M2 Order No.	TiN-Coated Order No.
20	2&4	1 each of 3/16" to 3/4" by 16ths	320-9001	320-8001	329-9001	329-8001	320-9101	320-8101
10	4	1 each of 3/16" to 3/4" by 16ths	320-9002	320-8002	329-9002	329-8002	320-9102	320-8102
10	2	1 each of 3/16" to 3/4" by 16ths	320-9003	320-8003	329-9003	329-8003	320-9103	320-8103
10	2&4	1 each of 1/4", 3/8", 1/2", 5/8", 3/4"	320-9004	320-8004	329-9004	329-8004	320-9104	320-8104

M42 8% Cobalt Single End Mill Sets

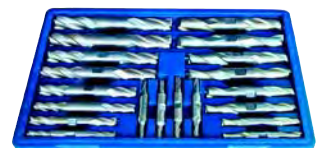
含钴高速钢单头套装立铣刀



Pieces	Description	Wooden Case Order No.	Plastic Case Order No.	End Mill Only Order No.
20	2&4 1 each of 3/16" to 3/4" by 16ths	723-0000	723-0010	723-0110
10	2 1 each of 3/16" to 3/4" by 16ths	723-0001	723-0011	723-0111
10	4 1 each of 3/16" to 3/4" by 16ths	723-0002	723-0012	723-0112
10	2&4 1 each of 1/4", 3/8", 1/2", 5/8", 3/4"	723-0003	723-0013	723-0113

M42 8% Cobalt Double End Mill Sets

含钴高速钢双头套装立铣刀



Pieces	Flute	Description	Wooden Case Order No.	Plastic Case Order No.	End Mill Only Order No.
20	2&4	1 each of 3/16" to 3/4" by 16ths	723-9000	723-9010	723-9020
10	2	1 each of 3/16" to 3/4" by 16ths	723-9001	723-9011	723-9021
10	4	1 each of 3/16" to 3/4" by 16ths	723-9002	723-9012	723-9022
10	2&4	1 each of 1/4", 3/8", 1/2", 5/8", 3/4"	723-9003	723-9013	723-9023

Single End Mill Sets

Center Cutting, Ground,
Wooden stand

单头中心切削套装立铣刀



M2

No. of Piece	No. of Flute	Shank Dia.	Descriptions	M2 Order No.	TiN-Coated Order No.
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	320-2006	320-5006
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	320-2016	320-5016
6	2	3/4"	1", 3/4, 7/8, 1-1/8, 1-1/4, 1-1/2"	320-2066	320-5066
6	4	3/4"	1", 3/4, 7/8, 1-1/8, 1-1/4, 1-1/2"	320-2076	320-5076
6	4	3/4"	3/4, 7/8, 1"	320-2086	320-5086
6	6	3/4"	1-1/8, 1-1/4, 1-1/2"		
12	2&4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	320-2026	320-5026
14	2	3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"	320-2014	320-5014
		1/2"	1/2, 9/16"		
		5/8"	5/8, 11/16, 3/4"		
		3/4"	13/16, 7/8, 1"		

M42

No. of Piece	No. of Flute	Shank Dia.	Descriptions	M42 Order No.	TiN Coated Order No.
4	4	3/8"	1/4, 5/16, 3/8"	723-2544	
		1/2"	1/2"		
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-2406	
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-2416	
8	2&4	3/8"	1/4, 5/16, 3/8 & 1/2"	723-2548	
		1/2"	1/2"		
12	2&4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-2512	
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	723-2526	723-2626
		1/2"	1/2"		
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	723-2546	723-2646
		1/2"	1/2"		

Ball Nose Single End Mill Sets

Center Cutting, Ground, Wooden Stand

单头中心切削套装球头立铣刀

Pieces	No. of Flute	Shank Dia.	Descriptions	M2 Order No.	TiN Coated Order No.
4	2		7/8, 1, 1-1/4, 1-1/2"	320-2004	320-5004
9	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	320-2009	320-5009
		1/2"	7/16, 1/2, 5/8"		
		3/4"	3/4"		
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	320-2007	320-5007
		1/2"	1/2"		
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	320-2046	
		1/2"	1/2"		

Miniature Double End Mill Sets

3/16" Shank, Wooden Stand

Pieces	No. of Flute	Descriptions	HSS Order No.	TiN Coated Order No.	Cobalt Order No.
5	2	1/16, 3/32, 1/8, 5/32, 3/16"	320-2305	320-5305	
5	4	1/16, 3/32, 1/8, 5/32, 3/16"	320-2405	320-5405	
9	4	Stub Length, 1each of 1/16 to 3/16" by 64ths	320-2409	320-5409	723-2409
9	4	Regular Length, 1each of 1/16-3/16" by 64ths	320-2419	320-5419	723-2419
11	2	Stub Length, 1each of 1/32-3/16" by 64ths	320-2411	320-5411	723-2411
11	2	Regular Length, 1each of 1/32-3/16" by 64ths	320-2421	320-5421	723-2421
10	2 & 4	1/16, 3/32, 1/8, 5/32, 3/16"	320-2610	320-5610	

Double End Mill Sets

Center Cutting, Ground,
Wooden stand

双头中心切削套装立铣刀



M2

No. of Piece	No. of Flute	Shank Dia.	Descriptions	M2 Order No.	TiN Coated Order No.
6	2	3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"	320-2106	320-5106
6	4	3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"	320-2116	320-5116
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	320-2226	320-5226
		1/2"	1/2"		
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8"	320-2246	320-5246
		1/2"	1/2"		
12	2&4	3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"	320-2036	320-5036
		3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"		
		1/2"	1/2"		
14	2	5/8"	9/16, 5/8"	320-2114	320-5114
		3/4"	11/16, 3/4"		
		7/8"	13/16, 7/8"		
		1"	1"		
14	4	3/8"	1/8, 5/32, 3/16, 1/4, 5/16, 3/8"	320-2214	320-5214
		1/2"	1/2"		
		5/8"	9/16, 5/8"		
		3/4"	11/16, 3/4"		
		7/8"	13/16, 7/8"		
		1"	1"		

M42

No. of Piece	No. of Flute	Shank Dia.	Descriptions	Center Cutting Order No.	Order No.
6	2	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-2226	723-2426
		1/2"	1/2"		
6	4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-2246	723-2446
		1/2"	1/2"		
12	2&4	3/8"	1/8, 3/16, 1/4, 5/16, 3/8, 1/2"	723-4456	723-2256
		1/2"	1/2"		



3/16" Shank, Wooden Stand

3/16" Shank, Wooden Stand

Pieces	No. of Flute	Descriptions	HSS Order No.	TiN Coated Order No.	Cobalt Order No.
5	2	1/16, 3/32, 1/8, 5/32, 3/16"	320-2305	320-5305	
5	4	1/16, 3/32, 1/8, 5/32, 3/16"	320-2405	320-5405	
9	4	Stub Length, 1each of 1/16 to 3/16" by 64ths	320-2409	320-5409	723-2409
9	4	Regular Length, 1each of 1/16-3/16" by 64ths	320-2419	320-5419	723-2419
11	2	Stub Length, 1each of 1/32-3/16" by 64ths	320-2411	320-5411	723-2411
11	2	Regular Length, 1each of 1/32-3/16" by 64ths	320-2421	320-5421	723-2421
10	2 & 4	1/16, 3/32, 1/8, 5/32, 3/16"	320-2610	320-5610	



3/16" Shank End Mills

High Speed Steel

3/16" 柄双头立铣刀

Used for small diameter milling, slotting, engraving, pocketing and similar applications.

2 Flute Double End Mills



Regular Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/32"	3/32"	2-1/4"	720-1630	721-1630	722-1630
3/64	9/64	2-1/4	720-1632	721-1632	722-1632
1/16	3/16	2-1/4	720-1634	721-1634	722-1634
5/64	15/64	2-1/4	720-1636	721-1636	722-1636
3/32	9/32	2-1/4	720-1638	721-1638	722-1638
7/64	21/64	2-1/4	720-1640	721-1640	722-1640
1/8	3/8	2-1/4	720-1642	721-1642	722-1642
9/64	13/32	2-1/4	720-1644	721-1644	722-1644
5/32	7/16	2-1/4	720-1646	721-1646	722-1646
11/64	1/2	2-1/4	720-1648	721-1648	722-1648
3/16	1/2	2-1/4	720-1650	721-1650	722-1650

2 Flute Ball Nose Double End Mills



Regular Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/32"	3/32"	2-1/4"	720-1730	721-1730	722-1730
3/64	9/64	2-1/4	720-1732	721-1732	722-1732
1/16	3/16	2-1/4	720-1734	721-1734	722-1734
5/64	15/64	2-1/4	720-1736	721-1736	722-1736
3/32	9/32	2-1/4	720-1738	721-1738	722-1738
7/64	21/64	2-1/4	720-1740	721-1740	722-1740
1/8	3/8	2-1/4	720-1742	721-1742	722-1742
9/64	27/64	2-1/4	720-1744	721-1744	722-1744
5/32	7/16	2-1/4	720-1746	721-1746	722-1746
11/64	1/2	2-1/4	720-1748	721-1748	722-1748
3/16	1/2	2-1/4	720-1750	721-1750	722-1750

4 Flute Center Cutting Double End Mills



Regular Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	3/16"	2-1/4"	720-4318	721-4318	722-4318
5/64	15/64	2-1/4	720-4320	721-4320	722-4320
3/32	9/32	2-1/4	720-4322	721-4322	722-4322
7/64	21/64	2-1/4	720-4324	721-4324	722-4324
1/8	3/8	2-1/4	720-4326	721-4326	722-4326
9/64	13/32	2-1/4	720-4328	721-4328	722-4328
5/32	7/16	2-1/4	720-4330	721-4330	722-4330
11/64	1/2	2-1/4	720-4332	721-4332	722-4332
3/16	1/2	2-1/4	720-4334	721-4334	722-4334

Stub Length

Size	Flute Length	Overall Length	TiN-Coated Order No.	M2Al Order No.	M2 Order No.
1/32"	3/64"	2"	722-1600	721-1600	720-1600
3/64	1/16	2	722-1602	721-1602	720-1602
1/16	3/32	2	722-1604	721-1604	720-1604
5/64	1/8	2	722-1606	721-1606	720-1606
3/32	9/64	2	722-1608	721-1608	720-1608
7/64	5/32	2	722-1610	721-1610	720-1610
1/8	3/16	2	722-1612	721-1612	720-1612
9/64	7/32	2	722-1614	721-1614	720-1614
5/32	15/64	2	722-1616	721-1616	720-1616
11/64	1/4	2	722-1618	721-1618	720-1618
3/16	9/32	2	722-1620	721-1620	720-1620

Long Length

Size	Length Below Shank	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	3/8"	7/32"	2-1/2"	720-1652	721-1652	722-1652
5/64	3/8	1/4	2-1/2	720-1654	721-1654	722-1654
3/32	1/2	9/32	2-5/8	720-1656	721-1656	722-1656
7/64	1/2	9/32	2-5/8	720-1658	721-1658	722-1658
1/8	3/4	3/4	3-1/8	720-1660	721-1660	722-1660
9/64	3/4	3/4	3-1/8	720-1662	721-1662	722-1662
5/32	7/8	7/8	3-1/4	720-1664	721-1664	722-1664
11/64	7/8	7/8	3-1/4	720-1666	721-1666	722-1666
3/16	1	1	3-3/8	720-1668	721-1668	722-1668

Stub Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/32"	3/64"	2"	720-1700	721-1700	722-1700
3/64	1/16	2	720-1702	721-1702	722-1702
1/16	3/32	2	720-1704	721-1704	722-1704
5/64	1/8	2	720-1706	721-1706	722-1706
3/32	9/64	2	720-1708	721-1708	722-1708
7/64	5/32	2	720-1710	721-1710	722-1710
1/8	3/16	2	720-1712	721-1712	722-1712
9/64	7/32	2	720-1714	721-1714	722-1714
5/32	15/64	2	720-1716	721-1716	722-1716
11/64	1/4	2	720-1718	721-1718	722-1718
3/16	9/32	2	720-1720	721-1720	722-1720

Long Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	7/32"	2-1/2"	720-1752	721-1752	722-1752
5/64	1/4	2-1/2	720-1754	721-1754	722-1754
3/32	9/32	2-5/8	720-1756	721-1756	722-1756
7/64	9/32	2-5/8	720-1758	721-1758	722-1758
1/8	3/4	3-1/8	720-1760	721-1760	722-1760
9/64	3/4	3-1/8	720-1762	721-1762	722-1762
5/32	7/8	3-1/4	720-1764	721-1764	722-1764
11/64	7/8	3-1/4	720-1766	721-1766	722-1766
3/16	1	3-3/8	720-1768	721-1768	722-1768

Stub Length

Size	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	3/32"	2"	720-4300	721-4300	722-4300
5/64	5/32	2	720-4302	721-4302	722-4302
3/32	9/64	2	720-4303	721-4303	722-4303
3/32	5/32	2	720-4304	721-4304	722-4304
7/64	5/32	2	720-4306	721-4306	722-4306
1/8	3/16	2	720-4308	721-4308	722-4308
9/64	7/32	2	720-4310	721-4310	722-4310
5/32	15/64	2	720-4311	721-4311	722-4311
5/32	1/4	2	720-4312	721-4312	722-4312
11/64	9/32	2	720-4314	721-4314	722-4314
3/16	9/32	2	720-4316	721-4316	722-4316

Long Length

Size	Length Below Shank	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	3/8"	7/32"	2-1/2"	720-4336	721-4336	722-4336
5/64	3/8	1/4	2-1/2	720-4338	721-4338	722-4338
3/32	1/2	9/32	2-5/8	720-4340	721-4340	722-4340
7/64	1/2	9/32	2-5/8	720-4342	721-4342	722-4342
1/8	3/4	3/4	3-1/8	720-4344	721-4344	722-4344
9/64	3/4	3/4	3-1/8	720-4346	721-4346	722-4346
5/32	7/8	7/8	3-1/4	720-4348	721-4348	722-4348
11/64	7/8	7/8	3-1/4	720-4350	721-4350	722-4350
3/16	1	1	3-3/8	720-4352	721-4352	722-4352

3/16" Shank Single Miniature End Mills 3/16" 柄单头立铣刀

High Speed Steel

Used for small diameter milling, slotting, engraving, pocketing and similar applications.

2 Flute Single End Mill

Dia.	Flute Length	Overall Length	Order No.
11/32"	3/32"	1-11/16"	720-1902
3/64	5/32	1-11/16	720-1903
1/16	7/32	1-11/16	720-1904
5/64	1/4	1-1/8	720-1905
3/32	5/16	1-1/8	720-1906
7/64	11/32	1-5/16	720-1907

Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	1-5/16"	720-1908
9/64	13/32	1-7/16	720-1909
5/32	7/16	1-7/16	720-1910
11/64	15/32	1-11/16	720-1911
3/16	1/2	1-11/16	720-1912

4 Flute Single End Mill



Dia.	Flute Length	Overall Length	Order No.
5/64"	1/4"	1-11/16"	720-2900
3/32	5/16	1-11/16	720-2902
7/64	11/32	1-11/16	720-2904
1/8	3/8	1-11/16	720-2906
9/64	13/32	1-11/16	720-2908
5/32	7/16	1-11/16	720-2910
11/64	15/32	1-11/16	720-2912
3/16	1/2	1-11/16	720-2914

M42 8% Cobalt 3/16" Shank End Mills M42, 3/16" 柄双头立铣刀

use for small diameter milling, slotting, engraving, pocketing and similar applications.

2 Flute Double End Mills



Regular Length

Size	Flute Length	Overall Length	Order No.
1/32"	3/32"	2-1/4"	723-1630
3/64	9/64	2-1/4	723-1632
1/16	3/16	2-1/4	723-1634
5/64	15/64	2-1/4	723-1636
3/32	9/32	2-1/4	723-1638
7/64	21/64	2-1/4	723-1640
1/8	3/8	2-1/4	723-1642
9/64	13/32	2-1/4	723-1644
5/32	7/16	2-1/4	723-1646
11/64	1/2	2-1/4	723-1648
3/16	1/2	2-1/4	723-1650

Long Length

Size	Length Below Shank	Flute Length	Overall Length	Order No.
1/16"	3/8"	7/32"	2-1/2"	723-1652
5/64	3/8	1/4	2-1/2	723-1654
3/32	1/2	9/32	2-5/8	723-1656
7/64	1/2	9/32	2-5/8	723-1658
1/8	3/4	3/4	3-1/8	723-1660
9/64	3/4	3/4	3-1/8	723-1662
5/32	7/8	7/8	3-1/4	723-1664
11/64	7/8	7/8	3-1/4	723-1666
3/16	1	1	3-3/8	723-1668

Stub Length

Size	Flute Length	Overall Length	Order No.
1/32"	3/64"	2"	723-1600
3/64	1/16	2	723-1602
1/16	3/32	2	723-1604
5/64	1/8	2	723-1606
3/32	9/64	2	723-1608
7/64	5/32	2	723-1610
1/8	3/16	2	723-1612
9/64	7/32	2	723-1614
5/32	15/64	2	723-1616
11/64	1/4	2	723-1618
3/16	9/32	2	723-1620

2 Flute Ball Nose Double End Mills



Regular Length

Size	Flute Length	Overall Length	Order No.
1/32"	3/32"	2-1/4"	723-1730
3/64	9/64	2-1/4	723-1732
1/16	3/16	2-1/4	723-1734
5/64	15/64	2-1/4	723-1736
3/32	9/32	2-1/4	723-1738
7/64	21/64	2-1/4	723-1740
1/8	3/8	2-1/4	723-1742
9/64	27/64	2-1/4	723-1744
5/32	7/16	2-1/4	723-1746
11/64	1/2	2-1/4	723-1748
3/16	1/2	2-1/4	723-1750

Long Length

Size	Flute Length	Overall Length	Order No.
1/16"	7/32"	2-1/2"	723-1752
5/64	1/4	2-1/2	723-1754
3/32	9/32	2-5/8	723-1756
7/64	9/32	2-5/8	723-1758
1/8	3/4	3-1/8	723-1760
9/64	3/4	3-1/8	723-1762
5/32	7/8	3-1/4	723-1764
11/64	7/8	3-1/4	723-1766
3/16	1	3-3/8	723-1768

Stub Length

Size	Flute Length	Overall Length	Order No.
1/32"	3/64"	2"	723-1700
3/64	1/16	2	723-1702
1/16	3/32	2	723-1704
5/64	1/8	2	723-1706
3/32	9/64	2	723-1708
7/64	5/32	2	723-1710
1/8	3/16	2	723-1712
9/64	7/32	2	723-1714
5/32	15/64	2	723-1716
11/64	1/4	2	723-1718
3/16	9/32	2	723-1720

4 Flute Center Cutting Double End Mills



Regular Length

Size	Flute Length	Overall Length	Order No.
1/16"	3/16"	2-1/4"	723-4318
5/64	15/64	2-1/4	723-4320
3/32	9/32	2-1/4	723-4322
7/64	21/64	2-1/4	723-4324
1/8	3/8	2-1/4	723-4326
9/64	13/32	2-1/4	723-4328
5/32	7/16	2-1/4	723-4330
11/64	1/2	2-1/4	723-4332
3/16	1/2	2-1/4	723-4334

Long Length

Size	Length Below Shank	Flute Length	Overall Length	Order No.
1/16"	3/8"	7/32"	2-1/2"	723-4336
5/64	3/8	1/4	2-1/2	723-4338
3/32	1/2	9/32	2-5/8	723-4340
7/64	1/2	9/32	2-5/8	723-4342
1/8	3/4	3/4	3-1/8	723-4344
9/64	3/4	3/4	3-1/8	723-4346
5/32	7/8	7/8	3-1/4	723-4348
11/64	7/8	7/8	3-1/4	723-4350
3/16	1	1	3-3/8	723-4352

Stub Length

Size	Flute Length	Overall Length	Order No.
1/16"	3/32"	2"	723-4300
3/64	1/16	2	723-4301
5/64	5/32	2	723-4302
3/32	9/64	2	723-4303
3/32	5/32	2	723-4304
7/64	5/32	2	723-4306
1/8	3/16	2	723-4308
9/64	7/32	2	723-4310
5/32	15/64	2	723-4311
5/32	1/4	2	723-4312
11/64	9/32	2	723-4314
3/16	9/32	2	723-4316

2 Flute Single End Mills

2 齿单头立铣刀

High Speed Steel

- Use for milling slots, pockets and plunge cuts.
- 2 Flutes allows maximum space for chip ejection.
- Suitable for use in a wide range of ferrous and non-ferrous materials.
- TiN coating improves tool life and allows elevated speeds and feeds.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8"	3/8"	3/8"	2-5/16"	720-1001	721-1001	722-1001	7/8	7/8	1-1/2	3-3/4	720-1087	721-1087	722-1087
9/64	3/8	3/8	2-5/16	720-1003	721-1003	722-1003	29/32	1/2	1-1/2	3-1/2	720-1089	721-1089	722-1089
5/32	3/8	7/16	2-5/16	720-1005	721-1005	722-1005	15/16	1/2	1-1/2	3-5/8	720-1090	721-1090	722-1090
11/64	3/8	7/16	2-5/16	720-1007	721-1007	722-1007	15/16"	5/8"	1-1/2"	3-5/8"	720-1091	721-1091	722-1091
3/16	3/8	7/16	2-5/16	720-1009	721-1009	722-1009	15/16	3/4	1-1/2	3-3/4	720-1093	721-1093	722-1093
13/64	3/8	7/16	2-5/16	720-1011	721-1011	722-1011	15/16	7/8	1-1/2	3-3/4	720-1095	721-1095	722-1095
7/32	3/8	1/2	2-3/8	720-1013	721-1013	722-1013	31/32	1/2	1-1/2	3-1/2	720-1097	721-1097	722-1097
15/64	3/8	1/2	2-3/8	720-1015	721-1015	722-1015	1	1/2	1-1/2	3-1/2	720-1099	721-1099	722-1099
1/4	3/8	3/8	2-1/4	720-1016	721-1016	722-1016	1	1/2	1-1/2	3-5/8	720-1102	721-1102	722-1102
1/4	3/8	1/2	2-5/16	720-1017	721-1017	722-1017	1	5/8	1-1/2	3-5/8	720-1101	721-1101	722-1101
17/64	3/8	9/16	2-3/8	720-1019	721-1019	722-1019	1	3/4	1-1/2	3-3/4	720-1103	721-1103	722-1103
9/32	3/8	1/2	2-5/16	720-1020	721-1020	722-1020	1	7/8	1-1/2	3-3/4	720-1105	721-1105	722-1105
9/32	3/8	9/16	2-3/8	720-1021	721-1021	722-1021	1	1	1-5/8	4-1/8	720-1107	721-1107	722-1107
19/64	3/8	9/16	2-3/8	720-1023	721-1023	722-1023	1-1/16	3/4	1-5/8	3-3/4	720-1109	721-1109	722-1109
5/16	3/8	9/16	2-5/16	720-1025	721-1025	722-1025	1-1/16	5/8	1-5/8	3-7/8	720-1100	721-1100	722-1100
21/64	3/8	9/16	2-3/8	720-1027	721-1027	722-1027	1-1/16	3/4	1-5/8	3-7/8	720-1108	721-1108	722-1108
11/32	3/8	9/16	2-5/16	720-1028	721-1028	722-1028	1-1/16	7/8	1-5/8	3-7/8	720-1110	721-1110	722-1110
11/32	3/8	9/16	2-3/8	720-1029	721-1029	722-1029	1-1/8	3/4	1-1/2	3-3/4	720-1112	721-1112	722-1112
23/64	3/8	9/16	2-3/8	720-1031	721-1031	722-1031	1-1/8	3/4	1-5/8	3-7/8	720-1111	721-1111	722-1111
3/8	3/8	9/16	2-5/16	720-1033	721-1033	722-1033	1-1/8	7/8	1-5/8	3-7/8	720-1113	721-1113	722-1113
13/32	3/8	13/16	2-1/2	720-1035	721-1035	722-1035	1-1/8	1	1-5/8	4-1/8	720-1115	721-1115	722-1115
7/16	3/8	13/16	2-1/2	720-1037	721-1037	722-1037	1-3/16	3/4	1-5/8	3-7/8	720-1117	721-1117	722-1117
15/32	3/8	13/16	2-1/2	720-1036	721-1036	722-1036	1-3/16	1	1-5/8	4-1/8	720-1118	721-1118	722-1118
15/32	1/2	7/8	2-1/2	720-1038	721-1038	722-1038	1-1/4	3/4	1-5/8	3-7/8	720-1119	721-1119	722-1119
15/32	1/2	1	3	720-1039	721-1039	722-1039	1-1/4	7/8	1-5/8	3-7/8	720-1121	721-1121	722-1121
1/2	3/8	13/16	2-1/2	720-1041	721-1041	722-1041	1-1/4	1	1-5/8	4-1/8	720-1123	721-1123	722-1123
1/2	3/8	1	3	720-1042	721-1042	722-1042	1-1/4	1-1/4	1-5/8	4-1/8	720-1125	721-1125	722-1125
1/2	1/2	1	3	720-1043	721-1043	722-1043	1-5/16	3/4	1-5/8	3-7/8	720-1127	721-1127	722-1127
1/2	1/2	1-1/8	3-1/8	720-1044	721-1044	722-1044	1-3/8	3/4	1-5/8	3-7/8	720-1129	721-1129	722-1129
17/32	1/2	1-1/8	3-1/8	720-1045	721-1045	722-1045	1-3/8	3/4	1-5/8	4	720-1130	721-1130	722-1130
9/16	1/2	1-1/8	3-1/8	720-1047	721-1047	722-1047	1-3/8	1	1-5/8	4-1/8	720-1131	721-1131	722-1131
19/32	1/2	1-1/8	3-1/8	720-1049	721-1049	722-1049	1-3/8	1-1/4	1-5/8	4-1/8	720-1132		722-1132
5/8	1/2	1-1/8	3-1/8	720-1051	721-1051	722-1051	1-7/16	3/4	1-5/8	3-7/8	720-1133	721-1133	722-1133
5/8	5/8	1-5/16	3-7/16	720-1053	721-1053	722-1053	1-1/2	3/4	1-5/8	3-7/8	720-1135	721-1135	722-1135
21/32	1/2	1-5/16	3-5/16	720-1055	721-1055	722-1055	1-1/2	3/4	1-5/8	4-1/8	720-1136	721-1136	722-1136
11/16	1/2	1-5/16	3-5/16	720-1057	721-1057	722-1057	1-1/2	1	1-5/8	4-1/8	720-1137	721-1137	722-1137
11/16	5/8	1-5/16	3-7/16	720-1059	721-1059	722-1059	1-1/2	1-1/4	1-5/8	4-1/8	720-1139	721-1139	722-1139
23/32	1/2	1-5/16	3-5/16	720-1061	721-1061	722-1061	1-5/8	3/4	1-5/8	3-7/8	720-1141	721-1141	722-1141
3/4	1/2	1-5/16	3-5/16	720-1063	721-1063	722-1063	1-5/8	3/4	1-5/8	4-1/8	720-1142	721-1142	722-1142
3/4	5/8	1-5/16	3-7/16	720-1065	721-1065	722-1065	1-5/8	1-1/4	1-5/8	4-1/8	720-1143	721-1143	722-1143
3/4	3/4	1-5/16	3-7/16	720-1066	721-1066	722-1066	1-3/4	3/4	1-5/8	3-7/8	720-1145	721-1145	722-1145
3/4	3/4	1-5/16	3-9/16	720-1067	721-1067	722-1067	1-3/4	3/4	1-5/8	4-1/8	720-1146	721-1146	722-1146
3/4	3/4	1-3/4	4	720-1069	721-1069	722-1069	1-3/4	1-1/4	1-5/8	4-1/8	720-1147	721-1147	722-1147
25/32	1/2	1-1/2	3-1/2	720-1071	721-1071	722-1071	1-7/8	3/4	1-5/8	3-7/8	720-1149	721-1149	722-1149
13/16	1/2	1-1/2	3-5/16	720-1077	721-1077	722-1077	1-7/8	3/4	1-5/8	4-1/8	720-1150	721-1150	722-1150
13/16	1/2	1-1/2	3-5/8	720-1072	721-1072	722-1072	1-7/8	1-1/4	1-5/8	4-1/8	720-1151	721-1151	722-1151
13/16	5/8	1-1/2	3-5/8	720-1073	721-1073	722-1073	2	3/4	1-5/8	3-7/8	720-1153	721-1153	722-1153
13/16	3/4	1-1/2	3-3/4	720-1075	721-1075	722-1075	2	3/4	1-5/8	4-1/8	720-1154	721-1154	722-1154
27/32	1/2	1-1/2	3-1/2	720-1079	721-1079	722-1079	2	1-1/4	1-5/8	4-1/8	720-1155	721-1155	722-1155
7/8	1/2	1-1/2	3-1/2	720-1081	721-1081	722-1081	2	1-1/4	2-1/2	5	720-1156	721-1156	722-1156
7/8	1/2	1-1/2	3-5/8	720-1082	721-1082	722-1082	2-1/4	1-1/4	1-5/8	4-1/8	720-1161	721-1161	722-1161
7/8	5/8	1-1/2	3-5/8	720-1083	721-1083	722-1083	2-1/2	1-1/4	2	4-1/2	720-1166		
7/8	3/4	1-1/2	3-3/4	720-1085	721-1085	722-1085							

2 Flute Single End Mills 2 齿单头长柄立铣刀

High Speed Steel, Extend Shank

- Use for milling slots, pockets and plunge cuts.
- 2 Flutes allows maximum space for chip ejection.
- Suitable for use in a wide range of ferrous and non-ferrous materials.
- TiN coating improves tool life and allows elevated speeds and feeds.



Size	Shank Dia.	Length Below shank	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8"	3/8"	13/16"	3/8"	2-3/8"	720-1171	721-1171	722-1171
3/16	3/8	1-1/8	1/2	2-11/16	720-1173	721-1173	722-1173
3/16	3/8	1-1/2	5/8	3-1/16	720-1172	721-1172	722-1172
1/4	3/8	1	5/8	3-1/16	720-1174	721-1174	722-1174
1/4	3/8	1-1/2	5/8	3-1/16	720-1175	721-1175	722-1175
5/16	3/8	1-3/4	3/4	3-5/16	720-1177	721-1177	722-1177
5/16	3/8	1-1/2	3/4	3-1/4	720-1178	721-1178	722-1178
3/8	3/8	1-3/4	3/4	3-5/16	720-1179	721-1179	722-1179
3/8	3/8	1-3/4	7/8	3-5/16	720-1180	721-1180	722-1180
1/2	1/2	2-1/4	1	4	720-1181	721-1181	722-1181
1/2	1/2	2-1/4	1-7/8	4	720-1182	721-1182	722-1182
5/8	1/2	2-3/4	1-3/8	4-5/8	720-1184	721-1184	722-1184
5/8	5/8	2-3/4	1-3/8	4-5/8	720-1183	721-1183	722-1183
5/8	5/8	2-3/4	2	4-5/8	720-1188	721-1188	722-1188
3/4	1/2	3-3/8	1-5/8	5-3/8	720-1186	721-1186	722-1186
3/4	3/4	3-3/8	1-5/8	5-3/8	720-1185	721-1185	722-1185
7/8	7/8	4	2	6	720-1187	721-1187	722-1187
1	1	5	2-1/2	7-1/4	720-1189	721-1189	722-1189
1-1/4	1-1/4	5	3	7-1/4	720-1191	721-1191	722-1191

Medium Length & Long Length

- Use for milling slots, pockets and plunge cuts.
- TiN coating facilitates chip flow and allows elevated feeds.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3/16"	3/8"	3/4"	2-5/8"	720-1201	721-1201	722-1201	1"	1"	2"	4-1/2"	720-1249	721-1249	722-1249
7/32	3/8	1-1/4	3-1/8	720-1203	721-1203	722-1203	1	1	2-1/4	4-3/4	720-1251	721-1251	722-1251
1/4	3/8	1	2-3/4	720-1204	721-1204	722-1204	1	1	2-1/2	5	720-1253	721-1253	722-1253
1/4	3/8	1	3-1/16	720-1205	721-1205	722-1205	1	1	3	5-1/2	720-1255	721-1255	722-1255
1/4	3/8	1-1/4	3-1/8	720-1207	721-1207	722-1207	1	1	3-1/2	6	720-1257	721-1257	722-1257
9/32	3/8	1-3/8	3-1/8	720-1209	721-1209	722-1209	1	1	4	6-1/2	720-1259	721-1259	722-1259
5/16	3/8	1-1/4	3	720-1210	721-1210	722-1210	1	1	4-5/8	7	720-1261	721-1261	722-1261
5/16	3/8	1-1/4	3-5/16	720-1211	721-1211	722-1211	1-1/8	1	2-1/4	4-3/4	720-1263	721-1263	722-1263
5/16	3/8	1-3/8	3-1/8	720-1213	721-1213	722-1213	1-1/8	1	3	4-3/4	720-1265	721-1265	722-1265
11/32	3/8	1-1/2	3-1/4	720-1215	721-1215	722-1215	1-1/8	1	3	5-1/2"	720-1266	721-1266	722-1266
3/8	3/8	1	2-3/4	720-1217	721-1217	722-1217	1-1/4	1	2-1/4	4-3/4	720-1267	721-1267	722-1267
3/8	3/8	1-1/2	3-1/4	720-1219	721-1219	722-1219	1-1/4	1-1/4	2-1/4	5-1/2	720-1269	721-1269	722-1269
7/16	1/2	1-3/4	3-3/4	720-1221	721-1221	722-1221	1-1/4	1	3	5-1/2	720-1271	721-1271	722-1271
1/2	1/2	1-1/2	3-1/2	720-1223	721-1223	722-1223	1-1/4	1-1/4	3	5-1/2	720-1273	721-1273	722-1273
1/2	1/2	2	4	720-1225	721-1225	722-1225	1-1/4	1-1/4	3-1/2	6	720-1274	721-1274	722-1274
1/2	1/2	3	5	720-1226	721-1226	722-1226	1-1/4	1-1/4	4-3/4	7-1/4	720-1275	721-1275	722-1275
5/8	5/8	1-5/8	3-3/4	720-1227	721-1227	722-1227	1-3/8	1	2-1/4	4-3/4	720-1277	721-1277	722-1277
5/8	5/8	2	4-1/8	720-1229	721-1229	722-1229	1-3/8	1	3	5-1/2	720-1279	721-1279	722-1279
5/8	5/8	2-3/8	4-1/2	720-1230	721-1230	722-1230	1-1/2	1-1/4	6	8-1/2	720-1280	721-1280	722-1280
5/8	5/8	2-1/2	4-5/8	720-1231	721-1231	722-1231	1-1/2	1-1/4	2-1/4	4-3/4	720-1281	721-1281	722-1281
5/8	5/8	3	5-1/8	720-1233	721-1233	722-1233	1-1/2	1-1/4	3	5-1/2	720-1283	721-1283	722-1283
5/8	5/8	4	6-1/8	720-1234	721-1234	722-1234	1-1/2	1-1/4	4	6-1/2	720-1284	721-1284	722-1284
3/4	3/4	1-3/4	4	720-1235	721-1235	722-1235	1-5/8	1-1/4	2-1/4	4-3/4	720-1285	721-1285	722-1285
3/4	3/4	2-1/4	4-1/2	720-1237	721-1237	722-1237	1-5/8	1-1/4	3	5-1/2	720-1287	721-1287	722-1287
3/4	3/4	2-1/2	4-3/4	720-1239	721-1239	722-1239	1-3/4	1-1/4	2-1/4	4-3/4	720-1289	721-1289	722-1289
3/4	3/4	3	5-1/4	720-1241	721-1241	722-1241	1-3/4	1-1/4	3	5-1/2	720-1291	721-1291	722-1291
3/4	3/4	3-1/2	5-3/4	720-1243	721-1243	722-1243	1-7/8	1-1/4	2-1/4	4-3/4	720-1293	721-1293	722-1293
3/4	3/4	4	6-1/4	720-1244	721-1244	722-1244	1-7/8	1-1/4	3	5-1/2	720-1295	721-1295	722-1295
7/8	7/8	2	4-1/4	720-1245	721-1245	722-1245	2	1-1/4	2-1/4	4-3/4	720-1297	721-1297	722-1297
7/8	7/8	2-1/2	4-3/4	720-1247	721-1247	722-1247	2	1-1/4	3	5-1/2	720-1299	721-1299	722-1299
7/8	7/8	3-1/2	5-3/4	720-1248	721-1248	722-1248	2	1-1/4	4	6-1/2	720-1300	721-1300	722-1300

2 Flute Single End Mills For Aluminum

2 齿单头铝用立铣刀

Regular Long & Extra long Flute Length

- Recommended for milling aluminum and other non-ferrous materials.
- The helix angle sheers the material cleanly and helps eliminate chatter.
- Tin coating adds lubricity to minimize chip packing in the flutes.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/4"	3/8"	5/8"	2-1/2"	720-1501	721-1501	722-1501
1/4	3/8	1-1/4	3-1/8	720-1503	721-1503	722-1503
1/4	3/8	1-3/4	3-1/2	720-1505	721-1505	722-1505
5/16	3/8	3/4	2-1/2	720-1507	721-1507	722-1507
5/16	3/8	1-3/8	3-1/8	720-1509	721-1509	722-1509
5/16	3/8	2	3-3/4	720-1511	721-1511	722-1511
3/8	3/8	3/4	2-1/2	720-1513	721-1513	722-1513
3/8	3/8	1-1/2	3-1/4	720-1515	721-1515	722-1515
3/8	3/8	2-1/2	4-1/4	720-1517	721-1517	722-1517
7/16	1/2	1	2-11/16	720-1518	721-1518	722-1518
7/16	3/8	1	2-11/16	720-1519	721-1519	722-1519
7/16	1/2	1-3/4	3-3/4	720-1521	721-1521	722-1521
7/16	1/2	2-3/4	4-3/4	720-1523	721-1523	722-1523
1/2	1/2	1	3-1/4	720-1525	721-1525	722-1525
1/2	1/2	1-1/4	3-1/4	720-1526	721-1526	722-1526
1/2	1/2	2	4	720-1527	721-1527	722-1527
1/2	1/2	3	5	720-1529	721-1529	722-1529
5/8	1/2	1-3/8	3-3/8	720-1530	721-1530	722-1530
5/8	5/8	1-5/8	3-3/4	720-1531	721-1531	722-1531
5/8	5/8	2-1/2	4-5/8	720-1533	721-1533	722-1533
5/8	5/8	4	6-1/8	720-1535	721-1535	722-1535
3/4	1/2	1-5/8	3-5/8	720-1536	721-1536	722-1536

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3/4	3/4	1-5/8	3-7/8"	720-1537	721-1537	722-1537
3/4	3/4	3	5-1/4	720-1539	721-1539	722-1539
3/4	3/4	4	6-1/4	720-1541	721-1541	722-1541
7/8	7/8	1-7/8	4-1/8	720-1543	721-1543	722-1543
7/8	7/8	3-1/2	5-3/4	720-1545	721-1545	722-1545
7/8	7/8	5	7-1/4	720-1547	721-1547	722-1547
1	3/4	1-7/8	4-1/8	720-1551	721-1551	722-1551
1	1	2	4-1/2	720-1553	721-1553	722-1553
1	1	4	6-1/2	720-1555	721-1555	722-1555
1	1	6	8-1/2	720-1557	721-1557	722-1557
1-1/4	1-1/4	2	4-1/2	720-1559	721-1559	722-1559
1-1/4	1-1/4	4	6-1/2	720-1561	721-1561	722-1561
1-1/4	1-1/4	6	8-1/2	720-1563	721-1563	722-1563
1-1/2	1-1/4	2	4-1/2	720-1565	721-1565	722-1565
1-1/2	1-1/4	4	6-1/2	720-1567	721-1567	722-1567
1-1/2	1-1/4	6	6-1/2	720-1568		
1-1/2	1-1/4	8	10-1/2	720-1569	721-1569	722-1569
1-3/4	1-1/4	2	4-1/2	720-1571	721-1571	722-1571
1-3/4	1-1/4	4	6-1/2	720-1573	721-1573	722-1573
2	1-1/4	2	4-1/2	720-1575	721-1575	722-1575
2	1-1/4	4	6-1/2	720-1577	721-1577	722-1577

2 Flute Keyway Single End Mills

单头2刃直齿立铣刀

High Speed Steel

Straight Flute

Available -0.001" -0.002" -0.003"
Under Nominal



Keyway W(In.)	Mill Dia.(In.)	Shank Dia.(In.)	LOC (In.)	OAL (In.)	Order No.
1/8	0.1220	3/8	3/8	2-5/16	720-0001
1/8	0.1230	3/8	3/8	2-5/16	720-0003
1/8	0.1240	3/8	3/8	2-5/16	720-0005
3/16	0.1845	3/8	3/8	2-5/16	720-0007
3/16	0.1855	3/8	3/8	2-5/16	720-0009
3/16	0.1865	3/8	3/8	2-5/16	720-0011
1/4	0.2470	3/8	1/2	2-5/16	720-0013
1/4	0.2480	3/8	1/2	2-5/16	720-0015
1/4	0.2490	3/8	1/2	2-5/16	720-0017
5/16	0.3095	3/8	9/16	2-5/16	720-0019
5/16	0.3105	3/8	9/16	2-5/16	720-0021
5/16	0.3115	3/8	9/16	2-5/16	720-0023
3/8	0.3720	3/8	9/16	2-5/16	720-0025
3/8	0.3730	3/8	9/16	2-5/16	720-0027
3/8	0.3740	3/8	9/16	2-5/16	720-0029
1/2	0.4970	1/2	1	3	720-0031
1/2	0.4980	1/2	1	3	720-0033
1/2	0.4990	1/2	1	3	720-0035

Keyway W(In.)	Mill Dia.(In.)	Shank Dia.(In.)	LOC (In.)	OAL (In.)	Order No.
5/8	0.6220	5/8	1-5/16	3-7/16	720-0037
5/8	0.6230	5/8	1-5/16	3-7/16	720-0039
5/8	0.6240	5/8	1-5/16	3-7/16	720-0041
3/4	0.7470	3/4	1-5/16	3-9/16	720-0043
3/4	0.7480	3/4	1-5/16	3-9/16	720-0045
3/4	0.7490	3/4	1-5/16	3-9/16	720-0047
7/8	0.8720	7/8	1-1/2	3-3/4	720-0049
7/8	0.8730	7/8	1-1/2	3-3/4	720-0051
7/8	0.8740	7/8	1-1/2	3-3/4	720-0053
1	0.9970	1	1-5/8	4-1/8	720-0055
1	0.9980	1	1-5/8	4-1/8	720-0057
1	0.9990	1	1-5/8	4-1/8	720-0059
1-1/4	1.2470	1-1/4	1-5/8	4-1/8	720-0061
1-1/4	1.2480	1-1/4	1-5/8	4-1/8	720-0063
1-1/4	1.2490	1-1/4	1-5/8	4-1/8	720-0065
1	1.4970	1-1/4	1-5/8	4-1/8	720-0067
1	1.4980	1-1/4	1-5/8	4-1/8	720-0069
1	1.4990	1-1/4	1-5/8	4-1/8	720-0071

M42 8% Cobalt 2 Flute Single End Mills

含钴2齿单头立铣刀

- Premium 8% cobalt is especially effective for machining high strength, heat-resistant, exotic and difficult-to-machine materials,



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	3/8"	2-5/16"	723-1001	15/16"	5/8"	1-1/2"	3-5/8"	723-1091
9/64	3/8	3/8	2-5/16	723-1003	15/16	3/4	1-1/2	3-5/8	723-1094
5/32	3/8	7/16	2-5/16	723-1005	15/16	3/4	1-1/2	3-3/4	723-1093
11/64	3/8	7/16	2-5/16	723-1007	15/16	7/8	1-1/2	3-3/4	723-1095
3/16	3/8	7/16	2-5/16	723-1009	31/32	1/2	1-1/2	3-1/2	723-1097
13/64	3/8	7/16	2-5/16	723-1011	1	1/2	1-1/2	3-1/2	723-1099
7/32	3/8	1/2	2-5/16	723-1012	1	5/8	1-1/2	3-5/8	723-1101
7/32	3/8	1/2	2-3/8	723-1013	1	1/2	1-1/2	3-5/8	723-1102
15/64	3/8	1/2	2-3/8	723-1015	1	3/4	1-1/2	3-3/4	723-1103
1/4	3/8	3/8	2-1/4	723-1016	1	7/8	1-1/2	3-3/4	723-1105
1/4	3/8	1/2	2-5/16	723-1017	1	5/8	1-5/8	4-1/8	723-1104
17/64	3/8	9/16	2-3/8	723-1019	1	1	1-5/8	4-1/8	723-1107
9/32	3/8	1/2	2-5/16	723-1020	1-1/16	3/4	1-5/8	3-3/4	723-1109
9/32	3/8	9/16	2-3/8	723-1021	1-1/16	5/8	1-5/8	3-7/8	723-1100
19/64	3/8	9/16	2-3/8	723-1023	1-1/16	3/4	1-5/8	3-7/8	723-1108
5/16	3/8	9/16	2-5/16	723-1025	1-1/16	7/8	1-5/8	3-7/8	723-1110
21/64	3/8	9/16	2-3/8	723-1027	1-1/8	3/4	1-1/2	3-3/4	723-1112
11/32	3/8	9/16	2-5/16	723-1028	1-1/8	3/4	1-5/8	3-7/8	723-1111
11/32	3/8	9/16	2-3/8	723-1029	1-1/8	7/8	1-5/8	3-7/8	723-1113
23/64	3/8	9/16	2-3/8	723-1031	1-1/8	1	1-5/8	3-7/8	723-1114
3/8	3/8	9/16	2-5/16	723-1033	1-1/8	1	1-5/8	4-1/8	723-1115
13/32	3/8	13/16	2-1/2	723-1035	1-3/16	3/4	1-5/8	3-7/8	723-1117
7/16	3/8	13/16	2-1/2	723-1037	1-3/16	1	1-5/8	4-1/8	723-1098
15/32	3/8	13/16	2-1/2	723-1036	1-3/16	1	1-5/8	4-1/8	723-1118
15/32	1/2	7/8	2-1/2	723-1038	1-1/4	3/4	1-5/8	3-7/8	723-1119
15/32	1/2	1	3	723-1039	1-1/4	7/8	1-5/8	3-7/8	723-1121
1/2	3/8	13/16	2-1/2	723-1041	1-1/4	1	1-5/8	4-1/8	723-1123
1/2	3/8	1	3	723-1042	1-1/4	1-1/4	1-5/8	4-1/8	723-1125
1/2	1/2	1	3	723-1043	1-3/8	1-1/4	1-5/8	4-1/8	723-1126
1/2	1/2	1-1/8	3-1/8	723-1044	1-5/16	3/4	1-5/8	3-7/8	723-1127
17/32	1/2	1-1/8	3-1/8	723-1045	1-3/8	3/4	1-5/8	3-7/8	723-1129
9/16	1/2	1-1/8	3-1/8	723-1047	1-3/8	1	1-5/8	3-7/8	723-1132
19/32	1/2	1-1/8	3-1/8	723-1049	1-3/8	3/4	1-5/8	4	723-1130
5/8	1/2	1-1/8	3-1/8	723-1051	1-3/8	3/4	1-5/8	4-1/8	723-1128
5/8	5/8	1-5/16	3-7/16	723-1053	1-3/8	1	1-5/8	4-1/8	723-1131
5/8	5/8	2	4-1/8	723-1054	1-7/16	3/4	1-5/8	3-7/8	723-1133
21/32	1/2	1-5/16	3-5/16	723-1055	1-1/2	3/4	1-5/8	3-7/8	723-1135
11/16	1/2	1-5/16	3-5/16	723-1057	1-1/2	3/4	1-5/8	4	723-1134
11/16	5/8	1-5/16	3-7/16	723-1059	1-1/2	3/4	1-5/8	4-1/8	723-1136
23/32	1/2	1-5/16	3-5/16	723-1061	1-1/2	1	1-5/8	4-1/8	723-1137
3/4	1/2	1-5/16	3-5/16	723-1063	1-1/2	1-1/4	1-5/8	4-1/8	723-1139
3/4	5/8	1-5/16	3-7/16	723-1065	1-5/8	3/4	1-5/8	3-7/8	723-1141
3/4	3/4	1-5/16	3-7/16	723-1066	1-5/8	3/4	1-5/8	4-1/8	723-1142
3/4	3/4	1-5/16	3-9/16	723-1067	1-5/8	1-1/4	1-5/8	4-1/8	723-1143
3/4	3/4	1-3/4	4	723-1069	1-3/4	3/4	1-5/8	3-7/8	723-1145
3/4	3/4	2-1/4	4-1/2	723-1070	1-3/4	3/4	1-5/8	4-1/8	723-1146
25/32	1/2	1-1/2	3-1/2	723-1071	1-3/4	1-1/4	1-5/8	4-1/8	723-1147
13/16	1/2	1-1/2	3-5/16	723-1077	1-7/8	3/4	1-5/8	3-7/8	723-1149
13/16	1/2	1-1/2	3-5/8	723-1072	1-7/8	3/4	1-5/8	4-1/8	723-1150
13/16	5/8	1-1/2	3-5/8	723-1073	1-7/8	1-1/4	1-5/8	4-1/8	723-1151
13/16	3/4	1-1/2	3-3/4	723-1075	2	3/4	1-5/8	3-7/8	723-1153
27/32	1/2	1-1/2	3-1/2	723-1079	2	3/4	1-5/8	4-1/8	723-1154
7/8	1/2	1-1/2	3-1/2	723-1081	2	1-1/4	1-5/8	4-1/8	723-1155
7/8	1/2	1-1/2	3-5/8	723-1082	2	1-1/4	2-1/2	5	723-1156
7/8	5/8	1-1/2	3-5/8	723-1083	2	2	2	5-3/4	723-1157
7/8	3/4	1-1/2	3-5/8	723-1086	2	2	3	6-3/4	723-1159
7/8	7/8	1-1/2	3-5/8	723-1088	2	2	4	7-3/4	723-1160
7/8	5/8	1-1/2	3-3/4	723-1084	2-1/4	1-1/4	1-5/8	4-1/8	723-1161
7/8	3/4	1-1/2	3-3/4	723-1085	2-1/2	2	4	7-5/8	723-1162
7/8	7/8	1-1/2	3-3/4	723-1087	2-1/2	2	4	7-3/4	723-1163
29/32	1/2	1-1/2	3-1/2	723-1089	2-1/2	2	6	9-5/8	723-1164
15/16	1/2	1-1/2	3-5/8	723-1090	2-1/2	2	6	9-3/4	723-1165
					3	2-1/2	4	7-3/4	723-1167

M42 8% Cobalt 2 Flute Single End Mills 含钴2齿单头立铣刀

- Use for milling slots, pockets and plunge cuts.

F.Y.I

M-42 cobalt end mills are more economical than high speed steel end mills. They stay sharper longer to allow more cuts between grinds and reduce downtime to give you lower cost per machined workpiece!



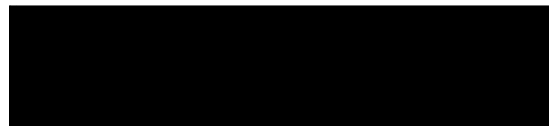
Medium Length & Long Length



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
3/16"	3/8"	3/4"	2-5/8"	723-1201	1"	1"	2"	4-1/2"	723-1249
7/32	3/8	1-1/4	3-1/8	723-1203	1	1	2-1/4	4-3/4	723-1251
1/4	3/8	1	2-3/4	723-1204	1	1	2-1/2	5	723-1253
1/4	3/8	1	3-1/16	723-1205	1	1	3	5-1/2	723-1255
1/4	3/8	1-1/4	3-1/8	723-1207	1	1	3-1/2	6	723-1257
9/32	3/8	1-3/8	3-1/8	723-1209	1	1	4	6-1/2	723-1259
5/16	3/8	1-1/4	3	723-1210	1	1	4-5/8	7	723-1261
5/16	3/8	1-1/4	3-5/16	723-1211	1-1/8	1	2-1/4	4-3/4	723-1263
5/16	3/8	1-3/8	3-1/8	723-1213	1-1/8	1	3	4-3/4	723-1265
11/32	3/8	1-1/2	3-1/4	723-1215	1-1/8	1	3	5-1/2"	723-1266
3/8	3/8	1	2-3/4	723-1217	1-1/4	1	2-1/4	4-3/4	723-1267
3/8	3/8	1-1/2	3-1/4	723-1219	1-1/4	1-1/4	2-1/4	5-1/2	723-1269
7/16	1/2	1-3/4	3-3/4	723-1221	1-1/4	1	3	5-1/2	723-1271
1/2	1/2	1-1/2	3-1/2	723-1223	1-1/4	1-1/4	3	5-1/2	723-1273
1/2	1/2	2	4	723-1225	1-1/4	1-1/4	3-1/2	6	723-1274
1/2	1/2	3	5	723-1226	1-1/4	1-1/4	4-3/4	7-1/4	723-1275
5/8	5/8	1-5/8	3-3/4	723-1227	1-3/8	1	2-1/4	4-3/4	723-1277
5/8	5/8	2	4-1/8	723-1229	1-3/8	1	3	5-1/2	723-1279
5/8	5/8	2-3/8	4-1/2	723-1230	1-1/2	1-1/4	6	8-1/2	723-1280
5/8	5/8	2-1/2	4-5/8	723-1231	1-1/2	1-1/4	2-1/4	4-3/4	723-1281
5/8	5/8	3	5-1/8	723-1233	1-1/2	1-1/4	3	5-1/2	723-1283
5/8	5/8	4	6-1/8	723-1234	1-1/2	1-1/4	4	6-1/2	723-1284
3/4	3/4	1-3/4	4	723-1235	1-5/8	1-1/4	2-1/4	4-3/4	723-1285
3/4	3/4	2-1/4	4-1/2	723-1237	1-5/8	1-1/4	3	5-1/2	723-1287
3/4	3/4	2-1/2	4-3/4	723-1239	1-3/4	1-1/4	2-1/4	4-3/4	723-1289
3/4	3/4	3	5-1/4	723-1241	1-3/4	1-1/4	3	5-1/2	723-1291
3/4	3/4	3-1/2	5-3/4	723-1243	1-7/8	1-1/4	2-1/4	4-3/4	723-1293
3/4	3/4	4	6-1/4	723-1244	1-7/8	1-1/4	3	5-1/2	723-1295
7/8	7/8	2	4-1/4	723-1245	2	1-1/4	2-1/4	4-3/4	723-1297
7/8	3/4	2-1/2	4-3/4	723-1246	2	1-1/4	3	5-1/2	723-1299
7/8	7/8	2-1/2	4-3/4	723-1247	2	1-1/4	4	6-1/2	723-1300
7/8	7/8	3-1/2	5-3/4	723-1248					



Extend Shank



Size	Shank Dia.	Length Below shank	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Length Below shank	Flute Length	Overall Length	Order No.
1/8"	3/8"	13/16"	3/8"	2-3/8"	723-1171	1/2"	1/2"	2-1/4"	1-7/8"	4"	723-1182
3/16	3/8	1-1/8	1/2	2-11/16	723-1173	5/8	1/2	2-3/4	1-3/8	4-5/8	723-1184
3/16	3/8	1-1/2	5/8	3-1/16	723-1172	5/8	5/8	2-3/4	1-3/8	4-5/8	723-1183
1/4	3/8	1	5/8	3-1/16	723-1174	5/8	5/8	2-3/4	2	4-5/8	723-1188
1/4	3/8	1-1/2	5/8	3-1/16	723-1175	3/4	1/2	3-3/8	1-5/8	5-3/8	723-1186
5/16	3/8	1-3/4	3/4	3-5/16	723-1177	3/4	3/4	3-3/8	1-5/8	5-3/8	723-1185
5/16	3/8	1-1/2	3/4	3-1/4"	723-1178	7/8	7/8	4	2	6	723-1187
3/8	3/8	1-3/4	3/4	3-5/16	723-1179	1	1	5	2-1/2	7-1/4	723-1189
3/8	3/8	1-3/4	7/8	3-5/16	723-1180	1-1/4	1-1/4	5	3	7-1/4	723-1191
1/2	1/2	2-1/4	1	4	723-1181						

2 Flute Double End Mills 2 齿双头立铣刀

High Speed Steel Regular Length

- Use for milling slots, pockets and for plunge cutting in a wide variety of materials.
- More economical in production milling than single end end mills.

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
5/64"	3/8"	5/16"	3-1/16"	720-2000	721-2000	722-2000
3/32	3/8	5/16	3-1/16	720-2002	721-2002	722-2002
7/64	3/8	5/16	3-1/16	720-2004	721-2004	722-2004
1/8	3/8	3/8	3-1/16	720-2008	721-2008	722-2008
9/64	3/8	7/16	3-1/8	720-2010	721-2010	722-2010
5/32	3/8	7/16	3-1/8	720-2012	721-2012	722-2012
11/64	3/8	7/16	3-1/8	720-2014	721-2014	722-2014
3/16	3/8	7/16	3-1/8	720-2016	721-2016	722-2016
13/64	3/8	1/2	3-1/8	720-2018	721-2018	722-2018
7/32	3/8	1/2	3-1/8	720-2020	721-2020	722-2020
15/64	3/8	1/2	3-1/8	720-2022	721-2022	722-2022
1/4	3/8	1/2	3-1/8	720-2024	721-2024	722-2024
17/64	3/8	9/16	3-1/8	720-2026	721-2026	722-2026
9/32	3/8	9/16	3-1/8	720-2028	721-2028	722-2028
19/64	3/8	9/16	3-1/8	720-2030	721-2030	722-2030
5/16	3/8	9/16	3-1/8	720-2032	721-2032	722-2032
21/64	3/8	9/16	3-1/8	720-2034	721-2034	722-2034
11/32	3/8	9/16	3-1/8	720-2036	721-2036	722-2036
23/64	3/8	9/16	3-1/8	720-2038	721-2038	722-2038
3/8	3/8	9/16	3-1/8	720-2040	721-2040	722-2040
25/64	1/2	13/16	3-3/4	720-2042	721-2042	722-2042
13/32	1/2	13/16	3-3/4	720-2044	721-2044	722-2044



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
27/64"	1/2"	13/16"	3-3/4"	720-2046	721-2046	722-2046
7/16	1/2	13/16	3-3/4	720-2048	721-2048	722-2048
29/64	1/2	13/16	3-3/4	720-2050	721-2050	722-2050
15/32	1/2	13/16	3-3/4	720-2052	721-2052	722-2052
31/64	1/2	13/16	3-3/4	720-2054	721-2054	722-2054
1/2	1/2	13/16	3-3/4	720-2056	721-2056	722-2056
17/32	5/8	1-1/8	4-1/2	720-2058	721-2058	722-2058
9/16	5/8	1-1/8	4-1/2	720-2060	721-2060	722-2060
19/32	5/8	1-1/8	4-1/2	720-2062	721-2062	722-2062
5/8	5/8	1-1/8	4-1/2	720-2064	721-2064	722-2064
5/8	1/2	1-1/8	4-1/2	720-2065	721-2065	722-2065
21/32	3/4	1-5/16	5	720-2066	721-2066	722-2066
11/16	3/4	1-5/16	5	720-2068	721-2068	722-2068
23/32	3/4	1-5/16	5	720-2070	721-2070	722-2070
3/4	3/4	1-5/16	5	720-2072	721-2072	722-2072
25/32	7/8	1-9/16	5-1/2	720-2074	721-2074	722-2074
13/16	7/8	1-9/16	5-1/2	720-2076	721-2076	722-2076
27/32	7/8	1-9/16	5-1/2	720-2078	721-2078	722-2078
7/8	7/8	1-9/16	5-1/2	720-2080	721-2080	722-2080
7/8	3/4	1-9/16	5-1/2	720-2081	721-2081	722-2081
29/32	1	1-5/8	5-7/8	720-2082	721-2082	722-2082
15/16	1	1-5/8	5-7/8	720-2084	721-2084	722-2084
31/32	1	1-5/8	5-7/8	720-2086	721-2086	722-2086
1	1	1-5/8	5-7/8	720-2088	721-2088	722-2088

M42 8% Cobalt 2 Flute Double End Mills 含钴 2 齿双头立铣刀

- Use for milling slots, pockets and for plunge cutting in a wide variety of materials.
- More economical in production milling than single end end mills.



Size	Shank Dia.	Flute Length	Overall Length	Order No.
5/64"	3/8"	5/16"	3-1/16"	723-2000
3/32	3/8	5/16	3-1/16	723-2002
7/64	3/8	5/16	3-1/16	723-2004
1/8	3/8	3/8	3-1/16	723-2008
9/64	3/8	7/16	3-1/8	723-2010
5/32	3/8	7/16	3-1/8	723-2012
11/64	3/8	7/16	3-1/8	723-2014
3/16	3/8	7/16	3-1/8	723-2016
13/64	3/8	1/2	3-1/8	723-2018
7/32	3/8	1/2	3-1/8	723-2020
15/64	3/8	1/2	3-1/8	723-2022
1/4	3/8	1/2	3-1/8	723-2024
17/64	3/8	9/16	3-1/8	723-2026
9/32	3/8	9/16	3-1/8	723-2028
19/64	3/8	9/16	3-1/8	723-2030
5/16	3/8	9/16	3-1/8	723-2032
21/64	3/8	9/16	3-1/8	723-2034
11/32	3/8	9/16	3-1/8	723-2036
23/64	3/8	9/16	3-1/8	723-2038
3/8	3/8	9/16	3-1/8	723-2040
25/64	1/2	13/16	3-3/4	723-2042
13/32	1/2	13/16	3-3/4	723-2044



Size	Shank Dia.	Flute Length	Overall Length	Order No.
27/64"	1/2"	13/16"	3-3/4"	723-2046
7/16	1/2	13/16	3-3/4	723-2048
29/64	1/2	13/16	3-3/4	723-2050
15/32	1/2	13/16	3-3/4	723-2052
31/64	1/2	13/16	3-3/4	723-2054
1/2	1/2	13/16	3-3/4	723-2056
17/32	5/8	1-1/8	4-1/2	723-2058
9/16	5/8	1-1/8	4-1/2	723-2060
19/32	5/8	1-1/8	4-1/2	723-2062
5/8	5/8	1-1/8	4-1/2	723-2064
5/8	1/2	1-1/8	4-1/2	723-2065
21/32	3/4	1-5/16	5	723-2066
11/16	3/4	1-5/16	5	723-2068
23/32	3/4	1-5/16	5	723-2070
3/4	3/4	1-5/16	5	723-2072
25/32	7/8	1-9/16	5-1/2	723-2074
13/16	7/8	1-9/16	5-1/2	723-2076
27/32	7/8	1-9/16	5-1/2	723-2078
7/8	7/8	1-9/16	5-1/2	723-2080
7/8	3/4	1-9/16	5-1/2	723-2081
29/32	1	1-5/8	5-7/8	723-2082
15/16	1	1-5/8	5-7/8	723-2084
31/32	1	1-5/8	5-7/8	723-2086
1	1	1-5/8	5-7/8	723-2088

1/4" Shank 3 Flute Single End Mills 1/4" 柄 3 齿中心切削单头立铣刀

High Speed Steel

Stud Length

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	1/4"	3/32"	31/32"	720-3700	721-3700	722-3700
3/32	1/4	5/32	1-1/64	720-3702	721-3702	722-3702
1/8	1/4	3/16	1-3/32	720-3704	721-3704	722-3704
5/32	1/4	1/4	1-9/32	720-3706	721-3706	722-3706
3/16	1/4	9/32	1-11/32	720-3708	721-3708	722-3708
7/32	1/4	5/16	1-13/32	720-3710	721-3710	722-3710
1/4	1/4	3/8	1-13/32	720-3712	721-3712	722-3712

Long Length

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/16"	1/4"	5/32"	1-3/32"	720-3714	721-3714	722-3714
3/32	1/4	1/4	1-1/4	720-3716	721-3716	722-3716
1/8	1/4	5/16	1-11/32	720-3718	721-3718	722-3718
5/32	1/4	3/8	1-17/32	720-3720	721-3720	722-3720
3/16	1/4	7/16	1-21/32	720-3722	721-3722	722-3722
7/32	1/4	1/2	1-3/4	720-3724	721-3724	722-3724
1/4	1/4	5/8	1-3/4	720-3726	721-3726	722-3726



3 Flute Single End Mills 3 齿中心切单头立铣刀

Center Cutting, High Speed Steel

- Center cutting allows for plunge milling.
- Use in a wide range of ferrous and non-ferrous materials.
- TiN coating improves tool life and allows elevated speeds and feeds.
- Combines the chip carrying ability of 2 flute end mills and the excellent finish produced by 4 flute end mills.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	TiN-Coated Order No.
3/32"	3/8"	5/16"	2-5/16"	720-3801	722-3801
1/8	3/8	3/8	2-5/16	720-3803	722-3803
3/16	3/8	1/2	2-3/8	720-3805	722-3805
1/4	3/8	5/8	2-7/16	720-3807	722-3807
5/16	3/8	3/4	2-1/2	720-3809	722-3809
5/16	3/8	1-3/8	3-3/8	720-3810	
3/8	3/8	3/4	2-1/2	720-3811	722-3811
7/16	3/8	1	2-11/16	720-3813	722-3813
7/16	1/2	1	2-15/16	720-3815	722-3815
1/2	3/8	1	2-11/16	720-3817	722-3817
1/2	1/2	1	2-3/4	720-3818	
1/2	1/2	1-1/4	3-1/4	720-3819	722-3819
9/16	1/2	1-3/8	3-3/8	720-3821	722-3821
5/8	1/2	1-3/8	3-3/8	720-3823	722-3823
5/8	5/8	1-5/8	3-3/4	720-3825	722-3825
11/16	1/2	1-5/8	3-5/8	720-3827	722-3827
11/16	5/8	1-5/8	3-3/4	720-3829	722-3829
3/4	5/8	1-5/8	3-3/4	720-3831	722-3831
3/4	1/2	1-5/8	3-5/8	720-3833	722-3833
3/4	3/4	1-5/8	3-7/8	720-3835	722-3835
13/16	5/8	1-5/8	3-3/4	720-3837	722-3837
13/16	3/4	1-5/8	3-7/8	720-3839	722-3839
7/8	5/8	1-7/8	4	720-3841	722-3841

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	TiN-Coated Order No.
7/8"	3/4"	1-7/8"	4-1/8"	720-3843	722-3843
7/8	7/8	1-7/8	4-1/8	720-3844	
7/8	1/2	1-5/8	3-5/8	720-3847	722-3847
15/16	7/8	1-7/8	4-1/8	720-3849	722-3849
15/16	5/8	1-7/8	4	720-3851	722-3851
1	5/8	1-7/8	4	720-3853	722-3853
1	3/4	1-7/8	4-1/8	720-3855	722-3855
1	7/8	1-7/8	4-1/8	720-3857	722-3857
1	1	2	4-1/2	720-3859	722-3859
1-1/8	1	2	4-1/2	720-3861	722-3861
1-1/4	1	2	4-1/2	720-3863	722-3863
1-1/4	1-1/4	2	4-1/2	720-3865	722-3865
1-3/8	1	2	4-1/2	720-3867	722-3867
1-3/8	1-1/4	2	4-1/2	720-3869	722-3869
1-1/2	1	2	4-1/2	720-3871	722-3871
1-1/2	1-1/4	2	4-1/2	720-3873	722-3873
1-3/4	1-1/4	2	4-1/2	720-3875	722-3875
1-3/4	1-1/4	4	6-1/2	720-3876	
2	1-1/4	2	4-1/2	720-3877	722-3877

Long Length

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/4	3/8	1-1/4	3-1/8	720-6105	721-6105	722-6105
5/16	3/8	1-3/8	3-1/8	720-6110	721-6110	722-6110
3/8	3/8	1-1/2	3-1/4	720-6115	721-6115	722-6115
7/16	1/2	1-3/4	3-3/4	720-6120	721-6120	722-6120
1/2	1/2	2	4	720-6125	721-6125	722-6125

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
5/8	5/8	2-1/2	4-5/8	720-6130	721-6130	722-6130
3/4	3/4	3	5-1/4	720-6135	721-6135	722-6135
7/8	7/8	3-1/2	5-3/4	720-6140	721-6140	722-6140
1	1	4	6-1/2	720-6145	721-6145	722-6145
1-1/4	1-1/4	4	6-1/2	720-6150	721-6150	722-6150
1-1/2	1-1/4	4	6-1/2	720-6155	721-6155	722-6155

3 Flute Double End Mills 3 齿双头立铣刀

Center Cutting, High Speed Steel

- Use in a wide range of ferrous and non-ferrous materials.
- TiN coating improves tool life and allows elevated speeds and feeds.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3/32"	3/8"	5/16"	3-1/16"	720-3002	721-3002	722-3002
1/8	3/8	3/8	3-1/16	720-3004	721-3004	722-3004
5/32	3/8	7/16	3-1/8	720-3006	721-3006	722-3006
3/16	3/8	1/2	3-1/4	720-3008	721-3008	722-3008
7/32	3/8	9/16	3-1/4	720-3010	721-3010	722-3010
1/4	3/8	5/8	3-3/8	720-3012	721-3012	722-3012
9/32	3/8	11/16	3-3/8	720-3014	721-3014	722-3014
5/16	3/8	3/4	3-1/2	720-3016	721-3016	722-3016
11/32	3/8	3/4	3-1/2	720-3018	721-3018	722-3018
3/8	3/8	3/4	3-1/2	720-3020	721-3020	722-3020

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
7/16"	1/2"	1"	4-1/8"	720-3022	721-3022	722-3022
1/2	1/2	1	4-1/8	720-3024	721-3024	722-3024
9/16	5/8	1-3/8	5	720-3026	721-3026	722-3026
5/8	5/8	1-3/8	5	720-3028	721-3028	722-3028
11/16	3/4	1-1/2	5-3/8	720-3030	721-3030	722-3030
3/4	3/4	1-1/2	5-3/8	720-3032	721-3032	722-3032
13/16	7/8	1-3/4	5-7/8	720-3034	721-3034	722-3034
7/8	7/8	1-3/4	5-7/8	720-3036	721-3036	722-3036
15/16	1	1-3/4	6-1/8	720-3038	721-3038	722-3038
1	1	1-3/4	6-1/8	720-3040	721-3040	722-3040

M42 8% Cobalt 3 Flute Single End Mills 3 齿含钴中心切削铣刀

Center Cutting

- Center cutting allows for plunge milling.
- Combines the chip carrying ability of 2 flute end mills and the excellent finish produced by 4 flute end mills.
- Use in a wide range of ferrous and non-ferrous materials.
- TiN coating improves tool life and allows elevated speeds and feeds.

Three-Flute End Mills—Have smoother cutting action with less chatter and flutter than two-flute tools and may eliminate the need for a second finishing cut.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	M42 Order No.	Size	Shank Dia.	Flute Length	Overall Length	M42 Order No.
3/32"	3/8"	5/16"	2-5/16"	723-3801	7/8"	3/4"	1-7/8"	4-1/8"	723-3843
1/8	3/8	3/8	2-5/16	723-3803	7/8	7/8	1-7/8	4-7/8	723-3845
3/16	3/8	1/2	2-3/8	723-3805	7/8	1/2	1-5/8	3-5/8	723-3847
1/4	3/8	5/8	2-7/16	723-3807	15/16	7/8	1-7/8	4-1/8	723-3849
5/16	3/8	3/4	2-1/2	723-3809	15/16	5/8	1-7/8	4	723-3851
3/8	3/8	3/4	2-1/2	723-3811	1	5/8	1-7/8	4	723-3853
7/16	3/8	1	2-11/16	723-3813	1	3/4	1-7/8	4-1/8	723-3855
7/16	1/2	1	2-15/16	723-3815	1	7/8	1-7/8	4-1/8	723-3857
1/2	3/8	1	2-11/16	723-3817	1	1	2	4-1/2	723-3859
1/2	1/2	1-1/4	3-1/4	723-3819	1-1/8	1	2	4-1/2	723-3861
9/16	1/2	1-3/8	3-3/8	723-3821	1-1/4	1	2	4-1/2	723-3863
5/8	1/2	1-3/8	3-3/8	723-3823	1-1/4	1-1/4	2	4-1/2	723-3865
5/8	5/8	1-5/8	3-3/4	723-3825	1-3/8	1	2	4-1/2	723-3867
11/16	1/2	1-5/8	3-5/8	723-3827	1-3/8	1-1/4	2	4-1/2	723-3869
11/16	5/8	1-5/8	3-3/4	723-3829	1-1/2	1	2	4-1/2	723-3871
3/4	5/8	1-5/8	3-3/4	723-3831	1-1/2	1-1/4	2	4-1/2	723-3873
3/4	1/2	1-5/8	3-5/8	723-3833	1-3/4	1-1/4	2	4-1/2	723-3875
3/4	3/4	1-5/8	3-7/8	723-3835	2	1-1/4	2	4-1/2	723-3877
13/16	5/8	1-5/8	3-3/4	723-3837	2	2	3	5-3/4	723-3879
13/16	3/4	1-5/8	3-7/8	723-3839	2-1/2	2	4	7-5/8	723-3881
7/8	5/8	1-7/8	4	723-3841	2-1/2	2-1/2	4	8	723-3883

Long Length

Size	Shank Dia.	Flute Length	Overall Length	M42 Order No.	Size	Shank Dia.	Flute Length	Overall Length	M42 Order No.
1/4"	3/8"	1-1/4"	3-1/8"	723-6105	3/4"	3/4"	3"	5-1/4"	723-6135
5/16	3/8	1-3/8	3-1/8	723-6110	7/8	7/8	3-1/2	5-3/4	723-6140
3/8	3/8	1-1/2	3-1/4	723-6115	1	1	4	6-1/2	723-6145
7/16	1/2	1-3/4	3-3/4	723-6120	1-1/4	1-1/4	4	6-1/2	723-6150
1/2	1/2	2	4	723-6125	1-1/2	1-1/4	4	6-1/2	723-6155
5/8	5/8	2-1/2	4-5/8	723-6130					

M42 8% Cobalt 3 Flute 45° Helical Semi-Roughing & Finishing End Mills

Center Cutting

含钴 3 齿 45 度螺旋角中心切削立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Tin-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	Tin-Coated Order No.	Order No.
1/4"	3/8"	5/8"	2-7/16"	723-9708	722-9708	1	1	4	6-1/2	723-9778	722-9778
5/16	3/8	3/4	2-1/2	723-9713	722-9713	1-1/8	3/4	2	4-1/2	723-9781	722-9781
3/8	3/8	3/4	2-1/2	723-9718	722-9718	1-1/8	1	2	4-1/2	723-9783	722-9783
7/16	3/8	1	2-11/16	723-9723	722-9723	1-1/4	3/4	2	4-1/2	723-9788	722-9788
1/2	1/2	1-1/4	3-1/4	723-9728	722-9728	1-1/4	3/4	4	6-1/2	723-9791	722-9791
1/2	1/2	2	4	723-9733	722-9733	1-1/4	1	2	4-1/2	723-9793	722-9793
5/8	5/8	1-5/8	3-3/4	723-9738	722-9738	1-1/4	1-1/4	2	4-1/2	723-9798	722-9798
5/8	5/8	2-1/2	4-5/8	723-9743	722-9743	1-1/4	1-1/4	4	6-1/2	723-9803	722-9803
3/4	5/8	1-5/8	3-7/8	723-9745	722-9745	1-1/2	3/4	2	4-1/2	723-9808	722-9808
3/4	3/4	1-5/8	3-7/8	723-9748	722-9748	1-1/2	3/4	4	6-1/2	723-9811	722-9811
3/4	3/4	3	5-1/4	723-9753	722-9753	1-1/2	1-1/4	2	4-1/2	723-9813	722-9813
7/8	3/4	1-7/8	4-1/8	723-9758	722-9758	1-1/2	1-1/4	4	6-1/2	723-9818	722-9818
7/8	3/4	3-1/2	5-5/8	723-9761	722-9761	1-3/4	3/4	2	4-1/2	723-9821	722-9821
7/8	7/8	1-7/8	4-1/8	723-9763	722-9763	1-3/4	1-1/4	2	4-1/2	723-9823	722-9823
1	3/4	2	4-1/2	723-9768	722-9768	2	3/4	2	4-1/2	723-9725	722-9725
1	1	2	4-1/2	723-9773	722-9773	2	1-1/4	2	4-1/2	723-9828	722-9828

Multiple Flute Single End Mills

单头多齿立铣刀

- Designed for general purpose work including cam milling, die sinking and slot milling.
- Suitable for use in a wide range of ferrous and non-ferrous materials.
- Excellent for use in finishing operations.
- Multi-flute design allows for higher feed rates.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
7/64"	3/8"	3/8"	2-5/16"	4	720-3001	721-3001	722-3001
1/8	3/8	3/8	2-5/16	4	720-3003	721-3003	722-3003
9/64	3/8	3/8	2-5/16	4	720-3005	721-3005	722-3005
5/32	3/8	7/16	2-3/8	4	720-3007	721-3007	722-3007
11/64	3/8	7/16	2-3/8	4	720-3009	721-3009	722-3009
3/16	3/8	1/2	2-3/8	4	720-3011	721-3011	722-3011
13/64	3/8	1/2	2-3/8	4	720-3013	721-3013	722-3013
7/32	3/8	9/16	2-1/2	4	720-3015	721-3015	722-3015
7/32	3/8	5/8	2-1/4	4	720-3423	721-3423	722-3423
15/64	3/8	9/16	2-1/2	4	720-3017	721-3017	722-3017
1/4	3/8	5/8	2-1/4	4	720-3427	721-3427	722-3425
1/4	3/8	5/8	2-7/16	4	720-3428	721-3428	722-3428
1/4	3/8	5/8	2-1/2	4	720-3019	721-3019	722-3019
17/64	3/8	5/8	2-1/2	4	720-3021	721-3021	722-3021
9/32	3/8	5/8	2-1/4	4	720-3429	721-3429	722-3427
9/32	3/8	11/16	2-1/2	4	720-3023	721-3023	722-3023
19/64	3/8	11/16	2-1/2	4	720-3025	721-3025	722-3025
5/16	3/8	3/4	2-1/4	4	720-3431	721-3436	722-3436
5/16	3/8	3/4	2-1/2	4	720-3027	721-3027	722-3027
21/64	3/8	3/4	2-1/2	4	720-3029	721-3029	722-3029
11/32	3/8	3/4	2-1/2	4	720-3031	721-3031	722-3031
23/64	3/8	3/4	2-1/2	4	720-3033	721-3033	722-3033
3/8	3/8	3/4	2-1/2	4	720-3035	721-3035	722-3035
13/32	3/8	1	2-11/16	4	720-3037	721-3037	722-3037
7/16	3/8	1	2-11/16	4	720-3039	721-3039	722-3039
15/32	3/8	1	2-11/16	4	720-3042	721-3042	722-3042
15/32	1/2	1-1/4	3-1/4	4	720-3041	721-3041	722-3041
1/2	3/8	1	2-11/16	4	720-3043	721-3043	722-3043
1/2	1/2	1-1/4	3-1/4	4	720-3045	721-3045	722-3045
1/2	1/2	1-1/4	3-1/4	6	720-3046	721-3046	722-3046
17/32	1/2	1-3/8	3-3/8	4	720-3047	721-3047	722-3047
9/16	1/2	1-3/8	3-3/8	4	720-3049	721-3049	722-3049
19/32	1/2	1-3/8	3-3/8	4	720-3051	721-3051	722-3051
5/8	1/2	1-3/8	3-3/8	4	720-3053	721-3053	722-3053
5/8	5/8	1-5/8	3-1/4	6	720-3056	721-3056	722-3056
5/8	5/8	1-5/8	3-3/4	4	720-3055	721-3055	722-3055
21/32	1/2	1-5/8	3-5/8	4	720-3057	721-3057	722-3057
11/16	1/2	1-5/8	3-5/8	4	720-3059	721-3059	722-3059
11/16	5/8	1-5/8	3-3/4	4	720-3061	721-3061	722-3061
23/32	1/2	1-5/8	3-5/8	4	720-3063	721-3063	722-3063
3/4	1/2	1-5/8	3-5/8	4	720-3065	721-3065	722-3065
3/4	5/8	1-5/8	3-5/8	4	720-3066	721-3066	722-3066
3/4	5/8	1-5/8	3-3/4	4	720-3067	721-3067	722-3067
3/4	3/4	1-5/8	3-7/8	4	720-3068	721-3068	722-3068
3/4	3/4	1-5/8	3-3/4	4	720-3069	721-3069	722-3069
3/4	3/4	1-5/8	3-3/4	6	720-3070	721-3070	722-3070
25/32	1/2	1-5/8	3-5/8	4	720-3071	721-3071	722-3071
13/16	1/2	1-3/4	3-3/4	4	720-3072	721-3072	722-3072
13/16	5/8	1-7/8	4	4	720-3074	721-3074	722-3074
13/16	5/8	1-7/8	4	6	720-3073	721-3073	722-3073
13/16	3/4	1-7/8	4-1/8	4	720-3075	721-3075	722-3075
27/32	1/2	1-5/8	3-5/8	4	720-3077	721-3077	722-3077
7/8	1/2	1-7/8	3-5/8	4	720-3078		
7/8	1/2	1-5/8	3-5/8	4	720-3079	721-3079	722-3079
7/8	1/2	1-5/8	3-5/8	6	720-3081	721-3081	722-3081
7/8	1/2	1-7/8	4	4	720-3080	721-3080	722-3080
7/8	1/2	1-7/8	4	6	720-3082	721-3082	722-3082
7/8	5/8	1-7/8	4	6	720-3083	721-3083	722-3083
7/8	3/4	1-7/8	4-1/8	4	720-3085	721-3085	722-3085
7/8	7/8	1-7/8	4-1/8	4	720-3087	721-3087	722-3087
7/8	3/4	1-7/8	4-1/8	6	720-3086	721-3086	722-3086
29/32	1/2	1-7/8	3-7/8	4	720-3089	721-3089	722-3089
15/16	1/2	1-7/8	4	4	720-3090	721-3090	722-3090
15/16	5/8	1-7/8	4	6	720-3091	721-3091	722-3091
15/16	3/4	1-7/8	4-1/8	4	720-3093	721-3093	722-3093
15/16	3/4	1-7/8	4-1/8	6	720-3170	721-3170	722-3170
15/16	5/8	1-7/8	4-1/8	6	720-3092	721-3092	722-3440
15/16	7/8	1-7/8	4-1/8	4	720-3095	721-3095	722-3095
15/16	7/8	1-7/8	4-1/8	6	720-3096	721-3096	722-3096
31/32	1/2	1-7/8	3-7/8	4	720-3097	721-3097	722-3097
1	1/2	1-7/8	3-7/8	4	720-3098	721-3098	722-3098

	Shank Flute		Overall	No. of	M2	M2Al	TiN-Coated
Size	Dia.	Length	Length	Flute	Order No.	Order No.	Order No.
1"	1/2"	1-7/8"	4"	4	720-3099	721-3099	722-3099
1	1/2	1-7/8	4	6	720-3100	721-3100	722-3100
1	5/8	1-7/8	4	4	720-3102	721-3102	722-3102
1	5/8	1-7/8	4	6	720-3101	721-3101	722-3101
1	3/4	1-7/8	4	6	720-3106	721-3106	722-3106
1	3/4	1-7/8	4-1/8	4	720-3103	721-3103	722-3103
1	7/8	1-7/8	4-1/8	4	720-3105	721-3105	722-3105
1	3/4	2	4-1/2	4	720-3104	721-3445	722-3445
1	1	2	4-1/2	4	720-3107	721-3107	722-3107
1	1	2	4-1/2	6	720-3108	721-3108	722-3108
1-1/16	3/4	2	4-1/4	4	720-3433	721-3433	722-3429
1-1/16	3/4	2	4-1/4	6	720-3109	721-3109	722-3109
1-1/8	3/4	1-1/2	3-7/8	6	720-3171	721-3181	722-3171
1-1/8	3/4	2	4-1/4	4	720-3112	721-3112	722-3112
1-1/8	3/4	2	4-1/4	6	720-3111	721-3111	722-3111
1-1/8	1	2	4-1/4	4	720-3114	721-3114	722-3114
1-1/8	7/8	2	4-1/4	6	720-3113	721-3113	722-3113
1-1/8	3/4	2	4-1/2	6	720-3173	721-3173	722-3173
1-1/8	1	2	4-1/2	6	720-3115	721-3115	722-3115
1-1/8	1	2-5/8	4-1/2	4	720-3116	721-3116	722-3116
1-3/16	3/4	2	4-1/4	6	720-3117	721-3117	722-3117
1-3/16	1	2	4-1/4	6	720-3118	721-3118	722-3118
1-1/4	3/4	2	4-1/4	6	720-3119	721-3119	722-3119
1-1/4	7/8	2	4-1/4	4	720-3120	721-3120	722-3120
1-1/4	7/8	2	4-1/4	6	720-3121	721-3121	722-3121
1-1/4	1	2	4-1/2	6	720-3123	721-3123	722-3123
1-1/4	1-1/4	2	4-1/2	4	720-3124	721-3171	722-3124
1-1/4	1-1/4	2	4-1/2	6	720-3125	721-3125	722-3125
1-5/16	3/4	1-5/8	3-7/8	6	720-3435	721-3435	722-3431
1-5/16	3/4	2	4-1/2	6	720-3127	721-3127	722-3127
1-3/8	3/4	2	4-1/4	4	720-3442	721-3442	722-3433
1-3/8	3/4	2	4-1/4	6	720-3128	721-3128	722-3128
1-3/8	3/4	2	4-1/2	6	720-3129	721-3129	722-3129
1-3/8	1	2	4-1/2	6	720-3131	721-3131	722-3131
1-3/8	1-1/4	2	4-1/2	6	720-3130	721-3130	722-3130
1-7/16	3/4	1-5/8	3-7/8	6	720-3132	721-3132	722-3132
1-7/16	3/4	2	4-1/2	6	720-3133	721-3133	722-3133
1-1/2	3/4	2	4-1/4	4	720-3134	721-3134	722-3447
1-1/2	3/4	2	4-1/2	6	720-3135	721-3135	722-3135
1-1/2	1	2	4-1/2	4	720-3136	721-3136	722-3136
1-1/2	1	2	4-1/2	6	720-3137	721-3137	722-3137
1-1/2	1-1/4	2	4-1/2	4	720-3141	721-3141	722-3141
1-1/2	1-1/4	2	4-1/2	6	720-3139	721-3139	722-3139
1-5/8	3/4	1-5/8	3-7/8	6	720-3142	721-3142	722-3142
1-5/8	3/4	1-5/8	4-1/8	6	720-3140	721-3140	722-3140
1-5/8	3/4	2	4-1/2	6	720-3143	721-3143	722-3143
1-5/8	1-1/4	2	4-1/2	4	720-3144	721-3144	722-3144
1-5/8	1-1/4	2	4-1/2	6	720-3145	721-3145	722-3145
1-3/4	3/4	1-1/2	3-7/8	6	720-3172	721-3183	722-3172
1-3/4	3/4	2	4-1/4	4	720-3148	721-3148	722-3438
1-3/4	3/4	2	4-1/2	4	720-3146	721-3146	722-3148
1-3/4	3/4	2	4-1/2	6	720-3147	721-3147	722-3147
1-3/4	1-1/4	2	4-1/2	4	720-3151	721-3151	722-3151
1-3/4	1-1/4	2	4-1/2	6	720-3149	721-3149	722-3149
1-13/16	3/4	2	4-1/4	4	720-3152	721-3152	722-3152
1-7/8	3/4	2	4-3/8	4	720-3150	721-3150	722-3150
1-7/8	3/4	2	4-1/2	6	720-3153	721-3153	722-3153
1-7/8	1-1/4	2	4-1/2	6	720-3154	721-3154	722-3154
1-7/8	1-1/4	2	4-1/2	8	720-3155	721-3155	722-3155
2	3/4	1-1/2	3-7/8	8	720-3183		
2	3/4	1-1/2	3-7/8	6	720-3185	721-3185	722-3185
2	3/4	2	4-1/4	4	720-3156	721-3156	722-3156
2	3/4	2	4-1/2	6	720-3157	721-3157	722-3157
2	3/4	2	4-1/2	8	720-3158	721-3158	722-3158
2	1-1/4	2	4-1/2	4	720-3161	721-3161	722-3161
2	1-1/4	2	4-1/2	6	720-3163	721-3163	722-3163
2	1-1/4	2	4-1/2	8	720-3159	721-3159	722-3159
2	1-1/4	2	5-1/2	6	720-3165	721-3165	722-3165
2	2	2	5-3/4	6	720-3166	721-3166	722-3166
2-1/4	1-1/4	2	4-1/2	6	720-3167	721-3167	722-3167
2-1/4	1-1/4	3	5-1/2	8	720-3169	721-3169	722-3169

Multiple Flute Single End Mills 单头多齿立铣刀

Long Flute



Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.
1/4"	3/8"	1-1/4"	3-1/16"	4	720-3501	721-3501	722-3501	1-1/4"	3/4"	4"	6-1/2"	6	720-3520	721-3520	722-3520
5/16	3/8	1-3/8	3-1/8	4	720-3503	721-3503	722-3503	1-1/4	1	4	6-1/2	6	720-3521	721-3521	722-3521
3/8	3/8	1-1/2	3-1/4	4	720-3505	721-3505	722-3505	1-1/4	1-1/4	4	6-1/2	4	720-3523	721-3523	722-3523
7/16	1/2	1-3/4	3-3/4	4	720-3507	721-3507	722-3507	1-1/4	1-1/4	4	6-1/2	6	720-3525	721-3525	722-3525
1/2	1/2	2	4	4	720-3509	721-3509	722-3509	1-3/8	1	4	6-1/2	6	720-3527	721-3527	722-3527
5/8	5/8	2-1/2	4-5/8	4	720-3511	721-3511	722-3511	1-1/2	1	4	6-1/2	6	720-3529	721-3529	722-3529
5/8	1/2	2-1/2	4-5/8	4	720-3512	721-3512	722-3512	1-1/2	1-1/4	4	6-1/2	4	720-3531	721-3531	722-3531
3/4	3/4	3	5-1/4	4	720-3513	721-3513	722-3513	1-1/2	1-1/4	4	6-1/2	6	720-3533	721-3533	722-3533
3/4	1/2	3	5-1/4	4	720-3514	721-3514	722-3514	1-3/4	1-1/4	4	6-1/2	4	720-3534	721-3534	722-3534
7/8	7/8	3-1/2	5-3/4	4	720-3515	721-3515	722-3515	1-3/4	1-1/4	4	6-1/2	6	720-3535	721-3535	722-3535
7/8	3/4	3-1/2	5-3/4	4	720-3516	721-3516	722-3516	2	1-1/4	4	6-1/2	4	720-3537	721-3537	722-3537
1	1	4	6-1/2	4	720-3517	721-3517	722-3517	2	1-1/4	4	6-1/2	6	720-3539	721-3539	722-3539
1	3/4	4	6-1/2	4	720-3518			2	1-1/4	4	6-1/2	8	720-3541	721-3541	722-3541
1-1/8	1	4	6-1/2	6	720-3519	721-3519	722-3519								
1-1/8	3/4	4	6-1/2	6	720-3522										



Extra Long Flute

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.
1/4"	3/8"	1-3/4"	3-9/16"	4	720-3601	721-3601	722-3601	7/8"	7/8"	5"	7-1/4"	4	720-3613	721-3613	722-3613
5/16	3/8	2	3-3/4	4	720-3603	721-3603	722-3603	1	1	6	8-1/2	4	720-3615	721-3615	722-3615
3/8	3/8	2-1/2	4-1/4	4	720-3605	721-3605	722-3605	1-1/4	1-1/4	6	8-1/2	6	720-3617	721-3617	722-3617
1/2	1/2	3	5	4	720-3607	721-3607	722-3607	1-1/4	1-1/4	6	8-1/2	4	720-3618	721-3618	722-3618
5/8	5/8	4	6-1/8	4	720-3609	721-3609	722-3609	1-1/2	1-1/4	6	8-1/2	6	720-3619	721-3619	722-3619
5/8	1/2	4	6-1/8	4	720-3610	721-3610	722-3610	1-1/2	1-1/4	6	8-1/2	4	720-3620	721-3620	722-3620
3/4	3/4	4	6-1/4	4	720-3611	721-3611	722-3611	1-1/2	1-1/4	8	10-1/2	6	720-3622		
3/4	1/2	4	6-1/4	4	720-3612	721-3612	722-3612	1-1/2	1-1/4	8	10-9/16	6	720-3621	721-3621	722-3621

Multiple Flute Heavy Duty End Mills 英制重型立铣刀

- Designed for rough cutting applications in a wide range of materials.
- Positive lock shank provides the grip needed to withstand the high torque generated.



Large Diameter, Positive Lock

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.
2"	2"	2"	5-3/4"	4	720-3910	2-1/2"	2-1/2"	6"	9-3/4"	4	720-3929
2	2	3	6-3/4	4	720-3912	2-1/2	2-1/2	6	9-3/4	6	720-3930
2	2	4	7-3/4	4	720-3914	2-1/2	2-1/2	8	11-3/4	4	720-3931
2	2	4	7-3/4	6	720-3916	2-1/2	2-1/2	8	11-3/4	6	720-3932
2	2	6	9-3/4	4	720-3918	2-1/2	2-1/2	10	13-3/4	4	720-3933
2	2	6	9-3/4	6	720-3920	2-1/2	2-1/2	10	13-3/4	6	720-3934
2	2	8	11-3/4	4	720-3921	3	2-1/2	4	8	4	720-3935
2	2	8	11-3/4	6	720-3922	3	2-1/2	4	8	6	720-3936
2	2	10	13-3/4	4	720-3923	3	2-1/2	6	10	4	720-3937
2	2	10	13-3/4	6	720-3924	3	2-1/2	6	10	6	720-3938
2	2	12	15-3/4	4	720-3925	3	2-1/2	8	12	4	720-3939
2	2	12	15-3/4	6	720-3926	3	2-1/2	8	12	6	720-3940
2-1/2	2-1/2	4	7-3/4	4	720-3927	3	2-1/2	10	14	4	720-3941
2-1/2	2-1/2	4	7-3/4	6	720-3928	3	2-1/2	10	14	6	720-3942

Multiple Flute Single End Mills 多齿单头中心切削立铣刀

Center Cutting, High Speed Steel

- Recommended for finishing operations in a wide range of ferrous and non-ferrous materials.
- Center cutting design allows for plunge milling into solid material at the beginning of a slotting operation.
- TiN coating increases surface hardness and resists abrasive wear.

Four/Multiple-Flute End Mills-Produce finer finishes and last longer than two or three-flute tools. Compared to two-flute tools, *four-flute end mills* remove metal faster and can be fed two to three times faster; *six-flute end mills* can be fed three times faster.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.
1/8"	3/8"	3/8"	2-5/16"	4	720-3201	721-3201	722-3201
3/16	3/8	1/2	2-3/8	4	720-3203	721-3203	722-3203
1/4	3/8	5/8	2-7/16	4	720-3204	721-3204	722-3204
1/4	3/8	5/8	2-1/2	4	720-3205	721-3205	722-3205
9/32	3/8	3/4	2-1/2	4	720-3206		722-3206
5/16	3/8	3/4	2-1/2	4	720-3207	721-3207	722-3207
3/8	3/8	3/4	2-1/2	4	720-3209	721-3209	722-3209
7/16	3/8	1	2-11/16	4	720-3206	721-3206	722-3206
1/2	3/8	13/16	2-1/2	4	720-3210	721-3210	722-3210
1/2	1/2	1-1/4	3-1/4	4	720-3211	721-3211	722-3211
1/2	3/8	1	2-11/16	4	720-3212		722-3212
5/8	5/8	1-5/8	3-3/4	4	720-3213	721-3213	722-3213
9/16	1/2	1-3/8	3-3/8	4	720-3214	721-3214	722-3214
11/16	5/8	1-5/8	3-3/4	4	720-3215	721-3215	722-3215
3/4	5/8	1-5/8	3-3/4	4	720-3216	721-3216	722-3216
3/4	3/4	1-5/8	3-7/8	4	720-3217	721-3217	722-3217
7/8	3/4	1-7/8	4-1/8	4	720-3218	721-3218	722-3218
7/8	7/8	1-7/8	4-1/8	4	720-3219	721-3219	722-3219
1	3/4	1-7/8	4-1/8	4	720-3220	721-3220	722-3220
1	1	2	4-1/2	4	720-3221	721-3221	722-3221
1	1	2	4-1/2	6	720-3222		
1-1/8	1	2	4-1/2	4	720-3223	721-3223	722-3223
1-1/8	1	2	4-1/2	6	720-3225	721-3225	722-3225
1-1/4	1-1/4	2	4-1/2	4	720-3227	721-3227	722-3227
1-1/4	1-1/4	3	5-1/2	4	720-3226	721-3226	722-3226
1-1/4	1-1/4	2	4-1/2	6	720-3228	721-3228	722-3228
1-1/2	1-1/4	2	4-1/2	4	720-3229	721-3229	722-3229
1-1/2	1-1/4	2	4-1/2	6	720-3230	721-3230	722-3230



Long Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.
1/4"	3/8"	1-1/4"	3-1/16"	4	720-3301	721-3301	722-3301	1-1/4"	1-1/4"	3"	5-1/2"	4	720-3327	721-3327	722-3327
5/16	3/8	1-3/8	3-1/8	4	720-3303	721-3303	722-3303	1-1/4	1-1/4	4	6-1/2	4	720-3331	721-3331	722-3331
3/8	3/8	1-1/2	3-1/4	4	720-3305	721-3305	722-3305	1-1/4	1-1/4	3	5-1/2	6	720-3329	721-3329	722-3329
7/16	1/2	1-3/4	3-3/4	4	720-3306	721-3306	722-3306	1-1/4	1	4	6-1/2	6	720-3328	721-3328	722-3328
1/2	1/2	2	4	4	720-3307	721-3307	722-3307	1-1/4	3/4	4	6-1/2	6	720-3330	721-3330	722-3330
5/8	1/2	2-1/2	4-5/8	4	720-3308	721-3308	722-3308	1-1/4	1-1/4	4	6-1/2	6	720-3332	721-3332	722-3332
5/8	5/8	2-1/2	4-5/8	4	720-3309	721-3309	722-3309	1-3/8	1	4	6-1/2	6	720-3334	721-3334	722-3334
5/8	5/8	3	5-1/8	4	720-3311	721-3311	722-3311	1-1/2	1-1/4	3	5-1/2	4	720-3333	721-3333	722-3333
3/4	3/4	2	4-1/4	4	720-3315	721-3315	722-3315	1-1/2	1-1/4	4	6-1/2	4	720-3338	721-3338	722-3338
3/4	3/4	3	5-1/4	4	720-3313	721-3313	722-3313	1-1/2	1-1/4	3	5-1/2	6	720-3335	721-3335	722-3335
3/4	1/2	3	5-1/4	4	720-3318	721-3318	722-3318	1-1/2	1-1/4	4	6-1/2	6	720-3336	721-3336	722-3336
3/4	3/4	2	4-1/4	6	720-3317	721-3317	722-3317	1-1/2	1	4	6-1/2	6	720-3339	721-3339	722-3339
7/8	7/8	3-1/2	5-3/4	4	720-3319	721-3319	722-3319	1-3/4	1-1/4	3	5-1/2	4	720-3337	721-3337	722-3337
1	1	3	5-1/2	4	720-3321	721-3321	722-3321	1-3/4	1-1/4	4	6-1/2	6	720-3340	721-3340	722-3340
1	3/4	4	6-1/2	4	720-3322	721-3322	722-3322	2	1-1/4	4	6-1/2	4	720-3342	721-3342	722-3342
1	1	4	6-1/2	4	720-3325	721-3325	722-3325	2	1-1/4	4	6-1/2	6	720-3344	721-3344	722-3344
1	1	3	5-1/2	6	720-3323	721-3323	722-3323	2	1-1/4	4	6-1/2	8	720-3346	721-3346	722-3346
1-1/8	1	4	6-1/2	6	720-3324	721-3324	722-3324								
1-1/8	3/4	4	6-1/2	6	720-3326	721-3326	722-3326								



Extra Long Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2AI Order No.	TiN-Coated Order No.
1/4"	3/8"	1-3/4"	3-1/2"	4	720-3401	721-3401	722-3401	3/4"	1/2"	4"	6-1/4"	4	720-3412	721-3412	722-3412
1/4	3/8	1-3/4	3-9/16	4	720-3402	721-3402	722-3402	7/8	7/8	5	7-1/4	4	720-3413	721-3413	722-3413
5/16	3/8	2	3-3/4	4	720-3403	721-3403	722-3403	1	1	6	8-1/2	4	720-3415	721-3415	722-3415
3/8	3/8	2-1/2	4-1/4	4	720-3405	721-3405	722-3405	1-1/4	1-1/4	6	8-1/2	4	720-3417	721-3417	722-3417
1/2	1/2	3	5"	4	720-3407	721-3407	722-3407	1-1/4	1-1/4	6	8-1/2	6	720-3418	721-3418	722-3418
5/8	1/2	4	6-1/8	4	720-3410	721-3410	722-3410	1-1/2	1-1/4	6	8-1/2	4	720-3419	721-3419	722-3419
5/8	5/8	4	6-1/8	4	720-3409	721-3409	722-3409	1-1/2	1-1/4	6	8-1/2	6	720-3416	721-3416	722-3416
3/4	3/4	4	6-1/4	4	720-3411	721-3411	722-3411	1-1/2	1-1/4	8	10-9/16	6	720-3400	721-3400	722-3400

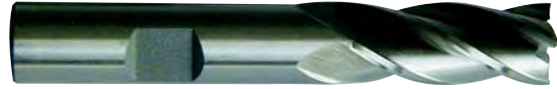
M42 8% Cobalt Multiple Flute Single End Mills M42 单头多齿立铣刀

- Designed for general purpose work including cam milling, die sinking and slot milling.
- Suitable for use in a wide range of ferrous and non-ferrous materials.
- Excellent for use in finishing operations.
- Multi-flute design allows for higher feed rates.

Four/Multiple-Flute End Mills—Produce finer finishes and last longer than two or three-flute tools. Compared to two-flute tools, *four-flute end mills* remove metal faster and can be fed two to three times faster; *six-flute end mills* can be fed three times faster.

Cobalt

Regular Length



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
7/64"	3/8"	3/8"	2-5/16"	4	723-3001
1/8	3/8	3/8	2-5/16	4	723-3003
9/64	3/8	3/8	2-5/16	4	723-3005
5/32	3/8	7/16	2-3/8	4	723-3007
11/64	3/8	7/16	2-3/8	4	723-3009
11/64	3/8	1/2	2-5/16	4	723-3422
3/16	3/8	1/2	2-3/8	4	723-3011
13/64	3/8	1/2	2-3/8	4	723-3013
7/32	3/8	9/16	2-1/2	4	723-3015
15/64	3/8	9/16	2-1/2	4	723-3017
1/4	3/8	5/8	2-1/2	4	723-3019
17/64	3/8	5/8	2-1/2	4	723-3021
9/32	3/8	11/16	2-1/2	4	723-3023
19/64	3/8	11/16	2-1/2	4	723-3025
5/16	3/8	3/4	2-1/2	4	723-3027
21/64	3/8	3/4	2-1/2	4	723-3029
11/32	3/8	3/4	2-1/2	4	723-3031
23/64	3/8	3/4	2-1/2	4	723-3033
3/8	3/8	3/4	2-1/2	4	723-3035
13/32	3/8	1	2-11/16	4	723-3037
7/16	3/8	1	2-11/16	4	723-3039
15/32	3/8	1	2-11/16	4	723-3042
15/32	1/2	1-1/4	3-1/4	4	723-3041
1/2	3/8	1	2-11/16	4	723-3043
1/2	1/2	1-1/4	3-1/4	4	723-3045
1/2	1/2	1-1/4	3-1/4	6	723-3046
17/32	1/2	1-3/8	3-3/8	4	723-3047
9/16	1/2	1-3/8	3-3/8	4	723-3049
19/32	1/2	1-3/8	3-3/8	4	723-3051
5/8	1/2	1-3/8	3-3/8	4	723-3053
5/8	5/8	1-5/8	3-3/4	6	723-3056
5/8	5/8	1-5/8	3-3/4	4	723-3055
21/32	1/2	1-5/8	3-5/8	4	723-3057
11/16	1/2	1-5/8	3-5/8	4	723-3059
11/16	5/8	1-5/8	3-3/4	4	723-3061
23/32	1/2	1-5/8	3-5/8	4	723-3063
3/4	1/2	1-5/8	3-5/8	4	723-3065
3/4	5/8	1-5/8	3-3/4	4	723-3067
3/4	3/4	1-5/8	3-3/4	4	723-3069
3/4	3/4	1-5/8	3-3/4	6	723-3070
25/32	1/2	1-5/8	3-5/8	4	723-3071
13/16	5/8	1-7/8	4	4	723-3074
13/16	5/8	1-7/8	4	6	723-3073
13/16	3/4	1-7/8	4-1/8	4	723-3075
27/32	1/2	1-5/8	3-5/8	4	723-3077
7/8	1/2	1-5/8	3-5/8	4	723-3079
7/8	1/2	1-5/8	3-5/8	6	723-3081
7/8	1/2	1-7/8	4	4	723-3080
7/8	1/2	1-7/8	4	6	723-3082
7/8	5/8	1-7/8	4	6	723-3083
7/8	3/4	1-7/8	4-1/8	4	723-3085
7/8	3/4	1-7/8	4-1/8	6	723-3086
7/8	7/8	1-7/8	4-1/8	4	723-3087
29/32	1/2	1-7/8	3-7/8	4	723-3089
15/16	1/2	1-7/8	4	4	723-3090
15/16	5/8	1-7/8	4-1/8	6	723-3092
15/16	3/4	1-7/8	4-1/8	4	723-3093
15/16	3/4	1-7/8	4-1/8	6	723-3170
15/16	7/8	1-7/8	4-1/8	4	723-3095
15/16	7/8	1-7/8	4-1/8	6	723-3096
31/32	1/2	1-7/8	3-7/8	4	723-3097

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1	1/2	1-7/8	4	4	723-3099
1	1/2	1-7/8	4	6	723-3100
1	5/8	1-7/8	4	6	723-3101
1	5/8	1-7/8	4	4	723-3102
1	3/4	1-7/8	4	6	723-3106
1	3/4	1-7/8	4-1/8	4	723-3103
1	7/8	1-7/8	4-1/8	4	723-3105
1	3/4	2	4-1/2	4	723-3104
1	1	2	4-1/2	4	723-3107
1	1	2	4-1/2	6	723-3108
1-1/16	3/4	2	4-1/4	6	723-3109
1-1/8	3/4	1-1/2	3-7/8	6	723-3171
1-1/8	3/4	2	4-1/4	4	723-3112
1-1/8	3/4	2	4-1/4	6	723-3111
1-1/8	7/8	2	4-1/4	6	723-3113
1-1/8	1	2	4-1/4	4	723-3114
1-1/8	1	2	4-1/2	6	723-3115
1-1/8	3/4	2	4-1/2	6	723-3173
1-1/8	1	2-5/8	4-1/2	4	723-3116
1-3/16	3/4	2	4-1/4	6	723-3117
1-3/16	1	2	4-1/4	6	723-3118
1-1/4	3/4	2	4-1/4	6	723-3119
1-1/4	7/8	2	4-1/4	4	723-3120
1-1/4	7/8	2	4-1/4	6	723-3121
1-1/4	1	2	4-1/2	6	723-3123
1-1/4	1-1/4	2	4-1/2	4	723-3124
1-1/4	1-1/4	2	4-1/2	6	723-3125
1-1/4	1-1/4	2	4-1/2	4	723-3126
1-5/16	3/4	2	4-1/2	6	723-3127
1-3/8	3/4	2	4-1/4	6	723-3128
1-3/8	3/4	2	4-1/2	6	723-3129
1-3/8	1	2	4-1/2	6	723-3131
1-3/8	1-1/4	2	4-1/2	6	723-3130
1-7/16	3/4	2	4-1/2	6	723-3133
1-1/2	3/4	2	4-1/2	6	723-3135
1-1/2	1	2	4-1/2	4	723-3136
1-1/2	1	2	4-1/2	6	723-3137
1-1/2	1-1/4	2	4-1/2	4	723-3141
1-1/2	1-1/4	2	4-1/2	6	723-3139
1-5/8	3/4	1-5/8	3-7/8	6	723-3142
1-5/8	3/4	2	4-1/2	6	723-3143
1-5/8	1-1/4	2	4-1/2	4	723-3144
1-5/8	1-1/4	2	4-1/2	6	723-3145
1-3/4	3/4	1-1/2	3-7/8	6	723-3172
1-3/4	3/4	2	4-1/2	4	723-3146
1-3/4	3/4	2	4-1/2	6	723-3147
1-3/4	1-1/4	2	4-1/2	4	723-3151
1-3/4	1-1/4	2	4-1/2	6	723-3149
1-13/16	3/4	2	4-1/4	4	723-3152
1-7/8	3/4	2	4-1/2	6	723-3153
1-7/8	1-1/4	2	4-1/2	6	723-3154
1-7/8	1-1/4	2	4-1/2	8	723-3155
2	3/4	2	4-1/2	6	723-3157
2	3/4	2	4-1/2	8	723-3158
2	1-1/4	2	4-1/2	4	723-3161
2	1-1/4	2	4-1/2	6	723-3163
2	1-1/4	2	4-1/2	8	723-3159
2	1-1/4	2	5-1/2	6	723-3165
2	2	2	5-3/4	6	723-3166
2-1/4	1-1/4	2	4-1/2	6	723-3167
2-1/4	1-1/4	3	5-1/2	8	723-3169
2-1/2	2	4	7-5/8	6	723-3168

M42 8% Cobalt Multiple Flute Single End Mills continued

M42 单头多齿立铣刀

Four/Multiple-Flute End Mills— Produce finer finishes and last longer than two or three-flute tools. Compared to two-flute tools, *four-flute end mills* remove metal faster and can be fed two to three times faster; *six-flute end mills* can be fed three times faster.

F.Y.I

M-42 cobalt end mills are more economical than high speed steel end mills. They stay sharper longer to allow more cuts between grinds and reduce downtime to give you lower cost per machined workpiece!



Long Flute

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1/4"	3/8"	1-1/4"	3-1/16"	4	723-3501
5/16	3/8	1-3/8	3-1/8	4	723-3503
3/8	3/8	1-1/2	3-1/4	4	723-3505
7/16	1/2	1-3/4	3-3/4	4	723-3507
1/2	1/2	2	4	4	723-3509
5/8	5/8	2-1/2	4-5/8	4	723-3511
5/8	1/2	2-1/2	4-5/8	4	723-3512
3/4	3/4	3	5-1/4	4	723-3513
3/4	1/2	3	5-1/4	4	723-3514
7/8	7/8	3-1/2	5-3/4	4	723-3515
7/8	3/4	3-1/2	5-3/4	4	723-3516
1	1	4	6-1/2	4	723-3517
1-1/8	1	4	6-1/2	6	723-3519
1-1/4	3/4	4	6-1/2	6	723-3520

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1-1/4"	1"	4"	6-1/2"	6	723-3521
1-1/4	1-1/4	4	6-1/2	4	723-3523
1-1/4	1-1/4	4	6-1/2	6	723-3525
1-3/8	1	4	6-1/2	6	723-3527
1-1/2	1	4	6-1/2	6	723-3529
1-1/2	1-1/4	4	6-1/2	4	723-3531
1-1/2	1-1/4	4	6-1/2	6	723-3533
1-3/4	1-1/4	4	6-1/2	4	723-3534
1-3/4	1-1/4	4	6-1/2	6	723-3535
2	1-1/4	4	6-1/2	4	723-3537
2	1-1/4	4	6-1/2	6	723-3539
2	1-1/4	4	6-1/2	8	723-3541
2-1/2	2	4	7-5/8	6	723-3542



Extra Long Flute

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1/4"	3/8"	1-3/4"	3-9/16"	4	723-3601
5/16	3/8	2	3-3/4	4	723-3603
3/8	3/8	2-1/2	4-1/4	4	723-3605
1/2	1/2	3	5	4	723-3607
5/8	5/8	4	6-1/8	4	723-3609
5/8	1/2	4	6-1/8	4	723-3610
3/4	3/4	4	6-1/4	4	723-3611
3/4	1/2	4	6-1/4	4	723-3612

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
7/8"	7/8"	5"	7-1/4"	4	723-3613
1	1	6	8-1/2	4	723-3615
1-1/4	1-1/4	6	8-1/2	6	723-3617
1-1/4	1-1/4	6	8-1/2	4	723-3618
1-1/2	1-1/4	6	8-1/2	6	723-3619
1-1/2	1-1/4	6	8-1/2	4	723-3620
1-1/2	1-1/4	8	10-9/16	6	723-3621

M42 8% Cobalt Multiple Flute Single End Mills

M42 单头多齿中心切削立铣刀

Center Cutting

- Suitable for use in a wide range of ferrous and non-ferrous materials.
- Excellent for use in finishing operations.
- Multi-flute design allows for higher feed rates.
- Center cutting is perfect for jobs that require drilling or plunge cutting to start a slot and for spot facing and counterboring.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1/8"	3/8"	3/8"	2-5/16"	4	723-3201
5/32	3/8	1/2	2-3/8	4	723-3202
3/16	3/8	1/2	2-3/8	4	723-3203
7/32	3/8	9/16	2-7/16	4	723-3900
1/4	3/8	5/8	2-7/16	4	723-3204
1/4	3/8	5/8	2-1/2	4	723-3205
9/32	3/8	3/4	2-1/2	4	723-3206
5/16	3/8	3/4	2-1/2	4	723-3207
3/8	3/8	3/4	2-1/2	4	723-3209
7/16	3/8	13/16	2-1/2	4	723-3208
7/16	3/8	1	2-11/16	4	723-3901
15/32	3/8	1	2-11/16	4	723-3902
1/2	3/8	13/16	2-1/2	4	723-3210
1/2	3/8	1	2-11/16	4	723-3903
1/2	1/2	1-1/4	3-1/4	4	723-3211
1/2	3/8	1	2-11/16	4	723-3212
9/16	1/2	1-1/8	3-3/8	4	723-3214
5/8	1/2	1-3/8	3-3/8	4	723-3905
5/8	5/8	1-5/8	3-3/4	4	723-3213
11/16	5/8	1-5/8	3-3/4	4	723-3215
3/4	1/2	1-5/8	3-5/8	4	723-3907
3/4	5/8	1-5/8	3-3/4	4	723-3216
3/4	3/4	1-5/8	3-7/8	4	723-3217
13/16	3/4	1-7/8	4-1/8	4	723-3909
7/8	5/8	1-1/2	3-5/8	4	723-3911
7/8	1/2	1-5/8	3-5/8	4	723-3913
7/8	1/2	1-7/8	4	4	723-3914
7/8	5/8	1-7/8	4	4	723-3912
7/8	3/4	1-7/8	4-1/8	4	723-3218
7/8	7/8	1-7/8	4-1/8	4	723-3219
15/16	3/4	1-7/8	4-1/8	4	723-3916
15/16	7/8	1-7/8	4-1/8	4	723-3915
1	1/2	1-7/8	3-7/8	4	723-3917
1	5/8	1-7/8	4	4	723-3920
1	5/8	1-7/8	4	6	723-3919
1	1/2	1-7/8	4-1/8	4	723-3918
1	3/4	1-7/8	4-1/8	4	723-3220
1	1	2	4-1/2	4	723-3221
1	1	3	5-1/2	4	723-3222
1-1/16	3/4	1-5/8	3-7/8	4	723-3921

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1-1/16"	3/4"	1-5/8"	3-7/8"	6	723-3922
1-1/8	3/4	1-1/2	3-7/8	6	723-3924
1-1/8	3/4	2	4-1/8	6	723-3950
1-1/8	7/8	2	4-1/4	6	723-3923
1-1/8	1	2	4-1/2	4	723-3223
1-1/8	1	2	4-1/2	6	723-3225
1-3/16	3/4	1-1/2	3-7/8	6	723-3926
1-3/16	3/4	1-5/8	3-7/8	4	723-3925
1-1/4	3/4	1-1/2	3-7/8	6	723-3928
1-1/4	3/4	2	4-1/2	6	723-3975
1-1/4	1-1/4	2	4-1/2	4	723-3227
1-1/4	1	2	4-1/2	6	723-3927
1-1/4	1-1/4	2	4-1/2	6	723-3228
1-1/4	1-1/4	3	5-1/2	4	723-3226
1-5/16	3/4	1-5/8	3-7/8	4	723-3929
1-5/16	3/4	2	4-3/8	6	723-3930
1-3/8	3/4	2	4-3/8	6	723-3932
1-3/8	1	2	4-1/2	6	723-3931
1-3/8	1-1/4	2	4-1/2	4	723-3933
1-7/16	3/4	1-5/8	3-7/8	4	723-3935
1-7/16	3/4	2	4-3/8	6	723-3936
1-1/2	3/4	2	4-3/8	6	723-3938
1-1/2	1-1/4	2	4-1/2	4	723-3229
1-1/2	1	2	4-1/2	6	723-3937
1-1/2	1-1/4	2	4-1/2	6	723-3230
1-5/8	3/4	1-5/8	4-1/8	4	723-3939
1-5/8	3/4	1-5/8	4-1/8	6	723-3942
1-5/8	3/4	2	4-1/2	6	723-3940
1-5/8	1-1/4	2	4-1/2	6	723-3941
1-3/4	1-1/4	2	4-1/2	4	723-3943
1-3/4	3/4	2	4-1/2	6	723-3944
1-3/4	1-1/4	2	4-1/2	6	723-3231
1-7/8	3/4	2	4-3/8	6	723-3951
1-7/8	1-1/4	2	4-3/8	6	723-3953
2	3/4	2	4-1/2	6	723-3955
2	1-1/4	2	4-1/2	4	723-3947
2	1-1/4	2	4-1/2	6	723-3239
2	1-1/4	2	4-1/2	8	723-3945

Long Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1/4"	3/8"	1-1/4"	3-1/16"	4	723-3301
1/4	3/8	1-3/4	3-9/16	4	723-3302
5/16	3/8	1-3/8	3-1/8	4	723-3303
3/8	3/8	1-1/2	3-1/4	4	723-3305
7/16	1/2	1-3/4	3-3/4	4	723-3306
1/2	1/2	2	4	4	723-3307
5/8	1/2	2-1/2	4-5/8	4	723-3308
5/8	5/8	2-1/2	4-5/8	4	723-3309
5/8	5/8	3	5-1/8	4	723-3311
3/4	3/4	2	4-1/4	4	723-3315
3/4	3/4	3	5-1/4	4	723-3313
3/4	1/2	3	5-1/4	4	723-3318
3/4	3/4	2	4-1/4	6	723-3317
7/8	7/8	3-1/2	5-3/4	4	723-3319
1	1	3	5-1/2	4	723-3321
1	3/4	4	6-1/2	4	723-3322
1	1	4	6-1/2	4	723-3325
1	1	3	5-1/2	6	723-3323
1-1/8	1	4	6-1/2	6	723-3324

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1-1/8	3/4	4	6-1/2	6	723-3326
1-1/4"	1-1/4"	3"	5-1/2"	4	723-3327
1-1/4	1-1/4	4	6-1/2	4	723-3331
1-1/4	1-1/4	3	5-1/2	6	723-3329
1-1/4	1	4	6-1/2	6	723-3328
1-1/4	3/4	4	6-1/2	6	723-3330
1-1/4	1-1/4	4	6-1/2	6	723-3332
1-3/8	1	4	6-1/2	6	723-3334
1-1/2	1-1/4	3	5-1/2	4	723-3333
1-1/2	1-1/4	4	6-1/2	4	723-3338
1-1/2	1-1/4	3	5-1/2	6	723-3335
1-1/2	1-1/4	4	6-1/2	6	723-3336
1-1/2	1	4	6-1/2	6	723-3339
1-3/4	1-1/4	3	5-1/2	4	723-3337
1-3/4	1-1/4	4	6-1/2	6	723-3340
2	1-1/4	4	6-1/2	4	723-3342
2	1-1/4	4	6-1/2	6	723-3344
2	1-1/4	4	6-1/2	8	723-3346
2-1/2	2	4	7-5/8	6	723-3348



M42 8% Cobalt Multiple Flute Single End Mills

M42 单头中心切削超长刃立铣刀

Center Cutting

Extra Long Length



Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1/4"	3/8"	1-3/4"	3-1/2"	4	723-3401	3/4"	1/2"	4"	6-1/4"	4	723-3412
1/4	3/8	1-3/4	3-9/16	4	723-3402	7/8	7/8	5	7-1/4	4	723-3413
5/16	3/8	2	3-3/4	4	723-3403	1	1	6	8-1/2	4	723-3415
3/8	3/8	2-1/2	4-1/4	4	723-3405	1-1/4	1-1/4	6	8-1/2	4	723-3417
1/2	1/2	3	5"	4	723-3407	1-1/4	1-1/4	6	8-1/2	6	723-3418
5/8	1/2	4	6-1/8	4	723-3410	1-1/2	1-1/4	6	8-1/2	4	723-3419
5/8	5/8	4	6-1/8	4	723-3409	1-1/2	1-1/4	6	8-1/2	6	723-3416
3/4	3/4	4	6-1/4	4	723-3411	1-1/2	1-1/4	8	10-9/16	6	723-3400

4 Flute Double End Mills 4 齿双头中心切削立铣刀

High Speed Steel, Center Cutting



- Center cutting design allows for plunge milling into solid material at the beginning of a slotting operation.

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8	3/8	3/8	3-1/16	720-4102	721-4102	722-4102
5/32	3/8	7/16	3-1/8	720-4103	721-4103	722-4103
3/16	3/8	1/2	3-1/4	720-4104	721-4104	722-4104
1/4	3/8	5/8	3-3/8	720-4106	721-4106	722-4106
5/16	3/8	3/4	3-1/2	720-4108	721-4108	722-4108
11/32	3/8	3/4	3-1/2	720-4109		722-4109
3/8	3/8	3/4	3-1/2	720-4110	721-4110	722-4110
7/16	1/2	1	4-1/8	720-4111		
1/2	1/2	1	4-1/8	720-4112	721-4112	722-4112
5/8	5/8	1-3/8	5	720-4114	721-4114	722-4114
3/4	3/4	1-5/8	5-5/8	720-4116	721-4116	722-4116
7/8	7/8	1-7/8	6-1/8	720-4118	721-4118	722-4118
1	1	1-7/8	6-3/8	720-4120	721-4120	722-4120

4 Flute Double End Mills 4 齿双头立铣刀

High Speed Steel

- Recommended for finishing operations in a wide range of ferrous and non-ferrous materials.
- Multiple flutes generate higher surface finish than 2 flute end mills.
- More economical in production milling than single end mills.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
7/64"	3/8"	3/8"	3-1/16"	720-4002	721-4002	722-4002
1/8	3/8	3/8	3-1/16	720-4004	721-4004	722-4004
9/64	3/8	7/16	3-1/8	720-4006	721-4006	722-4006
5/32	3/8	7/16	3-1/8	720-4008	721-4008	722-4008
11/64	3/8	7/16	3-1/8	720-4011	721-4011	722-4011
11/64	3/8	1/2	3-1/4	720-4010	721-4010	722-4010
3/16	3/8	1/2	3-1/4	720-4012	721-4012	722-4012
13/64	3/8	1/2	3-1/4	720-4013	721-4013	722-4013
13/64	3/8	9/16	3-1/4	720-4014	721-4014	722-4014
7/32	3/8	9/16	3-1/4	720-4016	721-4016	722-4016
15/64	3/8	9/16	3-1/4	720-4017	721-4017	722-4017
15/64	3/8	5/8	3-3/8	720-4018	721-4018	722-4018
1/4	3/8	5/8	3-3/8	720-4020	721-4020	722-4020
17/64	3/8	11/16	3-3/8	720-4022	721-4022	722-4022
9/32	3/8	11/16	3-3/8	720-4024	721-4024	722-4024
19/64	3/8	11/16	3-3/8	720-4025	721-4025	722-4025
19/64	3/8	3/4	3-1/2	720-4026	721-4026	722-4026
5/16	3/8	3/4	3-1/2	720-4028	721-4028	722-4028
21/64	3/8	3/4	3-1/2	720-4030	721-4030	722-4030
11/32	3/8	3/4	3-1/2	720-4032	721-4032	722-4032
23/64	3/8	3/4	3-1/2	720-4034	721-4034	722-4034
3/8	3/8	3/4	3-1/2	720-4036	721-4036	722-4036
25/64	1/2	1	4-1/8	720-4038	721-4038	722-4038
13/32	1/2	1	4-1/8	720-4040	721-4040	722-4040

Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
13/32	1/2	1	4-3/16	720-4039	721-4039	722-4039
27/64	1/2	1	4-1/8	720-4042	721-4042	722-4042
7/16	1/2	1	4-1/8	720-4044	721-4044	722-4044
29/64	1/2	1	4-1/8	720-4046	721-4046	722-4046
15/32	1/2	1	4-1/8	720-4048	721-4048	722-4048
31/64	1/2	1	4-1/8	720-4050	721-4050	722-4050
1/2	1/2	1	4-1/8	720-4052	721-4052	722-4052
17/32	5/8	1-3/8	5	720-4054	721-4054	722-4054
9/16	5/8	1-3/8	5	720-4056	721-4056	722-4056
19/32	5/8	1-3/8	5	720-4058	721-4058	722-4058
5/8	5/8	1-3/8	5	720-4060	721-4060	722-4060
21/32	3/4	1-5/8	5-5/8	720-4062	721-4062	722-4062
11/16	3/4	1-5/8	5-5/8	720-4064	721-4064	722-4064
23/32	3/4	1-5/8	5-5/8	720-4066	721-4066	722-4066
3/4	3/4	1-5/8	5-5/8	720-4068	721-4068	722-4068
25/32	7/8	1-7/8	6-1/8	720-4070	721-4070	722-4070
13/16	7/8	1-7/8	6-1/8	720-4072	721-4072	722-4072
27/32	7/8	1-7/8	6-1/8	720-4074	721-4074	722-4074
7/8	7/8	1-7/8	6-1/8	720-4076	721-4076	722-4076
29/32	1	1-7/8	6-3/8	720-4078	721-4078	722-4078
15/16	1	1-7/8	6-3/8	720-4080	721-4080	722-4080
31/32	1	1-7/8	6-3/8	720-4082	721-4082	722-4082
1	1	1-7/8	6-3/8	720-4084	721-4084	722-4084

M42 8% Cobalt 4 Flute Double End Mills M42 4 齿双头立铣刀

- Recommended for finishing operations in a wide range of ferrous and non-ferrous materials.
- Multiple flutes generate higher surface finish than 2 flute end mills.
- More economical in production milling than single end mills.



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
7/64"	3/8"	3/8"	3-1/16"	723-4002	27/64	1/2	1	4-1/8	723-4042
1/8	3/8	3/8	3-1/16	723-4004	7/16	1/2	1	4-1/8	723-4044
9/64	3/8	7/16	3-1/8	723-4006	29/64	1/2	1	4-1/8	723-4046
5/32	3/8	7/16	3-1/8	723-4008	15/32	1/2	1	4-1/8	723-4048
11/64	3/8	1/2	3-1/4	723-4010	31/64	1/2	1	4-1/8	723-4050
3/16	3/8	1/2	3-1/4	723-4012	1/2	1/2	1	4-1/8	723-4052
13/64	3/8	1/2	3-1/4	723-4013	17/32	5/8	1-3/8	5	723-4054
13/64	3/8	9/16	3-1/4	723-4014	9/16	5/8	1-3/8	5	723-4056
7/32	3/8	9/16	3-1/4	723-4016	19/32	5/8	1-3/8	5	723-4058
15/64	3/8	5/8	3-3/8	723-4018	5/8	5/8	1-3/8	5	723-4060
1/4	3/8	5/8	3-3/8	723-4020	21/32	3/4	1-5/8	5-5/8	723-4062
17/64	3/8	11/16	3-3/8	723-4022	11/16	3/4	1-5/8	5-5/8	723-4064
9/32	3/8	11/16	3-3/8	723-4024	23/32	3/4	1-5/8	5-5/8	723-4066
19/64	3/8	11/16	3-3/8	723-4025	3/4	3/4	1-5/8	5-5/8	723-4068
19/64	3/8	3/4	3-1/2	723-4026	25/32	7/8	1-7/8	6-1/8	723-4070
5/16	3/8	3/4	3-1/2	723-4028	13/16	7/8	1-7/8	6	723-4072
21/64	3/8	3/4	3-1/2	723-4030	27/32	7/8	1-7/8	6-1/8	723-4074
11/32	3/8	3/4	3-1/2	723-4032	7/8	7/8	1-7/8	6-1/8	723-4076
23/64	3/8	3/4	3-1/2	723-4034	29/32	1	1-7/8	6-3/8	723-4078
3/8	3/8	3/4	3-1/2	723-4036	15/16	1	1-7/8	6-3/8	723-4080
25/64	1/2	1	4-1/8	723-4038	31/32	1	1-7/8	6-3/8	723-4082
13/32	1/2	1	4-1/8	723-4040	1	1	1-7/8	6-3/8	723-4084

M42 8% Cobalt 4 Flute Double End Mills

Center Cutting

M42 4 齿双头中心切削立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	3/8"	3-1/16"	723-4102	1/2	1/2	1	4-1/8	723-4112
5/32	3/8	7/16	3-1/8	723-4103	9/16"	5/8"	1-3/8"	5	723-4113
3/16	3/8	1/2	3-1/4	723-4104	5/8	5/8	1-3/8	5	723-4114
7/32	3/8	9/16	3-1/4	723-4105	11/16	3/4	1-5/8	5-5/8	723-4119
1/4	3/8	5/8	3-3/8	723-4106	13/32	1/2	1	4-1/8	723-4115
9/32	3/8	11/16	3-3/8	723-4107	3/4	3/4	1-5/8	5-5/8	723-4116
5/16	3/8	3/4	3-1/2	723-4108	15/32	1/2	1	4-1/8	723-4117
11/32	3/8	3/4	3-1/2	723-4109	7/8	7/8	1-7/8	6-1/8	723-4118
3/8	3/8	3/4	3-1/2	723-4110	1	1	1-7/8	6-3/8	723-4120
7/16	1/2	1	4-1/8	723-4111					

M42 8% Cobalt 60° Helical Profiling End Mills

Center Cutting

M42 60 度大螺旋角立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Flute No.	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Flute No.	Order No.
1/4"	3/8"	5/8"	2-7/16"	3	723-9500	3/4	3/4	1-5/8	3-7/8	3	723-9530
5/16	3/8	3/4	2-1/2	3	723-9505	7/8	7/8	1-7/8	4-1/8	4	723-9535
3/8	3/8	3/4	2-1/2	3	723-9510	1	1	2	4-1/2	4	723-9540
7/16	3/8	1	2-11/16	3	723-9515	1-1/4	1-1/4	2	4-1/2	4	723-9545
1/2	1/2	1-1/4	3-1/4	3	723-9520	1-1/2	1-1/4	2	4-1/2	4	723-9550
5/8	5/8	1-5/8	3-3/4	3	723-9525	2	1-1/4	2	4-1/2	4	723-9555

ASP-30(Powdered Cobalt) Single End Mills

Center Cutting

含钴粉末冶金高速钢 60 度大螺旋角立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Flute No.	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Flute No.	Order No.
1/4"	3/8"	5/8"	2-7/16"	3	723-9408	5/8	5/8	1-5/8	3-3/4	3	723-9420
5/16	3/8	3/4	2-1/2	3	723-9410	3/4	3/4	1-5/8	3-7/8	3	723-9424
3/8	3/8	3/4	2-1/2	3	723-9412	1	1	2	4-1/2	4	723-9432
1/2	1/2	1-1/4	3-1/4	3	723-9416						

Roughing End Mills 单头波刃立铣刀

High Speed Steel
Regular Length

Size	Shank Dia.	Flute Length	Overall Length	No. Of Flutes	M2 Order No.	M2Al Order No.
1/4"	3/8"	3/4"	2-1/2"	4	720-5001	721-5001
1/4"	3/8"	5/8"	2-7/16"	4	720-5002	721-5002
1/4"	3/8"	1-1/4"	3-1/16"	4	720-5003	721-5003
5/16"	3/8"	3/4"	2-1/2"	4	720-5005	721-5005
5/16"	3/8"	1-3/8"	3-1/8"	4	720-5007	721-5007
3/8"	3/8"	3/4"	2-1/2"	4	720-5008	721-5008
3/8"	3/8"	7/8"	2-5/8"	4	720-5009	721-5009
3/8"	3/8"	1-1/2"	3-1/4"	4	720-5011	721-5011
7/16"	3/8"	1"	2-11/16"	4	720-5012	721-5012
1/2"	1/2"	1-1/4"	3-1/4"	4	720-5013	721-5013
5/8"	5/8"	1-5/8"	3-3/4"	4	720-5017	721-5017
11/16"	5/8"	1-5/8"	3-3/4"	4	720-5019	721-5019
3/4"	5/8"	1-5/8"	3-3/4"	4	720-5020	721-5020
3/4"	5/8"	1-5/8"	3-7/8"	4	720-5021	721-5021
3/4"	3/4"	1-5/8"	3-3/4"	4	720-5025	721-5025
7/8"	3/4"	1-5/8"	4-1/8"	4	720-5027	721-5027
7/8"	7/8"	1-7/8"	4-1/8"	4	720-5029	721-5029
15/16"	3/4"	1-7/8"	4-1/8"	4	720-5031	721-5031
1"	3/4"	2"	4-1/2"	4		721-5066
1"	3/4"	2"	4-1/2"	6	720-5033	721-5033
1"	1"	2"	4-1/2"	6	720-5035	721-5035
1-1/8"	3/4"	2"	4-1/2"	6	720-5037	721-5037
1-1/8"	1"	2"	4-1/2"	6	720-5039	721-5039
1-1/4"	3/4"	1-1/8"	3-5/8"	6	720-5040	
1-1/4"	3/4"	3"	5-1/2"	6		721-5040
1-1/4"	3/4"	2"	4-1/2"	6	720-5041	721-5041
1-1/4"	1-1/4"	2"	4-1/2"	6	720-5043	721-5043
1-1/2"	3/4"	2"	4-1/2"	6	720-5045	721-5045
1-1/2"	1-1/4"	2"	4-1/2"	6	720-5047	721-5047
1-1/2"	3/4"	1-1/8"	3-5/8"	6	720-5048	
1-3/4"	3/4"	2"	4-1/2"	6	720-5049	721-5049
1-3/4"	1-1/4"	2"	5-3/4"	6	720-5050	721-5050
1-3/4"	1-1/4"	2"	4-1/2"	6	720-5051	721-5051
2"	3/4"	2"	4-1/2"	8	720-5053	721-5053
2"	1-1/4"	2"	4-1/2"	6	720-5054	721-5054
2"	1-1/4"	2"	4-1/2"	8	720-5055	721-5055
2"	1-1/4"	2"	6-1/2"	8	720-5056	721-5056
2"	2"	2"	5-3/4"	8	720-5057	721-5057
2"	2"	3"	6-3/4"	6	720-5058	721-5058
2"	2"	4"	7-3/4"	8	720-5059	721-5059
2"	2"	4"	7-3/4"	6	720-5060	721-5060
2-1/2"	2"	4"	7-3/4"	8	720-5061	721-5061
2-1/2"	2-1/2"	4"	7-3/4"	8	720-5063	721-5063
2"	2"	3"	6-3/4"	8	720-5065	721-5065



Medium Length

Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	M2 Order No.	M2Al Order No.
2"	2"	5"	8-3/4"	8	720-5101	721-5101
2"	2"	6"	9-3/4"	8	720-5103	721-5103
2-1/2"	2"	6"	9-3/4"	8	720-5105	721-5105
2-1/2"	2-1/2"	6"	9-3/4"	8	720-5107	721-5107

Long Length

Size	Shank Dia.	Flute Length	Overall Length	No. of flutes	M2 Order No.	M2Al Order No.
1/2"	1/2"	2"	4"	4	720-5201	721-5201
5/8"	5/8"	2-1/2"	4-5/8"	4	720-5203	721-5203
3/4"	5/8"	3"	5-1/4"	4	720-5205	721-5205
3/4"	5/8"	3"	5-1/8"	4	720-5207	721-5207
3/4"	3/4"	3"	5-1/4"	4	720-5209	721-5209
7/8"	3/4"	3-1/2"	5-5/8"	4	720-5211	721-5211
7/8"	7/8"	3-1/2"	5-3/4"	4	720-5213	721-5213
1"	3/4"	6"	6-1/2"	6		721-5214
1"	1"	4"	6-1/2"	6	720-5215	721-5215
1"	1"	6"	8-1/2"	6	720-5217	721-5217
1-1/4"	1-1/4"	3"	5-1/2"	6	720-5218	721-5218
1-1/4"	3/4"	4"	6-1/4"	6	720-5219	721-5219
1-1/4"	1-1/4"	4"	6-1/2"	6	720-5221	721-5221
1-1/4"	1-1/4"	6"	8-1/2"	6	720-5223	721-5223
1-1/2"	1-1/4"	3"	5-1/2"	6	720-5224	721-5224
1-1/2"	3/4"	4"	6-1/4"	6	720-5225	721-5225
1-1/2"	1-1/4"	4"	6-1/2"	6	720-5227	721-5227
1-1/2"	1-1/4"	5"	7-1/2"	6	720-5228	721-5228
1-1/2"	1-1/4"	6"	8-1/2"	6	720-5229	721-5229
1-3/4"	1-1/4"	4"	6-1/2"	6	720-5231	721-5231
2"	1-1/4"	4"	6-1/2"	6	720-5232	721-5232
2"	1-1/4"	4"	6-1/2"	8	720-5233	721-5233
2"	2"	6"	9-3/4"	6	720-5234	721-5234
2"	2"	7"	10-3/4"	8	720-5235	721-5235
2"	2"	8"	11-3/4"	6	720-5236	721-5236
2"	2"	8"	11-3/4"	8	720-5237	721-5237
2"	2"	10"	13-3/4"	8	720-5239	721-5239
2"	2"	12"	15-3/4"	8	720-5241	721-5241
2-1/2"	2"	8"	11-3/4"	8	720-5243	721-5243
2-1/2"	2-1/2"	8"	11-3/4"	8	720-5245	721-5245
2-1/2"	2-1/2"	10"	13-3/4"	8	720-5247	721-5247
2-1/2"	2-1/2"	12"	15-3/4"	8	720-5249	721-5249

5 Flute Roughing End Mills

High Speed Steel 5 齿单头波刃立铣刀



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.
7/8"	3/4"	1-7/8"	4-1/8"	720-5701	721-5701	1"	3/4"	2"	4-1/2"	720-5709	721-5709
7/8"	3/8"	3-1/2"	5-3/4"	720-5703	721-5703	1"	1"	2"	4-1/2"	720-5711	721-5711
7/8"	7/8"	1-7/8"	4-1/8"	720-5705	721-5705	1"	1"	4"	6-1/2"	720-5713	721-5713
7/8"	7/8"	3-1/2"	5-3/4"	720-5707	721-5707	1-1/8"	1"	2"	4-1/2"	720-5715	721-5715

M42 8% Cobalt Coarse Pitch Roughing End Mills 粗齿波刃立铣刀(8%钴)

Non Center Cutting

Cobalt

- Remove more metal in less time.
- Need less horsepower.
- Have excellent performance on heavy duty machining.
- Tooth form provides excellent heat dissipation during heavy cutting jobs, is effective for cuts on high tensile steels.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	4	723-5703	723-6703
1/4	3/8	1/4	2-1/16	3	723-5706	723-6706
1/4	3/8	5/16	2-1/8	3	723-5705	723-6705
1/4	3/8	5/8	2-7/16	3	723-5708	723-6708
1/4	3/8	7/8	2-11/16	3	723-5701	723-6701
1/4	3/8	1-1/8	2-15/16	3	723-5702	723-6702
1/4	3/8	1-3/8	3-1/8	3	723-5707	723-6707
1/4	3/8	5/8	2-7/16	4	723-5930	723-6930
1/4	3/8	3/4	2-1/2	4	723-5709	723-6709
1/4	3/8	1-1/8	2-15/16	4	723-5710	723-6710
1/4	3/8	1-1/4	3-1/16	4	723-5711	723-6711
1/4	3/8	1-1/4	3-1/8	4	723-5936	723-6936
9/32	3/8	3/4	2-1/2	3	723-5712	723-6712
5/16	3/8	7/16	2-3/16	3	723-5714	723-6714
5/16	3/8	3/4	2-1/2	3	723-5715	723-6715
5/16	3/8	1-1/8	2-15/16	3	723-5717	723-6717
5/16	3/8	3/4	2-1/2	4	723-5716	723-6716
5/16	3/8	1-3/8	3-3/16	4	723-5942	723-6942
5/16	3/8	1-3/8	3-3/8	4	723-5713	723-6713
11/32	3/8	3/4	2-1/2	3	723-5725	723-6725
3/8	3/8	3/8	2-5/32	3	723-5718	723-6718
3/8	3/8	1/2	2-5/16	3	723-5946	723-6946
3/8	3/8	7/8	2-7/8	3	723-5949	723-6949
3/8	3/8	3/8	2-5/32	4	723-5719	723-6719
3/8	3/8	7/16	2-3/16	4	723-5720	723-6720
3/8	3/8	3/4	2-1/2	4	723-5721	723-6721
3/8	3/8	7/8	2-5/8	4	723-5722	723-6722
3/8	3/8	1-1/8	2-15/16	4	723-5726	723-6726
3/8	3/8	1-1/2	3-1/4	4	723-5723	723-6723
3/8	3/8	1-5/8	3-3/16	4	723-5724	723-6724
13/32	3/8	1	2-11/16	4	723-5735	723-6735
7/16	3/8	1	2-11/16	4	723-5727	723-6727
7/16	1/2	7/8	3	4	723-5729	
15/32	1/2	1-1/4	3-1/4	4	723-5728	723-6728
1/2	1/2	1/2	2-1/2	3	723-5730	723-6730
1/2	1/2	1/2	2-1/2	4	723-5952	723-6952
1/2	1/2	5/8	2-5/8	4	723-5731	723-6731
1/2	1/2	1	3	4	723-5732	723-6732
1/2	1/2	1-1/4	3-1/4	4	723-5733	723-6733
1/2	1/2	1-5/8	3-5/8	4	723-5734	723-6734
1/2	1/2	2	4	4	723-5736	723-6736
1/2	1/2	2-1/2	4-1/2	4	723-5738	723-6738
1/2	1/2	3	5	4	723-5739	723-6739
9/16	1/2	1-3/8	3-3/8	4	723-5742	723-6742
5/8	5/8	5/8	2-3/4	3	723-5745	723-6745
5/8	5/8	5/8	2-3/4	4	723-5746	723-6746
5/8	5/8	3/4	2-7/8	4	723-5747	723-6747
5/8	5/8	1-1/4	3-3/8	4	723-5743	723-6743
5/8	5/8	1-5/8	3-3/4	4	723-5748	723-6748
5/8	5/8	2	4-1/8	4	723-5749	723-6749
5/8	5/8	2-1/8	4-1/4	4	723-5750	723-6750
5/8	5/8	2-1/2	4-5/8	4	723-5751	723-6751
5/8	5/8	3-1/8	5-1/4	4	723-5757	723-6757
11/16	5/8	1-5/8	3-3/4	4	723-5760	723-6760
3/4	5/8	1-5/8	3-3/4	4	723-5766	723-6766
3/4	5/8	1-5/8	3-7/8	4	723-5761	723-6761
3/4	3/4	3/4	2-7/8	3	723-5763	723-6763
3/4	3/4	7/8	3-1/8	3	723-5765	723-6765
3/4	3/4	1-1/2	3-3/4	3	723-5768	723-6768
3/4	3/4	3/4	2-7/8	4	723-5764	723-6764
3/4	3/4	3/4	3	4	723-5762	723-6762
3/4	3/4	1-1/4	3-1/2	4	723-5767	723-6767
3/4	3/4	1-5/8	3-3/4	4	723-5769	723-6769
3/4	3/4	1-5/8	3-7/8	4	723-5770	723-6770
3/4	3/4	2-1/4	4-1/2	4	723-5771	723-6771
3/4	3/4	2-1/2	4-3/4	4	723-5773	723-6773
3/4	3/4	3	5-1/4	4	723-5775	723-6775
3/4	3/4	4-1/8	6-3/8	4	723-5776	723-6776
13/16	3/4	1-7/8	4-1/8	4	723-5777	723-6777
7/8	3/4	7/8	3-1/8	3	723-5778	723-6778
7/8	3/4	1	3-1/4	3	723-5779	723-6779

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
7/8"	3/4"	1-1/8"	3-3/8"	5	723-5780	723-6780
7/8	3/4	1-7/8	4-1/8	5	723-5781	723-6781
7/8	3/4	3-1/2	5-3/4	5	723-5782	723-6782
7/8	3/4	3-1/2	5-5/8	5	723-5784	723-6784
7/8	7/8	1-1/8	3-3/8	5	723-5786	723-6786
7/8	7/8	1-7/8	4-1/8	5	723-5787	723-6787
7/8	7/8	3-1/2	5-3/4	5	723-5789	723-6789
7/8	1	1-3/4	5	3	723-5955	723-6955
1	3/4	1-1/8	3-3/8	5	723-5792	723-6792
1	3/4	1-1/2	3-3/8	5	723-5791	723-6791
1	3/4	1-1/2	3-3/4	5	723-5794	723-6794
1	3/4	1-7/8	4-1/8	5	723-5793	723-6793
1	3/4	2	4-1/4	5	723-5795	723-6795
1	3/4	3	5-1/4	5	723-5796	723-6796
1	3/4	4	6-1/4	5	723-5797	723-6797
1	3/4	1-1/8	3-3/8	6	723-5790	723-6790
1	1	1	3-1/2	3	723-5799	723-6799
1	1	1-3/4	5	3	723-5958	723-6958
1	1	1	3-1/2	5	723-5800	723-6800
1	1	1-1/8	3-5/8	5	723-5801	723-6801
1	1	1-5/8	4-1/8	5	723-5798	723-6798
1	1	2	4-1/2	5	723-5802	723-6802
1	1	3	5-1/2	5	723-5805	723-6805
1	1	4	6-1/2	5	723-5808	723-6808
1	1	6	8-1/2	5	723-5811	723-6811
1-1/8	3/4	1-1/8	3-3/8	6	723-5814	723-6814
1-1/8	3/4	2	4-1/4	6	723-5817	723-6817
1-1/8	1	2	4-1/2	6	723-5820	723-6820
1-1/8	1	3-1/2	6	6	723-5823	723-6823
1-1/4	3/4	1-1/8	3-3/8	6	723-5826	723-6826
1-1/4	3/4	2	4-1/4	6	723-5829	723-6829
1-1/4	1-1/4	2	5-1/4	3	723-5836	723-6836
1-1/4	1-1/4	1-1/4	4	4	723-5833	723-6833
1-1/4	1-1/4	1-3/8	3-7/8	6	723-5834	723-6834
1-1/4	1-1/4	2	4-1/2	6	723-5835	723-6835
1-1/4	1-1/4	3	5-1/2	6	723-5838	723-6838
1-1/4	1-1/4	4	6-1/2	6	723-5841	723-6841
1-1/4	1-1/4	6	8-1/2	6	723-5844	723-6844
1-3/8	3/4	1-1/8	3-3/8	6	723-5847	723-6847
1-3/8	3/4	2	4-1/4	6	723-5850	723-6850
1-1/2	3/4	1-1/8	3-3/8	6	723-5853	723-6853
1-1/2	3/4	1-1/2	3-3/4	6	723-5854	723-6854
1-1/2	3/4	2	4-1/4	6	723-5856	723-6856
1-1/2	3/4	4	6-1/4	6	723-5858	723-6858
1-1/2	1-1/4	2	4-1/2	6	723-5859	723-6859
1-1/2	1-1/4	3	5-1/2	6	723-5862	723-6862
1-1/2	1-1/4	4	6-1/2	6	723-5865	723-6865
1-1/2	1-1/4	5	7-1/2	6	723-5868	723-6868
1-1/2	1-1/4	6	8-1/2	6	723-5871	723-6871
1-1/2	1-1/4	6-1/8	8-5/8	6	723-5869	723-6869
1-3/4	3/4	1-1/8	3-3/8	6	723-5874	723-6874
1-3/4	3/4	2	4-1/4	6	723-5877	723-6877
1-3/4	1-1/4	2	4-1/2	6	723-5880	723-6880
1-3/4	1-1/4	4	6-1/2	8	723-5883	723-6883
2	3/4	1-1/8	3-3/8	8	723-5886	723-6886
2	3/4	2	4-1/2	8	723-5889	723-6889
2	1-1/4	2	4-1/2	8	723-5892	723-6892
2	1-1/4	3-1/8	5-5/8	8	723-5893	723-6893
2	1-1/4	4	6-1/2	8	723-5895	723-6895
2	1-1/4	4	7-3/4	8	723-5897	
2	1-1/4	6-1/8	8-5/8	8	723-5896	723-6896
2	2	3	6-3/4	6	723-5899	723-6899
2	2	4	7-3/4	6	723-5902	723-6902
2	2	6	9-3/4	6	723-5908	723-6908
2	2	2	5-3/4	8	723-5898	723-6898
2	2	3	6-3/4	8	723-5901	723-6901
2	2	4	7-3/4	8	723-5904	723-6904
2	2	5	8-3/4	8	723-5907	723-6907
2	2	6	9-3/4	8	723-5910	723-6910
2	2	7	10-3/4	8	723-5911	723-6911
2	2	8	11-3/4	8	723-5913	723-6913
2	2	10	13-3/4	8	723-5916	723-6916
2	2	12	15-3/4	8	723-5919	723-6919

M42 8% Cobalt Coarse Pitch Roughing End Mills 粗齿波刃中心切削立铣刀(8%钴)

Center Cutting



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	4	724-0008	724-1008
1/4	3/8	1/4	2-1/16	3	724-0011	724-1011
1/4	3/8	5/16	2-1/8	3	724-0014	724-1014
1/4	3/8	1/4	2-1/16	3	724-0017	724-1017
1/4	3/8	5/8	2-7/16	3	724-0020	724-1020
1/4	3/8	5/8	2-7/16	4	724-0023	724-1023
1/4	3/8	7/8	2-11/16	3	724-0026	724-1026
1/4	3/8	3/4	2-1/2	4	724-0029	724-1029
1/4	3/8	1-1/8	2-15/16	4	724-0032	724-1032
1/4	3/8	1-1/4	3-1/16	4	724-0035	724-1035
1/4	3/8	1-1/4	3-1/8	4	724-0038	724-1038
1/4	3/8	1-3/8	3-1/8	3	724-0041	724-1041
9/32	3/8	3/4	2-1/2	3	724-0044	724-1044
5/16	3/8	7/16	2-3/16	3	724-0047	724-1047
5/16	3/8	3/4	2-1/2	3	724-0050	724-1050
5/16	3/8	3/4	2-1/2	4	724-0053	724-1053
5/16	3/8	1-1/8	2-15/16	3	724-0056	724-1056
5/16	3/8	1-3/8	3-1/8	4	724-0059	724-1059
11/32	3/8	3/4	2-1/2	3	724-0062	724-1062
3/8	3/8	3/8	2-5/32	3	724-0065	724-1065
3/8	3/8	3/8	2-5/32	4	724-0068	724-1068
3/8	3/8	7/16	2-3/16	4	724-0071	724-1071
3/8	3/8	1/2	2-5/16	3	724-0074	724-1074
3/8	3/8	3/4	2-1/2	4	724-0077	724-1077
3/8	3/8	7/8	2-5/8	4	724-0080	724-1080
3/8	3/8	7/8	2-7/8	3	724-0083	724-1083
3/8	3/8	1-1/8	2-15/16	4	724-0086	724-1086
3/8	3/8	1-1/2	3-1/4	4	724-0089	724-1089
3/8	3/8	1-5/8	3-3/16	4	724-0092	724-1092
7/16	3/8	1	2-11/16	4	724-0095	724-1095
15/32	1/2	1-1/4	3-1/4	4	724-0098	724-1098
1/2	1/2	1/2	2-1/2	3	724-0101	724-1101
1/2	1/2	1/2	2-1/2	4	724-0104	724-1104
1/2	1/2	5/8	2-5/8	4	724-0110	724-1110
1/2	1/2	1	3	4	724-0113	724-1113
1/2	1/2	1-1/4	3-1/4	4	724-0116	724-1116
1/2	1/2	1-5/8	3-5/8	4	724-0119	724-1119
1/2	1/2	2	4	4	724-0122	724-1122
1/2	1/2	2-1/2	4-1/2	4	724-0125	724-1125
1/2	1/2	3	5	4	724-0128	724-1128
9/16	1/2	1-3/8	3-3/8	4	724-0131	724-1131
5/8	5/8	5/8	2-3/4	3	724-0134	724-1134
5/8	5/8	5/8	2-3/4	4	724-0137	724-1137
5/8	5/8	3/4	2-7/8	4	724-0140	724-1140
5/8	5/8	1-1/4	3-3/8	4	724-0143	724-1143
5/8	5/8	1-5/8	3-3/4	4	724-0146	724-1146
5/8	5/8	2	4-1/8	4	724-0149	724-1149
5/8	5/8	2-1/8	4-1/4	4	724-0152	724-1152
5/8	5/8	2-1/2	4-5/8	4	724-0155	724-1155
5/8	5/8	3	5-1/4	4	724-0158	724-1158
5/8	5/8	3-1/8	5-1/4	4	724-0161	724-1161
11/16	5/8	1-5/8	3-3/4	4	724-0164	724-1164
3/4	5/8	1-5/8	3-3/4	4	724-0167	724-1167
3/4	3/4	3/4	2-7/8	3	724-0170	724-1170
3/4	3/4	3/4	3	4	724-0173	724-1173
3/4	3/4	7/8	3-1/8	3	724-0176	724-1176
3/4	3/4	1-1/4	3-1/2	4	724-0179	724-1179
3/4	3/4	1-1/2	3-3/4	3	724-0182	724-1182
3/4	3/4	1-5/8	3-3/4	4	724-0185	724-1185
3/4	3/4	1-5/8	3-7/8	4	724-0187	724-1187
3/4	3/4	2-1/4	4-1/2	4	724-0188	724-1188
3/4	3/4	2-1/2	4-5/8	4	724-0191	724-1191
3/4	3/4	3	5-1/4	4	724-0194	724-1194
3/4	3/4	4-1/8	6-3/8	4	724-0197	724-1197
13/16	3/4	1-7/8	4-1/8	4	724-0200	724-1200
7/8	3/4	7/8	3-1/8	3	724-0203	724-1203
7/8	3/4	1	3-1/4	3	724-0206	724-1206

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
7/8"	3/4"	1-1/8"	3-3/8"	5	724-0209	724-1209
7/8	3/4	1-7/8	4-1/8	5	724-0212	724-1212
7/8	3/4	3-1/2	5-5/8	5	724-0215	724-1215
7/8	7/8	1-1/8	3-3/8	5	724-0218	724-1218
7/8	7/8	1-7/8	4-1/8	5	724-0221	724-1221
7/8	7/8	3-1/2	5-3/4	5	724-0224	724-1224
7/8	1	1-3/4	5	3	724-0227	724-1227
1	3/4	1-1/8	3-3/8	6	724-0230	724-1230
1	3/4	1-1/2	3-3/8	5	724-0233	724-1233
1	3/4	1-7/8	4-1/8	5	724-0236	724-1236
1	3/4	2	4-1/4	5	724-0239	724-1239
1	3/4	3	5-1/4	5	724-0242	724-1242
1	3/4	4	6-1/4	5	724-0245	724-1245
1	1	1	3-1/2	3	724-0248	724-1248
1	1	1	3-1/2	5	724-0251	724-1251
1	1	1-1/8	3-5/8	5	724-0254	724-1254
1	1	1-5/8	4-1/8	5	724-0257	724-1257
1	1	1-3/4	5	3	724-0260	724-1260
1	1	2	4-1/2	5	724-0263	724-1263
1	1	3	5-1/2	5	724-0266	724-1266
1	1	4	6-1/2	5	724-0269	724-1269
1	1	6	8-1/2	5	724-0272	724-1272
1-1/8	3/4	1-1/8	3-3/8	6	724-0275	724-1275
1-1/8	3/4	2	4-1/4	6	724-0278	724-1278
1-1/8	1	2	4-1/2	6	724-0281	724-1281
1-1/8	1	3-1/2	6	6	724-0284	724-1284
1-1/4	3/4	1-1/8	3-3/8	6	724-0287	724-1287
1-1/4	3/4	2	4-1/4	6	724-0290	724-1290
1-1/4	1-1/4	1-1/4	4	4	724-0296	724-1296
1-1/4	1-1/4	1-3/8	3-7/8	6	724-0299	724-1299
1-1/4	1-1/4	2	4-1/2	6	724-0302	724-1302
1-1/4	1-1/4	2	5-1/4	3	724-0305	724-1305
1-1/4	1-1/4	3	5-1/2	6	724-0308	724-1308
1-1/4	1-1/4	4	6-1/2	6	724-0311	724-1311
1-1/4	1-1/4	6	8-1/2	6	724-0314	724-1314
1-3/8	3/4	1-1/8	3-3/8	6	724-0317	724-1317
1-3/8	3/4	2	4-1/4	6	724-0320	724-1320
1-1/2	3/4	1-1/8	3-3/8	6	724-0323	724-1323
1-1/2	3/4	1-1/2	3-3/4	6	724-0326	724-1326
1-1/2	3/4	2	4-1/4	6	724-0329	724-1329
1-1/2	3/4	4	6-1/4	6	724-0332	724-1332
1-1/2	1-1/4	2	4-1/2	6	724-0335	724-1335
1-1/2	1-1/4	3	5-1/2	6	724-0338	724-1338
1-1/2	1-1/4	4	6-1/2	6	724-0341	724-1341
1-1/2	1-1/4	5	7-1/2	6	724-0344	724-1344
1-1/2	1-1/4	6	8-1/2	6	724-0347	724-1347
1-3/4	3/4	1-1/8	3-3/8	6	724-0350	724-1350
1-3/4	3/4	2	4-1/4	6	724-0353	724-1353
1-3/4	1-1/4	2	4-1/2	6	724-0356	724-1356
1-3/4	1-1/4	4	6-1/2	6	724-0359	724-1359
2	3/4	1-1/8	3-3/8	8	724-0362	724-1362
2	3/4	2	4-1/2	8	724-0365	724-1365
2	1-1/4	2	4-1/2	8	724-0368	724-1368
2	1-1/4	4	6-1/2	8	724-0371	724-1371
2	1-1/4	6-1/8	8-5/8	8	724-0374	724-1374
2	2	2	5-3/4	8	724-0377	724-1377
2	2	3	6-3/4	6	724-0380	724-1380
2	2	3	6-3/4	8	724-0383	724-1383
2	2	4	7-3/4	6	724-0386	724-1386
2	2	4	7-3/4	8	724-0389	724-1389
2	2	5	8-3/4	8	724-0392	724-1392
2	2	6	9-3/4	6	724-0395	724-1395
2	2	6	9-3/4	8	724-0398	724-1398
2	2	7	10-3/4	8	724-0401	724-1401
2	2	8	11-3/4	8	724-0404	724-1404
2	2	10	13-3/4	8	724-0407	724-1407
2	2	12	15-3/4	8	724-0410	724-1410

M42 8% Cobalt Fine Pitch Roughing End Mills

Non Center Cutting

细齿波刃立铣刀 (8% 钴)



- For use in high production milling in variety of exotic materials.
- Coating improves tool life and allows for higher speeds and feeds.
- Fine pitch design provides a better finish than coarse pitch end mills and eliminates chipping in harder materials.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	4	724-2008	724-3008
1/4	3/8	1/4	2-1/16	3	724-2011	724-3011
1/4	3/8	5/16	2-1/8	3	724-2014	724-3014
1/4	3/8	1/4	2-1/16	3	724-2017	724-3017
1/4	3/8	5/8	2-7/16	3	724-2020	724-3020
1/4	3/8	5/8	2-7/16	4	724-2023	724-3023
1/4	3/8	7/8	2-11/16	3	724-2026	724-3026
1/4	3/8	3/4	2-1/2	4	724-2029	724-3029
1/4	3/8	1-1/4	2-15/16	4	724-2032	724-3032
1/4	3/8	1-1/8	3-1/8	4	724-2033	724-3033
1/4	3/8	1-1/4	3-1/16	4	724-2035	724-3035
1/4	3/8	1-1/4	3-1/8	4	724-2038	724-3038
1/4	3/8	1-3/8	3-1/8	3	724-2041	724-3041
9/32	3/8	3/4	2-1/2	3	724-2044	724-3044
5/16	3/8	7/16	2-3/16	3	724-2047	724-3047
5/16	3/8	3/4	2-1/2	3	724-2050	724-3050
5/16	3/8	3/4	2-1/2	4	724-2053	724-3053
5/16	3/8	1-1/8	2-15/16	3	724-2056	724-3056
5/16	3/8	1-3/8	3-1/8	4	724-2059	724-3059
11/32	3/8	3/4	2-1/2	3	724-2062	724-3062
3/8	3/8	3/8	2-5/32	3	724-2065	724-3065
3/8	3/8	3/8	2-5/32	4	724-2068	724-3068
3/8	3/8	7/16	2-3/16	4	724-2071	724-3071
3/8	3/8	1/2	2-5/16	3	724-2074	724-3074
3/8	3/8	3/4	2-1/2	4	724-2077	724-3077
3/8	3/8	7/8	2-5/8	4	724-2080	724-3080
3/8	3/8	7/8	2-7/8	3	724-2083	724-3083
3/8	3/8	1-1/8	2-15/16	4	724-2086	724-3086
3/8	3/8	1-1/2	3-1/4	4	724-2089	724-3089
3/8	3/8	1-5/8	3-3/16	4	724-2092	724-3092
7/16	3/8	1	2-5/16	3	724-2093	724-3093
7/16	3/8	1	2-5/16	4	724-2094	724-3094
7/16	3/8	1	2-11/16	4	724-2095	724-3095
15/32	1/2	1-1/4	3-1/4	4	724-2098	724-3098
1/2	1/2	1/2	2-1/2	3	724-2101	724-3101
1/2	1/2	1/2	2-1/2	4	724-2107	724-3107
1/2	1/2	5/8	2-5/8	4	724-2110	724-3110
1/2	1/2	1	3	4	724-2113	724-3113
1/2	1/2	1-1/4	3-1/4	4	724-2116	724-3116
1/2	1/2	1-5/8	3-5/8	4	724-2119	724-3119
1/2	1/2	2	4	4	724-2122	724-3122
1/2	1/2	2-1/2	4-1/2	4	724-2125	724-3125
1/2	1/2	3	5	4	724-2128	724-3128
9/16	1/2	1-3/8	3-3/8	4	724-2131	724-3131
5/8	5/8	5/8	2-3/4	3	724-2134	724-3134
5/8	5/8	5/8	2-3/4	4	724-2137	724-3137
5/8	5/8	3/4	2-7/8	4	724-2140	724-3140
5/8	5/8	1-1/4	3-3/8	4	724-2143	724-3143
5/8	5/8	1-5/8	3-3/4	4	724-2146	724-3146
5/8	5/8	2	4-1/8	4	724-2149	724-3149
5/8	5/8	2-1/8	4-1/4	4	724-2152	724-3152
5/8	5/8	2-1/2	4-5/8	4	724-2155	724-3155
5/8	5/8	3	5-1/4	4	724-2158	724-3158
5/8	5/8	3-1/8	5-1/4	4	724-2161	724-3161
11/16	5/8	1-5/8	3-3/4	4	724-2164	724-3164
3/4	5/8	1-5/8	3-3/4	4	724-2167	724-3167
3/4	5/8	3	5-1/8	4	724-2168	724-3168
3/4	3/4	3/4	2-7/8	3	724-2170	724-3170
3/4	3/4	3/4	3	4	724-2173	724-3173
3/4	3/4	7/8	3-1/8	3	724-2176	724-3176
3/4	3/4	1-1/4	3-1/2	4	724-2179	724-3179
3/4	3/4	1-1/2	3-3/4	3	724-2182	724-3182
3/4	3/4	1-5/8	3-3/4	4	724-2185	724-3185
3/4	3/4	2-1/4	4-1/2	4	724-2188	724-3188
3/4	3/4	2-1/2	4-5/8	4	724-2191	724-3191
3/4	3/4	3	5-1/4	4	724-2194	724-3194
3/4	3/4	4-1/8	6-3/8	4	724-2197	724-3197
13/16	3/4	1-7/8	4-1/8	4	724-2200	724-3200
7/8	3/4	7/8	3-1/8	3	724-2203	724-3203
7/8	3/4	1	3-1/4	3	724-2206	724-3206

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
7/8"	3/4"	1-1/8"	3-3/8"	5	724-2209	724-3209
7/8	3/4	1-7/8	4-1/8	5	724-2212	724-3212
7/8	3/4	3-1/2	5-5/8	5	724-2215	724-3215
7/8	7/8	1-1/8	3-3/8	5	724-2218	724-3218
7/8	7/8	1-7/8	4-1/8	5	724-2221	724-3221
7/8	7/8	3-1/2	5-3/4	5	724-2224	724-3224
7/8	1	1-3/4	5	3	724-2227	724-3227
1	3/4	1-1/8	3-3/8	5	724-2229	724-3229
1	3/4	1-1/8	3-3/8	6	724-2230	724-3230
1	3/4	1-1/2	3-3/8	5	724-2233	724-3233
1	3/4	1-7/8	4-1/8	5	724-2236	724-3236
1	3/4	2	4-1/4	5	724-2239	724-3239
1	3/4	3	5-1/4	5	724-2242	724-3242
1	3/4	4	6-1/4	5	724-2245	724-3245
1	1	1	3-1/2	3	724-2248	724-3248
1	1	1	3-1/2	5	724-2251	724-3251
1	1	1-1/8	3-5/8	5	724-2254	724-3254
1	1	1-5/8	4-1/8	5	724-2257	724-3257
1	1	1-3/4	5	3	724-2260	724-3260
1	1	2	4-1/2	5	724-2263	724-3263
1	1	3	5-1/2	5	724-2266	724-3266
1	1	4	6-1/2	5	724-2269	724-3269
1	1	6	8-1/2	5	724-2272	724-3272
1-1/8	3/4	1-1/8	3-3/8	6	724-2275	724-3275
1-1/8	3/4	2	4-1/4	6	724-2278	724-3278
1-1/8	1	2	4-1/2	6	724-2281	724-3281
1-1/8	1	3-1/2	6	6	724-2284	724-3284
1-1/4	3/4	1-1/8	3-3/8	6	724-2287	724-3287
1-1/4	3/4	2	4-1/4	6	724-2290	724-3290
1-1/4	3/4	4	6-1/4	6	724-2294	724-3294
1-1/4	1-1/4	1-1/4	4	4	724-2296	724-3296
1-1/4	1-1/4	1-3/8	3-7/8	6	724-2299	724-3299
1-1/4	1-1/4	2	4-1/2	6	724-2302	724-3302
1-1/4	1-1/4	2	5-1/4	3	724-2305	724-3305
1-1/4	1-1/4	3	5-1/2	6	724-2308	724-3308
1-1/4	1-1/4	4	6-1/2	6	724-2311	724-3311
1-1/4	1-1/4	6	8-1/2	6	724-2314	724-3314
1-3/8	3/4	1-1/8	3-3/8	6	724-2317	724-3317
1-3/8	3/4	2	4-1/4	6	724-2320	724-3320
1-1/2	3/4	1-1/8	3-3/8	6	724-2323	724-3323
1-1/2	3/4	1-1/2	3-3/4	6	724-2326	724-3326
1-1/2	3/4	2	4-1/4	6	724-2329	724-3329
1-1/2	3/4	4	6-1/4	6	724-2332	724-3332
1-1/2	1-1/4	2	4-1/2	6	724-2335	724-3335
1-1/2	1-1/4	3	5-1/2	6	724-2338	724-3338
1-1/2	1-1/4	4	6-1/2	6	724-2341	724-3341
1-1/2	1-1/4	5	7-1/2	6	724-2344	724-3344
1-1/2	1-1/4	6	8-1/2	6	724-2347	724-3347
1-3/4	3/4	1-1/8	3-3/8	6	724-2350	724-3350
1-3/4	3/4	2	4-1/4	6	724-2353	724-3353
1-3/4	1-1/4	2	4-1/2	6	724-2356	724-3356
1-3/4	1-1/4	4	6-1/2	6	724-2359	724-3359
2	3/4	1-1/8	3-3/8	8	724-2362	724-3362
2	3/4	2	4-1/2	8	724-2365	724-3365
2	1-1/4	2	4-1/2	8	724-2368	724-3368
2	1-1/4	4	6-1/2	8	724-2371	724-3371
2	1-1/4	6-1/8	8-5/8	8	724-2374	724-3374
2	2	2	5-3/4	8	724-2377	724-3377
2	2	3	6-3/4	6	724-2380	724-3380
2	2	3	6-3/4	8	724-2383	724-3383
2	2	4	7-3/4	6	724-2386	724-3386
2	2	4	7-3/4	8	724-2389	724-3389
2	2	5	8-3/4	8	724-2392	724-3392
2	2	6	9-3/4	6	724-2395	724-3395
2	2	6	9-3/4	8	724-2398	724-3398
2	2	7	10-3/4	8	724-2401	724-3401
2	2	8	11-3/4	8	724-2404	724-3404
2	2	10	13-3/4	8	724-2407	724-3407
2	2	12	15-3/4	8	724-2410	724-3410

M42 8% Cobalt Fine Pitch Roughing End Mills

细齿中心切削波刃立铣刀 8% 钴

Center Cutting

- Fine pitch design provides a better finish than coarse pitch end mills and eliminates chipping in harder materials.
- For use in high production milling in variety of exotic materials.
- Coating improves tool life and allows for higher speeds and feeds.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoate Order No.	TiN Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	4	724-0508	724-1508
1/4	3/8	1/4	2-1/16	3	724-0511	724-1511
1/4	3/8	5/16	2-1/8	3	724-0514	724-1514
1/4	3/8	5/8	2-7/16	3	724-0520	724-1520
1/4	3/8	5/8	2-7/16	4	724-0523	724-1523
1/4	3/8	7/8	2-11/16	3	724-0526	724-1526
1/4	3/8	3/4	2-1/2	4	724-0529	724-1529
1/4	3/8	1-1/8	2-15/16	4	724-0532	724-1532
1/4	3/8	1-1/4	3-1/16	4	724-0535	724-1535
1/4	3/8	1-1/4	3-1/8	4	724-0538	724-1538
1/4	3/8	1-3/8	3-1/8	3	724-0541	724-1541
9/32	3/8	3/4	2-1/2	3	724-0544	724-1544
5/16	3/8	7/16	2-3/16	3	724-0547	724-1547
5/16	3/8	3/4	2-1/2	3	724-0550	724-1550
5/16	3/8	3/4	2-1/2	4	724-0553	724-1553
5/16	3/8	1-1/8	2-15/16	3	724-0556	724-1556
5/16	3/8	1-3/8	3-1/8	4	724-0559	724-1559
11/32	3/8	3/4	2-1/2	3	724-0562	724-1562
3/8	3/8	3/8	2-5/32	3	724-0565	724-1565
3/8	3/8	3/8	2-5/32	4	724-0568	724-1568
3/8	3/8	7/16	2-3/16	4	724-0571	724-1571
3/8	3/8	1/2	2-5/16	3	724-0574	724-1574
3/8	3/8	3/4	2-1/2	4	724-0577	724-1577
3/8	3/8	7/8	2-5/8	4	724-0580	724-1580
3/8	3/8	7/8	2-7/8	3	724-0583	724-1583
3/8	3/8	1-1/8	2-15/16	4	724-0586	724-1586
3/8	3/8	1-1/2	3-1/4	4	724-0589	724-1589
3/8	3/8	1-5/8	3-3/16	4	724-0592	724-1592
7/16	3/8	1	2-11/16	4	724-0595	724-1595
15/32	1/2	1-1/4	3-1/4	4	724-0598	724-1598
1/2	1/2	1/2	2-1/2	3	724-0601	724-1601
1/2	1/2	1/2	2-1/2	4	724-0607	724-1607
1/2	1/2	5/8	2-5/8	4	724-0610	724-1610
1/2	1/2	1	3	4	724-0613	724-1613
1/2	1/2	1-1/4	3-1/4	4	724-0616	724-1616
1/2	1/2	1-5/8	3-5/8	4	724-0619	724-1619
1/2	1/2	2	4	4	724-0622	724-1622
1/2	1/2	2-1/2	4-1/2	4	724-0625	724-1625
1/2	1/2	3	5	4	724-0628	724-1628
9/16	1/2	1-3/8	3-3/8	4	724-0631	724-1631
5/8	5/8	5/8	2-3/4	3	724-0634	724-1634
5/8	5/8	5/8	2-3/4	4	724-0637	724-1637
5/8	5/8	3/4	2-7/8	4	724-0640	724-1640
5/8	5/8	1-1/4	3-3/8	4	724-0643	724-1643
5/8	5/8	1-5/8	3-3/4	4	724-0646	724-1646
5/8	5/8	2	4-1/8	4	724-0649	724-1649
5/8	5/8	2-1/8	4-1/4	4	724-0652	724-1652
5/8	5/8	2-1/2	4-5/8	4	724-0655	724-1655
5/8	5/8	3	5-1/4	4	724-0658	724-1658
5/8	5/8	3-1/8	5-1/4	4	724-0661	724-1661
11/16	5/8	1-5/8	3-3/4	4	724-0664	724-1664
3/4	5/8	1-5/8	3-3/4	4	724-0667	724-1667
3/4	5/8	3	5-1/8	4	724-0668	724-1668
3/4	3/4	3/4	2-7/8	3	724-0670	724-1670
3/4	3/4	3/4	2-7/8	4	724-0673	724-1673
3/4	3/4	7/8	3-1/8	3	724-0676	724-1676
3/4	3/4	1-1/4	3-1/2	4	724-0679	724-1679
3/4	3/4	1-1/2	3-3/4	3	724-0682	724-1682
3/4	3/4	1-5/8	3-3/4	4	724-0685	724-1685
3/4	3/4	2-1/4	4-1/2	4	724-0688	724-1688
3/4	3/4	2-1/2	4-5/8	4	724-0691	724-1691
3/4	3/4	3	5-1/4	4	724-0694	724-1694
3/4	3/4	4-1/8	6-3/8	4	724-0697	724-1697
13/16	3/4	1-7/8	4-1/8	4	724-0700	724-1700
7/8	3/4	7/8	3-1/8	3	724-0703	724-1703
7/8	3/4	1	3-1/4	3	724-0706	724-1706
7/8	3/8	1-7/8	3-3/8	5	724-0709	724-1709

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
7/8"	3/4"	1-7/8"	4-1/8"	5	724-0712	724-1712
7/8	3/4	3-1/2	5-5/8	5	724-0715	724-1715
7/8	7/8	1-1/8	3-3/8	5	724-0718	724-1718
7/8	7/8	1-7/8	4-1/8	5	724-0721	724-1721
7/8	7/8	3-1/2	5-3/4	5	724-0724	724-1724
7/8	1	1-3/4	5	3	724-0727	724-1727
1	3/4	1-1/8	3-3/8	6	724-0730	724-1730
1	3/4	1-1/2	3-3/8	5	724-0733	724-1733
1	3/4	1-7/8	4-1/8	5	724-0736	724-1736
1	3/4	2	4-1/4	5	724-0739	724-1739
1	3/4	3	5-1/4	5	724-0742	724-1742
1	3/4	4	6-1/4	5	724-0745	724-1745
1	1	1	3-1/2	3	724-0748	724-1748
1	1	1	3-1/2	5	724-0751	724-1751
1	1	1-1/8	3-5/8	5	724-0754	724-1754
1	1	1-5/8	4-1/8	5	724-0757	724-1757
1	1	1-3/4	5	3	724-0760	724-1760
1	1	2	4-1/2	5	724-0763	724-1763
1	1	3	5-1/2	5	724-0766	724-1766
1	1	4	6-1/2	5	724-0769	724-1769
1	1	6	8-1/2	5	724-0772	724-1772
1-1/8	3/4	1-1/8	3-3/8	6	724-0775	724-1775
1-1/8	3/4	2	4-1/4	6	724-0778	724-1778
1-1/8	1	2	4-1/2	6	724-0781	724-1781
1-1/8	1	3-1/2	6	6	724-0784	724-1784
1-1/4	3/4	1-1/8	3-3/8	6	724-0787	724-1787
1-1/4	3/4	2	4-1/4	6	724-0790	724-1790
1-1/4	1-1/4	1-1/4	4	4	724-0796	724-1796
1-1/4	3/4	1-1/8	3-3/8	6	724-0793	724-1793
1-1/4	3/4	4	6-1/4	6	724-0794	724-1794
1-1/4	1-1/4	1-3/8	3-7/8	6	724-0799	724-1799
1-1/4	1-1/4	2	4-1/2	6	724-0802	724-1802
1-1/4	1-1/4	2	5-1/4	3	724-0805	724-1805
1-1/4	1-1/4	3	5-1/2	6	724-0808	724-1808
1-1/4	1-1/4	4	6-1/2	6	724-0811	724-1811
1-1/4	1-1/4	6	8-1/2	6	724-0814	724-1814
1-3/8	3/4	1-1/8	3-3/8	6	724-0817	724-1817
1-3/8	3/4	2	4-1/4	6	724-0820	724-1820
1-1/2	3/4	1-1/8	3-3/8	6	724-0823	724-1823
1-1/2	3/4	1-1/2	3-3/4	6	724-0826	724-1826
1-1/2	3/4	2	4-1/4	6	724-0829	724-1829
1-1/2	3/4	4	6-1/4	6	724-0832	724-1832
1-1/2	1-1/4	2	4-1/2	6	724-0835	724-1835
1-1/2	1-1/4	3	5-1/2	6	724-0838	724-1838
1-1/2	1-1/4	4	6-1/2	6	724-0841	724-1841
1-1/2	1-1/4	5	7-1/2	6	724-0844	724-1844
1-1/2	1-1/4	6	8-1/2	6	724-0847	724-1847
1-3/4	3/4	1-1/8	3-3/8	6	724-0850	724-1850
1-3/4	3/4	2	4-1/4	6	724-0853	724-1853
1-3/4	1-1/4	2	4-1/2	6	724-0856	724-1856
1-3/4	1-1/4	4	6-1/2	6	724-0859	724-1859
2	3/4	1-1/8	3-3/8	8	724-0862	724-1862
2	3/4	2	4-1/2	8	724-0865	724-1865
2	1-1/4	2	4-1/2	8	724-0868	724-1868
2	1-1/4	4	6-1/2	8	724-0871	724-1871
2	1-1/4	6-1/8	8-5/8	8	724-0874	724-1874
2	2	2	5-3/4	8	724-0877	724-1877
2	2	3	6-3/4	6	724-0880	724-1880
2	2	3	6-3/4	8	724-0883	724-1883
2	2	4	7-3/4	6	724-0886	724-1886
2	2	4	7-3/4	8	724-0889	724-1889
2	2	5	8-3/4	8	724-0892	724-1892
2	2	6	9-3/4	6	724-0895	724-1895
2	2	6	9-3/4	8	724-0898	724-1898
2	2	7	10-3/4	8	724-0901	724-1901
2	2	8	11-3/4	8	724-0904	724-1904
2	2	10	13-3/4	8	724-0907	724-1907
2	2	12	15-3/4	8	724-0910	724-1910

M42 8% Cobalt Roughing & Finishing End Mills 波刃半精整立铣刀(8% 钴)

Non Center Cutting



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	3	724-4008	724-5008
1/4	3/8	1/4	2-1/16	3	724-4011	724-5011
1/4	3/8	5/16	2-1/8	4	724-4014	724-5014
1/4	3/8	1/4	2-1/16	3	724-4017	724-5017
1/4	3/8	5/8	2-7/16	3	724-4020	724-5020
1/4	3/8	5/8	2-7/16	4	724-4023	724-5023
1/4	3/8	7/8	2-11/16	4	724-4026	724-5026
1/4	3/8	3/4	2-1/2	4	724-4029	724-5029
1/4	3/8	1-1/8	2-15/16	4	724-4032	724-5032
1/4	3/8	1-1/4	3-1/16	4	724-4035	724-5035
1/4	3/8	1-1/4	3-1/8	4	724-4038	724-5038
1/4	3/8	1-3/8	3-1/8	3	724-4041	724-5041
9/32	3/8	3/4	2-1/2	3	724-4044	724-5044
5/16	3/8	7/16	2-3/16	4	724-4047	724-5047
5/16	3/8	3/4	2-1/2	3	724-4050	724-5050
5/16	3/8	3/4	2-1/2	4	724-4053	724-5053
5/16	3/8	1-1/8	2-15/16	4	724-4056	724-5056
5/16	3/8	1-3/8	3-1/8	3	724-4058	724-5058
5/16	3/8	1-3/8	3-1/8	4	724-4059	724-5059
11/32	3/8	3/4	2-1/2	3	724-4062	724-5062
3/8	3/8	3/8	2-5/32	3	724-4065	724-5065
3/8	3/8	3/8	2-5/32	4	724-4068	724-5068
3/8	3/8	7/16	2-3/16	4	724-4071	724-5071
3/8	3/8	1/2	2-5/16	3	724-4074	724-5074
3/8	3/8	3/4	2-1/2	3	724-4076	724-5076
3/8	3/8	3/4	2-1/2	4	724-4077	724-5077
3/8	3/8	7/8	2-5/8	4	724-4080	724-5080
3/8	3/8	7/8	2-7/8	3	724-4083	724-5083
3/8	3/8	1-1/8	2-15/16	4	724-4086	724-5086
3/8	3/8	1-3/8	3-3/16	4	724-4088	724-5088
3/8	3/8	1-1/2	3-1/4	4	724-4089	724-5089
3/8	3/8	1-5/8	3-3/16	4	724-4092	724-5092
7/16	3/8	1	2-11/16	4	724-4095	724-5095
15/32	1/2	1-1/4	3-1/4	4	724-4098	724-5098
1/2	1/2	1/2	2-1/2	3	724-4104	724-5104
1/2	1/2	1/2	2-1/2	4	724-4107	724-5107
1/2	1/2	5/8	2-5/8	4	724-4110	724-5110
1/2	1/2	1	3	4	724-4113	724-5113
1/2	1/2	1-1/4	3-1/4	3	724-4115	724-5115
1/2	1/2	1-1/4	3-1/4	4	724-4116	724-5116
1/2	1/2	1-5/8	3-5/8	4	724-4119	724-5119
1/2	1/2	2	4	3	724-4121	724-5121
1/2	1/2	2	4	4	724-4122	724-5122
1/2	1/2	2-1/2	4-1/2	4	724-4125	724-5125
1/2	1/2	3	5	4	724-4128	724-5128
9/16	1/2	1-3/8	3-3/8	4	724-4131	724-5131
5/8	5/8	5/8	2-3/4	3	724-4134	724-5134
5/8	5/8	5/8	2-3/4	4	724-4137	724-5137
5/8	5/8	3/4	2-7/8	4	724-4140	724-5140
5/8	5/8	1-1/4	3-3/8	4	724-4143	724-5143
5/8	5/8	1-5/8	3-3/4	3	724-4145	724-5145
5/8	5/8	1-5/8	3-3/4	4	724-4146	724-5146
5/8	5/8	2	4-1/8	4	724-4149	724-5149
5/8	5/8	2-1/8	4-1/4	4	724-4152	724-5152
5/8	5/8	2-1/2	4-5/8	3	724-4154	724-5154
5/8	5/8	2-1/2	4-5/8	4	724-4155	724-5155
5/8	5/8	3	5-1/4	4	724-4158	724-5158
5/8	5/8	3-1/8	5-1/4	4	724-4161	724-5161
11/16	5/8	1-5/8	3-3/4	4	724-4164	724-5164
3/4	5/8	1-5/8	3-3/4	4	724-4167	724-5167

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
3/4	3/4	3/4	2-7/8	3	724-4170	724-5170
3/4	3/4	3/4	3	4	724-4173	724-5173
3/4	3/4	7/8	3-1/8	3	724-4176	724-5176
3/4	3/4	1-1/4	3-1/2	4	724-4179	724-5179
3/4	3/4	1-1/2	3-3/4	3	724-4182	724-5182
3/4	3/4	1-5/8	3-3/4	4	724-4185	724-5185
3/4	3/4	1-5/8	3-7/8	3	724-4186	724-5186
3/4	3/4	2-1/4	4-1/2	4	724-4188	724-5188
3/4	3/4	2-1/2	4-5/8	4	724-4191	724-5191
3/4	3/4	3	5-1/4	3	724-4193	724-5193
3/4	3/4	3	5-1/4	4	724-4194	724-5194
3/4"	3/4"	4-1/8"	6-3/8"	4	724-4197	724-5197
13/16	3/4	1-7/8	4-1/8	5	724-4200	724-5200
7/8	3/4	7/8	3-1/8	3	724-4203	724-5203
7/8	3/4	1	3-1/4	3	724-4206	724-5206
7/8	3/4	1-1/8	3-3/8	5	724-4209	724-5209
7/8	3/4	1-3/4	4	3	724-4211	724-5211
7/8	3/4	1-7/8	4-1/8	5	724-4212	724-5212
7/8	3/4	3-1/2	5-5/8	5	724-4215	724-5215
7/8	7/8	1-1/8	3-3/8	5	724-4218	724-5218
7/8	7/8	1-7/8	4-1/8	5	724-4221	724-5221
7/8	7/8	3-1/2	5-3/4	5	724-4224	724-5224
7/8	1	1-3/4	5	3	724-4227	724-5227
1	3/4	1-1/8	3-3/8	6	724-4230	724-5230
1	3/4	1-1/2	3-3/8	5	724-4233	724-5233
1	3/4	1-1/2	3-3/4	3	724-4234	724-5234
1	3/4	1-7/8	4-1/8	5	724-4236	724-5236
1	3/4	2	4-1/4	5	724-4239	724-5239
1	3/4	3	5-1/4	5	724-4242	724-5242
1	3/4	4	6-1/4	4	724-4245	724-5245
1	1	1	3-1/2	3	724-4248	724-5248
1	1	1	3-1/2	5	724-4251	724-5251
1	1	1-1/8	3-5/8	6	724-4254	724-5254
1	1	1-5/8	4-1/8	6	724-4257	724-5257
1	1	1-3/4	5	3	724-4260	724-5260
1	1	2	4-1/2	3	724-4262	724-5262
1	1	2	4-1/2	6	724-4263	724-5263
1	1	3	5-1/2	5	724-4266	724-5266
1	1	4	6-1/2	3	724-4268	724-5268
1	1	4	6-1/2	5	724-4269	724-5269
1	1	6	8-1/2	5	724-4272	724-5272
1-1/8	3/4	1-1/8	3-3/8	6	724-4275	724-5275
1-1/8	3/4	2	4-1/4	6	724-4278	724-5278
1-1/8	1	2	4-1/2	6	724-4281	724-5281
1-1/8	1	3-1/2	6	6	724-4284	724-5284
1-1/4	3/4	1-1/8	3-3/8	6	724-4287	724-5287
1-1/4	3/4	1-1/2	3-3/4	3	724-4289	724-5289
1-1/4	3/4	2	4-1/4	6	724-4290	724-5290
1-1/4	3/4	2	4-1/2	6	724-4293	724-5293
1-1/4	1-1/4	1-1/4	4	4	724-4296	724-5296
1-1/4	1-1/4	1-3/8	3-7/8	6	724-4299	724-5299
1-1/4	1-1/4	2	4-1/2	3	724-4301	724-5301
1-1/4	1-1/4	2	4-1/2	6	724-4302	724-5302
1-1/4	1-1/4	2	5-1/4	3	724-4305	724-5305
1-1/4	1-1/4	3	5-1/2	6	724-4308	724-5308

M42 8% Cobalt Roughing & Finishing End Mills Continued

波刃半精整立铣刀 (8% 钴)

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
1-1/4	1-1/4	4	6-1/2	3	724-4310	724-5310
1-1/4	1-1/4	4	6-1/2	6	724-4311	724-5311
1-1/4	1-1/4	6	8-1/2	6	724-4314	724-5314
1-3/8	3/4	1-1/8	3-3/8	6	724-4317	724-5317
1-3/8	3/4	2	4-1/4	6	724-4320	724-5320
1-1/2	3/4	1-1/8	3-3/8	6	724-4323	724-5323
1-1/2	3/4	1-1/2	3-3/4	6	724-4326	724-5326
1-1/2	3/4	2	4-1/2	6	724-4329	724-5329
1-1/2	3/4	4	6-1/4	6	724-4332	724-5332
1-1/2	1-1/4	2	4-1/2	3	724-4334	724-5334
1-1/2	1-1/4	2	4-1/2	6	724-4335	724-5335
1-1/2	1-1/4	3	5-1/2	6	724-4338	724-5338
1-1/2	1-1/4	4	6-1/2	3	724-4340	724-5340
1-1/2	1-1/4	4	6-1/2	6	724-4341	724-5341
1-1/2	1-1/4	5	7-1/2	6	724-4344	724-5344
1-1/2	1-1/4	6	8-1/2	6	724-4347	724-5347
1-3/4	3/4	1-1/8	3-3/8	6	724-4350	724-5350

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN Coated Order No.
1-3/4	3/4	2	4-1/4	6	724-4353	724-5353
1-3/4	1-1/4	2	4-1/2	6	724-4356	724-5356
1-3/4	1-1/4	4	6-1/2	6	724-4359	724-5359
2	3/4	1-1/8	3-3/8	8	724-4362	724-5362
2	3/4	2	4-1/2	8	724-4365	724-5365
2	1-1/4	2	4-1/2	3	724-4367	724-5367
2	1-1/4	2	4-1/2	8	724-4368	724-5368
2	1-1/4	4	6-1/2	3	724-4370	724-5370
2	1-1/4	4	6-1/2	8	724-4371	724-5371
2	1-1/4	6-1/8	8-5/8	8	724-4374	724-5374
2	2	2	5-3/4	8	724-4377	724-5377
2	2	3	6-3/4	6	724-4380	724-5380
2	2	3	6-3/4	8	724-4383	724-5383
2	2	4	7-3/4	6	724-4386	724-5386
2	2	4	7-3/4	8	724-4389	724-5389
2	2	5	8-3/4	8	724-4392	724-5392
2	2	6	9-3/4	6	724-4395	724-5395
2	2	6	9-3/4	8	724-4398	724-5398
2	2	7	10-3/4	8	724-4401	724-5401
2	2	8	11-3/4	8	724-4404	724-5404
2	2	10	13-3/4	8	724-4407	724-5407
2	2	12	15-3/4	8	724-4410	724-5410

M42 8% Cobalt 3 Flute Roughing End Mills For Aluminum

3齿波刃加工铝用立铣刀 (8% 钴), 中心切削

Coarse Pitch, Center Cutting



Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.
3/16"	3/8"	1/2"	2-3/8"	723-4403	724-6403
1/4	3/8	5/8	2-7/16	723-4406	724-6406
1/4	3/8	1-1/8	2-15/16	723-4409	724-6409
1/4	3/8	1-3/8	3-1/8	723-4412	724-6412
9/32	3/8	3/4	2-1/2	723-4415	724-6415
5/16	3/8	3/4	2-1/2	723-4418	724-6418
5/16	3/8	1-1/8	2-15/16	723-4421	724-6421
5/16	3/8	1-3/8	3-1/8	723-4424	724-6424
11/32	3/8	3/4	2-1/2	723-4427	724-6427
3/8	3/8	7/16	2-3/16	723-4430	724-6430
3/8	3/8	3/4	2-1/2	723-4433	724-6433
3/8	3/8	1-1/8	2-13/16	723-4436	724-6436
3/8	3/8	1-1/2	3-1/4	723-4439	724-6439
3/8	3/8	1-5/8	3-3/16	723-4442	724-6442
7/16	3/8	1	2-11/16	723-4445	724-6445
15/32	1/2	1-1/4	3-1/4	723-4448	724-6448
1/2	1/2	5/8	2-5/8	723-4451	724-6451
1/2	1/2	1	3	723-4454	724-6454
1/2	1/2	1-1/4	3-1/4	723-4457	724-6457
1/2	1/2	1-5/8	3-5/8	723-4460	724-6460
1/2	1/2	2	4	723-4463	724-6463
1/2	1/2	2-1/2	4-1/2	723-4466	724-6466
1/2	1/2	3	5	723-4469	724-6469
9/16	1/2	1-3/8	3-3/8	723-4472	724-6472
5/8	5/8	3/4	2-7/8	723-4475	724-6475
5/8	5/8	1-1/4	3-3/8	723-4478	724-6478
5/8	5/8	1-5/8	3-3/4	723-4481	724-6481
5/8	5/8	1-5/8	3-7/8	723-4482	
5/8	5/8	2	4-1/8	723-4484	724-6484
5/8	5/8	2-1/8	4-1/4	723-4487	724-6487
5/8	5/8	2-1/2	4-5/8	723-4490	724-6490
5/8	5/8	3	5-1/8	723-4493	724-6493
5/8	5/8	3-1/8	5-1/4	723-4496	724-6496
11/16	5/8	1-5/8	3-3/4	723-4499	724-6499
3/4	5/8	1-5/8	3-3/4	723-4502	724-6502
3/4	3/4	3/4	3	723-4505	724-6505
3/4	3/4	1-1/4	3-1/2	723-4508	724-6508
3/4	3/4	1-5/8	3-3/4	723-4511	724-6511
3/4	3/4	1-5/8	3-7/8	723-4514	724-6514
3/4	3/4	2	4-1/4	723-4517	724-6517
3/4	3/4	2-1/4	4-1/2	723-4520	724-6520
3/4	3/4	2-1/2	4-3/4	723-4523	724-6523
3/4	3/4	3	5-1/4	723-4526	724-6526
3/4	3/4	4	6-1/4	723-4529	724-6529
3/4	3/4	4-1/8	6-3/8	723-4532	724-6532
7/8	3/4	1-1/8	3-3/8	723-4535	724-6535
7/8	3/4	1-1/2	3-3/4	723-4538	724-6538

Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.
7/8	3/4	1-7/8	4-1/8	723-4541	724-6541
7/8"	3/4"	3-1/2"	5-5/8"	723-4544	724-6544
7/8	7/8	1-1/8	3-3/8	723-4547	724-6547
7/8	7/8	1-7/8	4-1/8	723-4550	724-6550
1	3/4	1-1/8	3-3/8	723-4553	724-6553
1	3/4	1-1/2	3-3/4	723-4556	724-6556
1	3/4	2	4-1/4	723-4559	724-6559
1	3/4	3	5-1/4	723-4562	724-6562
1	3/4	4	6-1/4	723-4565	724-6565
1	1	1-1/8	3-5/8	723-4568	724-6568
1	1	1-5/8	4-1/8	723-4571	724-6571
1	1	2	4-1/2	723-4574	724-6574
1	1	3	5-1/2	723-4577	724-6577
1	1	4	6-1/2	723-4580	724-6580
1	1	6	8-1/2	723-4583	724-6583
1-1/8	3/4	1-1/8	3-3/8	723-4586	724-6586
1-1/4	3/4	1-1/2	3-3/4	723-4589	724-6589
1-1/4	3/4	2	4-1/4	723-4592	724-6592
1-1/4	1-1/4	2	4-1/2	723-4595	724-6595
1-1/4	1-1/4	3	5-1/2	723-4598	724-6598
1-1/4	1-1/4	4	6-1/2	723-4601	724-6601
1-1/4	1-1/4	6	8-1/2	723-4604	724-6604
1-3/8	3/4	2	4-1/4	723-4607	724-6607
1-1/2	3/4	1-1/2	3-3/4	723-4610	724-6610
1-1/2	3/4	2	4-1/4	723-4613	724-6613
1-1/2	1-1/4	2	4-1/2	723-4616	724-6616
1-1/2	1-1/4	3	5-1/2	723-4619	724-6619
1-1/2	1-1/4	4	6-1/2	723-4622	724-6622
1-1/2	1-1/4	5	7-1/2	723-4625	724-6625
1-1/2	1-1/4	6	8-1/2	723-4628	724-6628
1-1/2	1-1/4	8	10-1/2	723-4631	724-6631
1-3/4	1-1/4	2	4-1/2	723-4634	724-6634
1-3/4	1-1/4	4	6-1/2	723-4637	724-6637
2	3/4	3/4	3	723-4640	724-6640
2	3/4	1-1/8	3-1/2	723-4643	724-6643
2	3/4	2	4-1/2	723-4646	724-6646
2	1-1/4	2	4-1/2	723-4649	724-6649
2	1-1/4	4	6-1/2	723-4652	724-6652
2	2	2	5-3/4	723-4655	724-6655
2	2	2	6-3/4	723-4658	724-6658
2	2	3	6-3/4	723-4661	724-6661
2	2	4	7-3/4	723-4664	724-6664
2	2	5	7-3/4	723-4667	724-6667
2	2	6	8-3/4	723-4670	724-6670
2	2	6	9-3/4	723-4673	724-6673
2	2	7	9-3/4	723-4676	724-6676
2	2	8	11-3/4	723-4679	724-6679

M42 8% Cobalt 3 Flute Fine Pitch 45° Roughing End Mills For Aluminum

Center Cutting

细齿 45 度 3 齿波刃立铣刀 (8% 钴) 中心切削



Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.
1/4"	3/8"	5/8"	2-7/16"	723-5304	723-6304	1"	3/4"	2"	4-1/2"	723-5348	723-6348
5/16	3/8	3/4	2-1/2	723-5308	723-6308	1	1	2	4-1/2	723-5352	723-6352
3/8	3/8	3/4	2-1/2	723-5312	723-6312	1	1	4	6-1/2	723-5356	723-6356
1/2	1/2	1-1/4	3-1/4	723-5316	723-6316	1-1/8	3/4	2	4-1/2	723-5360	723-6360
1/2	1/2	2	4	723-5320	723-6320	1-1/4	1-1/4	2	4-1/2	723-5364	723-6364
5/8	5/8	1-5/8	3-3/4	723-5324	723-6324	1-1/4	1-1/4	4	6-1/2	723-5368	723-6368
5/8	5/8	2-1/2	4-5/8	723-5328	723-6328	1-1/2	1-1/4	2	4-1/2	723-5372	723-6372
3/4	3/4	1-5/8	3-3/4	723-5332	723-6332	1-3/4	1-1/4	2	4-1/2	723-5376	723-6376
3/4	3/4	3	5-1/4	723-5336	723-6336	2	1-1/4	2	4-1/2	723-5380	723-6380
7/8	3/4	1-7/8	4-1/8	723-5340	723-6340	2	1-1/4	4	6-1/2	723-5384	723-6384
7/8	3/4	3-1/2	5-3/4	723-5344	723-6344						

M42 8% Cobalt 3 Flute Coarse Pitch Roughing End Mills For Aluminum

Non Center Cutting

3 齿粗齿波刃立铣刀 (8% 钴) 铝用



Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.	Size	Shank Dia.	Flute Length	Overall Length	Uncoated Order No.	TiN-Coated Order No.
3/8"	3/8"	3/4"	2-1/2"	723-7304	723-8304	1-1/4"	3/4"	1-1/2"	3-3/4"	723-7364	723-8364
3/8	3/8	7/8	2-5/8	723-7308	723-8308	1-1/4	3/4	2	4-1/4	723-7368	723-8368
1/2	1/2	1-1/4	3-1/4	723-7312	723-8312	1-1/4	1-1/4	2	4-1/2	723-7372	723-8372
1/2	1/2	2	4	723-7316	723-8316	1-1/4	1-1/4	3	5-1/2	723-7376	723-8376
5/8	5/8	1-5/8	3-3/4	723-7320	723-8320	1-1/4	1-1/4	4	6-1/2	723-7380	723-8380
5/8	5/8	2-1/2	4-5/8	723-7324	723-8324	1-1/2	3/4	1-1/2	3-3/4	723-7384	723-8384
3/4	3/4	1-5/8	3-7/8	723-7328	723-8328	1-1/2	3/4	2	4-1/2	723-7388	723-8388
3/4	3/4	2	4-1/4	723-7332	723-8332	1-1/2	1-1/4	2	4-1/2	723-7392	723-8392
3/4	3/4	3	5-1/4	723-7336	723-8336	1-1/2	1-1/4	3	5-1/2	723-7396	723-8396
7/8	3/4	1-7/8	4-1/8	723-7340	723-8340	1-1/2	1-1/4	4	6-1/2	723-7397	
1	3/4	1-1/2	3-3/4	723-7344	723-8344	2	3/4	3/4	3	723-7400	723-8400
1	3/4	2	4-1/4	723-7348	723-8348	2	1-1/4	2	4-1/2	723-7404	723-8404
1	1	2	4-1/2	723-7352	723-8352	2	1-1/4	4	6-1/2	723-7408	723-8408
1	1	3	5-1/2	723-7356	723-8356	2	2	2	5-3/4	723-7412	723-8412
1	1	4	6-1/2	723-7360	723-8360	2	2	4	7-3/4	723-7416	723-8416

M42 8% Cobalt Ball Nose Roughing End Mills

球头波刃立铣刀 (8% 钴)

- Designed for heavy cuts and high stock removal in radius bottom slots, fillets and special contours.
- Coarse pitch profile can remove metal at the same rate as conventional end mills with considerably less deflection.

Fine Pitch



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN-Coated Order No.
3/8"	3/8"	3/4"	2-1/2"	4	724-2502	724-2702
1/2	1/2	1-1/4	3-1/4	4	724-2511	724-2711
1/2	1/2	2	4	4	724-2520	724-2720
5/8	5/8	1-5/8	3-3/4	4	724-2529	724-2729
5/8	5/8	2	4-1/8	4	724-2538	724-2738
5/8	5/8	2-1/2	4-5/8	4	724-2547	724-2747
3/4	3/4	1-5/8	3-7/8	4	724-2556	724-2756
3/4	3/4	1-3/4	4	4	724-2565	724-2765
3/4	3/4	2-1/4	4-1/2	4	724-2574	724-2774
3/4	3/4	3	5-1/4	4	724-2583	724-2783
7/8	7/8	1-7/8	4-1/8	5	724-2592	724-2792
1	1	2	4-1/2	5	724-2601	724-2801
1	1	3	5-1/2	5	724-2610	724-2810
1	1	4	6-1/2	5	724-2619	724-2819
1-1/4	1-1/4	2	4-1/2	6	724-2628	724-2828
1-1/4	1-1/4	3	5-1/2	6	724-2637	724-2837
1-1/4	1-1/4	4	6-1/2	6	724-2646	724-2846
1-1/2	1-1/4	2	4-1/2	6	724-2655	724-2855
2	2	2	5-3/4	6	724-2664	724-2864
2	2	4	6-3/4	6	724-2673	724-2873
2	2	4	9-3/4	6	724-2682	724-2882

Coarse Pitch



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Uncoated Order No.	TiN-Coated Order No.
1/4"	3/8"	5/8"	2-7/16"	3	723-5503	723-5603
1/4	3/8	5/8	2-1/2	3	723-5505	723-5605
5/16	3/8	3/4	2-1/2	3	723-5510	723-5610
3/8	3/8	3/4	2-1/2	4	723-5515	723-5615
1/2	1/2	1-1/4	3-1/4	4	723-5520	723-5620
1/2	1/2	2-1/2	4-1/2	4	723-5522	723-5622
5/8	5/8	1-5/8	3-3/4	4	723-5525	723-5625
5/8	5/8	2-1/2	4-5/8	4	723-5527	723-5627
3/4	3/4	1-5/8	3-7/8	4	723-5530	723-5630
3/4	3/4	1-3/4	4	4	723-5531	723-5631
3/4	3/4	3	5-1/4	4	723-5532	723-5632
1	3/4	2	4-1/2	5	723-5533	723-5633
1	1	2	4-1/2	5	723-5534	723-5634
1	1	2	4-1/2	6	723-5535	723-5635
1	1	4	6-1/2	5	723-5537	723-5637
1-1/4	3/4	2	4-1/2	6	723-5538	723-5638
1-1/4	1-1/4	2	4-1/2	6	723-5540	723-5640
1-1/4	1-1/4	4	6-1/2	6	723-5542	723-5642
1-1/2	3/4	2	4-1/2	6	723-5544	723-5644
1-1/2	1-1/4	2	4-1/2	6	723-5545	723-5645
1-1/2	1-1/2	2	4-1/2	6	723-5546	723-5646
1-1/2	1-1/2	4	6-1/2	6	723-5547	723-5647
2	2	4	7-3/4	6	723-5550	723-5650
2	1-1/4	4	7-3/4	8	723-5555	723-5655
2	2	4	7-3/4	8	723-5556	723-5656

2 Flute Ball Nose Single End Mills

High Speed Steel

2齿单头球头立铣刀

- Designed for milling radius bottom slots, fillets and special contours.
- Center cutting design is used to plunge into solid material at the beginning of a slotting cut.
- 2 Flute design provides excellent chip evacuation.

Regular Length



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8"	3/8"	3/8"	2-5/16"	720-1401	721-1401	722-1401
5/32	3/8"	7/16	2-5/16	720-1402	721-1402	722-1402
3/16	3/8"	1/2	2-3/8	720-1403	721-1403	722-1403
7/32	3/8"	1/2	2-3/8	720-1404	721-1404	722-1404
1/4	3/8"	5/8	2-7/16	720-1405	721-1405	722-1405
9/32	3/8"	9/16	2-3/8	720-1406	721-1406	722-1406
5/16	3/8"	3/4	2-1/2	720-1407	721-1407	722-1407
11/32	3/8"	3/4	2-1/2	720-1408	721-1408	722-1408
3/8	3/8"	3/4	2-1/2	720-1409	721-1409	722-1409
7/16	1/2	1	3	720-1411	721-1411	722-1411
1/2	1/2	1	3	720-1413	721-1413	722-1413
9/16	1/2	1	3	720-1415	721-1415	722-1415
5/8	1/2	1-1/8	3-1/8	720-1417	721-1417	722-1417
5/8	1/2	1-3/8	3-3/8	720-1418		
5/8	5/8	1-3/8	3-3/8	720-1419	721-1419	722-1419
3/4	1/2	1-5/16	3-5/8	720-1420		
3/4"	1/2"	1-5/8"	3-5/8"	720-1421	721-1421	722-1421
3/4	3/4	1-5/8	3-7/8	720-1423	721-1423	722-1423
13/16	3/4	2	4-1/4	720-1425	721-1425	722-1425
7/8	3/4	2	4-1/4	720-1427	721-1427	722-1427
7/8	7/8	2	4-1/4	720-1429	721-1429	722-1429
15/16	3/4	2-1/4	4-1/2	720-1431	721-1431	722-1431
1	3/4	2-1/4	4-9/16	720-1433	721-1433	722-1433
1	1	2-1/4	4-3/4	720-1435	721-1435	722-1435
1-1/8	1	2-1/4	4-3/4	720-1437	721-1437	722-1437
1-1/4	1-1/4	2-1/2	5	720-1439	721-1439	722-1439
1-3/8	1-1/4	2-1/2	5	720-1441	721-1441	722-1441
1-1/2	1-1/4	2-1/2	5	720-1443	721-1443	722-1443
2	1-1/4	2-1/2	5	720-1445	721-1445	722-1445

2 Flute Ball Nose Single End Mills

Extended Shank

2 齿单头球头加长柄立铣刀



Length					M2 Order No.	M2Al Order No.	TiN-Coated Order No.
Size	Shank Dia.	Shank Length	Flute Length	OAL			
1/8"	3/8"	13/16"	3/8"	2-3/8"	720-1451	721-1451	722-1451
3/16	3/8"	1-1/8	1/2	2-11/16	720-1453	721-1453	722-1453
1/4	3/8"	1-1/2	5/8	3-1/16	720-1455	721-1455	722-1455
5/16	3/8"	1-3/4	3/4	3-5/16	720-1457	721-1457	722-1457
3/8	3/8"	1-3/4	3/4	3-5/16	720-1459	721-1459	722-1459
7/16	1/2	1-7/8	1	3-11/16	720-1461	721-1461	722-1461
1/2	1/2	2-1/4	1	4	720-1463	721-1463	722-1463
5/8	5/8	2-3/4	1-3/8	4-5/8	720-1465	721-1465	722-1465
3/4	3/4	3-3/8	1-5/8	5-3/8	720-1467	721-1467	722-1467
1	1	5	2-1/2	7-1/4	720-1469	721-1469	722-1469

2 Flute Ball Nose Single End Mills For Aluminum

2齿单头球头铝用立铣刀

Regular long & Extra Long Flute Length

- Recommended for mill radius bottom slots and special contours in aluminum and other non-ferrous materials.
- The high helix angle shears the material cleanly and helps eliminate chatter.
- TiN coating add lubricity to minimize chip packing in th flutes.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/4"	3/8"	5/8"	2-1/2"	720-1601	721-1601	722-1601
1/4	3/8	1-1/4	3-1/8	720-1603	721-1603	722-1603
1/4	3/8	1-3/4	3-1/2	720-1605	721-1605	722-1605
5/16	3/8	3/4	2-1/2	720-1607	721-1607	722-1607
5/16	3/8	1-3/8	3-1/8	720-1609	721-1609	722-1609
5/16	3/8	2	3-3/4	720-1611	721-1611	722-1611
3/8	3/8	3/4	2-1/2	720-1613	721-1613	722-1613
3/8	3/8	1-1/2	3-1/4	720-1615	721-1615	722-1615
3/8	3/8	2-1/2	4-1/4	720-1617	721-1617	722-1617
7/16	3/8	1	2-11/16	720-1619	721-1619	722-1619
7/16	1/2	1-3/4	3-3/4	720-1621	721-1621	722-1621
7/16	1/2	2-3/4	4-3/4	720-1623	721-1623	722-1623
1/2	1/2	1	3-1/4	720-1625	721-1625	722-1625
1/2	1/2	2	4	720-1627	721-1627	722-1627
1/2"	1/2"	3"	5"	720-1629	721-1629	722-1629
5/8	5/8	1-5/8	3-3/4	720-1631	721-1631	722-1631
5/8	5/8	2-1/2	4-5/8	720-1633	721-1633	722-1633
5/8	5/8	4	6-1/8	720-1635	721-1635	722-1635
3/4	3/4	1-5/8	3-7/8	720-1637	721-1637	722-1637
3/4	3/4	3	5-1/4	720-1639	721-1639	722-1639
3/4	3/4	4	6-1/4	720-1641	721-1641	722-1641
7/8	1-7/8	1-7/8	4-1/8	720-1643	721-1643	722-1643
7/8	7/8	3-1/2	5-3/4	720-1645	721-1645	722-1645
7/8	7/8	5	7-1/4	720-1647	721-1647	722-1647
1	3/4	1-7/8	4-1/8	720-1651	721-1651	722-1651
1	1	2	4-1/2	720-1653	721-1653	722-1653
1	1	4	6-1/2	720-1655	721-1655	722-1655
1	1	6	8-1/2	720-1657	721-1657	722-1657

4 Flute Ball Nose Single End Mills

High Speed Steel

4齿单头球头中心切削立铣刀



Shank Flute					Shank Flute				
Size	Dia.	Length	OAL	Order No.	Size	Dia.	Length	OAL	Order No.
1/4"	3/8"	3/4"	2-9/16"	320-3700	7/8"	7/8"	1-7/8"	4-1/2"	320-3766
1/4	3/8	5/8	2-1/2	320-3705	3/4	3/4	3	5-1/4	320-3768
1/4	3/8	1-1/4	3-1/16	320-3708	1	1	2-1/4	4-3/4	320-3770
5/16	3/8	3/4	2-1/2	320-3715	1	1	2	4-1/2	320-3775
5/16	3/8	1	2-3/4	320-3710	1	1	4	6-1/2	320-3778
5/16	3/8	1-1/2	3-1/4	320-3718	1	1	6	7-1/2	320-3779
3/8	3/8	3/4	2-1/2	320-3725	1-1/4	1-1/4	2-1/2	5	320-3780
3/8	3/8	1	2-3/4	320-3720	1-1/4	1-1/4	3	5-1/2	320-3782
3/8	3/8	1-1/2	3-1/4	320-3728	1-1/4	1-1/4	4	6-1/2	320-3783
1/2	1/2	1	2-3/4	320-3730	1-1/4	1-1/4	6	8-1/2	320-3784
1/2	1/2	1-1/4	3-1/4	320-3735	1-1/4	1-1/4	2	4-1/2	320-3785
1/2	1/2	1-1/2	3-1/4	320-3740	1-1/4	1-1/4	2	6-1/2	320-3786
1/2	1/2	2	4	320-3748	1-1/2	1-1/4	2-1/2	5	320-3790
5/8	5/8	1-5/8	3-3/4	320-3750	1-1/2	1-1/4	4	6-1/2	320-3792
5/8	5/8	2-1/2	4-5/8	320-3758	1-1/2	1-1/4	6	8-1/2	320-3793
3/4	3/4	1-5/8	3-7/8	320-3760	1-1/2	1-1/4	2	4-1/2	320-3795

2 Flute Ball Nose Double End Mills

2齿双头球头立铣刀

High Speed Steel

- Designed for milling radius bottom slots, fillets and special contours.
- Center cutting design is used to plunge into solid material at the beginning of a slotting cut.
- 2 Flute design provides excellent chip evacuation.



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8"	3/8"	3/8"	3-3/16"	720-2100	721-2100	722-2100
9/64	3/8	7/16	3-1/8	720-2105	721-2105	722-2105
5/32	3/8	1/2	3-1/8	720-2110	721-2110	722-2110
11/64	3/8	7/16	3-1/8	720-2115	721-2115	722-2115
3/16	3/8	7/16	3-1/8	720-2120	721-2120	722-2120
13/64	3/8	1/2	3-1/8	720-2125	721-2125	722-2125
7/32	3/8	1/2	3-1/8	720-2130	721-2130	722-2130
15/64	3/8	1/2	3-1/8	720-2135	721-2135	722-2135
1/4	3/8	1/2	3-1/8	720-2140	721-2140	722-2140
17/64	3/8	9/16	3-1/8	720-2145	721-2145	722-2145
9/32	3/8	9/16	3-1/8	720-2150	721-2150	722-2150
19/64	3/8	9/16	3-1/8	720-2155	721-2155	722-2155
5/16	3/8	9/16	3-1/8	720-2160	721-2160	722-2160
21/64	3/8	9/16	3-1/8	720-2161	721-2161	722-2161
11/32	3/8	9/16	3-1/8	720-2162	721-2162	722-2162
23/64	1/2	9/16	3-1/8	720-2163	721-2163	722-2163
3/8	3/8	9/16	3-1/8	720-2165	721-2165	722-2165
13/32	1/2	13/16	3-3/4	720-2168	721-2168	722-2168
7/16	1/2	13/16	3-3/4	720-2170	721-2170	722-2170
1/2	1/2	13/16	3-3/4	720-2174	721-2174	722-2174
5/8	5/8	1-1/8	4-1/2	720-2185	721-2185	722-2185
3/4	3/4	1-5/16	5	720-2188	721-2188	722-2188
7/8	7/8	1-9/16	5-1/2	720-2190	721-2190	722-2190
1	1	1-5/8	5-7/8	720-2192	721-2192	722-2192

2 Flute High Helix Ball Nose Double End Mills for Aluminum

2 齿双头球头高螺旋立铣刀

High Speed Steel

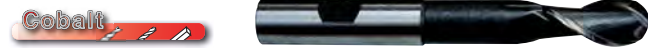


Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
1/8"	3/8"	3/8"	3-1/16"	720-2202	721-2202	722-2202
3/16	3/8	7/16	3-1/4	720-2204	721-2204	722-2204
1/4	3/8	1/2	3-3/8	720-2206	721-2206	722-2206
5/16	3/8	9/16	3-1/2	720-2208	721-2208	722-2208
3/8	3/8	9/16	3-1/2	720-2210	721-2210	722-2210
7/16	1/2	13/16	4-1/8	720-2212	721-2212	722-2212
1/2	1/2	13/16	4-1/8	720-2214	721-2214	722-2214
9/16	5/8	1-1/8	5	720-2216	721-2216	722-2216
5/8	5/8	1-1/8	5	720-2218	721-2218	722-2218
11/16	3/4	1-5/16	5-5/8	720-2220	721-2220	722-2220
3/4	3/4	1-5/16	5-5/8	720-2222	721-2222	722-2222
13/16	7/8	1-9/16	6-1/8	720-2224	721-2224	722-2224
7/8	7/8	1-9/16	6-1/8	720-2226	721-2226	722-2226
15/16	1	1-5/8	6-3/8	720-2228	721-2228	722-2228
1	1	1-5/8	6-3/8	720-2230	721-2230	722-2230

M42 8% Cobalt 2 Flute Ball Nose Single End Mills

M42 2齿单头球头加长柄立铣刀

Extended Shank



Size	Shank Dia.	Length Below Shank	Flute Length	Overall Length	Order No.
1/8"	3/8"	13/16"	3/8"	2-3/8"	723-1451
3/16	3/8	1-1/8	1/2	2-11/16	723-1453
1/4	3/8	1-1/2	5/8	3-1/16	723-1455
5/16	3/8	1-3/4	3/4	3-5/16	723-1457
3/8	3/8	1-3/4	3/4	3-5/16	723-1459
7/16	1/2	1-7/8	1	3-11/16	723-1461
1/2	1/2	2-1/4	1	4	723-1463
5/8	5/8	2-3/4	1-3/8	4-5/8	723-1465
3/4	3/4	3-3/8	1-5/8	5-3/8	723-1467
1	1	5	2-1/2	7-1/4	723-1469

M42 8% Cobalt 2 Flute Ball Nose Single End Mills

M42 2齿单头球头立铣刀

- Designed for milling radius bottom slots, fillets and special contours.
- Center cutting design is used to plunge into solid material at the beginning of a slotting cut.
- 2 Flute design provides excellent chip evacuation.



Regular Length

Size	Shank Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	3/8"	2-5/16"	723-1401
5/32	3/8	7/16	2-5/16	723-1402
3/16	3/8	1/2	2-3/8	723-1403
7/32	3/8	1/2	2-3/8	723-1404
1/4	3/8	5/8	2-7/16	723-1405
9/32	3/8	9/16	2-3/8	723-1406
5/16	3/8	3/4	2-1/2	723-1407
11/32	3/8	3/4	2-1/2	723-1408
3/8	3/8	3/4	2-1/2	723-1409
7/16	1/2	1	3	723-1411
1/2	1/2	1	3	723-1413
9/16	1/2	1	3	723-1415
5/8	1/2	1-1/8	3-1/8	723-1417
5/8	5/8	1-3/8	3-3/8	723-1419
3/4	1/2	1-5/8	3-5/8	723-1421
3/4	3/4	1-5/8	3-7/8	723-1423
13/16	3/4	2	4-1/4	723-1425
7/8	3/4	2	4-1/4	723-1427
7/8	7/8	2	4-1/4	723-1429
15/16	3/4	2-1/4	4-1/2	723-1431
1	3/4	2-1/4	4-9/16	723-1433
1	1	2-1/4	4-3/4	723-1435
1-1/8	1	2-1/4	4-3/4	723-1437
1-1/4	1-1/4	2-1/2	5	723-1439
1-3/8	1-1/4	2-1/2	5	723-1441
1-1/2	1-1/4	2-1/2	5	723-1443
2	1-1/4	2-1/2	5	723-1445

M42 8% Cobalt 4 Flute Ball Nose Single End Mills

M42 多齿单头球头中心切削立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	3/8"	2-5/16"	723-3700
3/16	3/8	1/2	2-3/8	723-3702
1/4	3/8	5/8	2-1/2	723-3705
1/4	3/8	1-1/4	3-1/16	723-3708
5/16	3/8	3/4	2-1/2	723-3715
5/16	3/8	1	2-3/4	723-3710
5/16	3/8	1-1/2	3-1/4	723-3718
3/8	3/8	3/4	2-1/2	723-3725
3/8	3/8	1	2-3/4	723-3720
3/8	3/8	1-1/2	3-1/4	723-3728
7/16	1/2	1-1/4	3-1/4	723-3729
1/2	1/2	1	2-3/4	723-3730
1/2	1/2	1-1/4	3-1/4	723-3735
1/2	1/2	1-1/2	3-1/4	723-3740
1/2	1/2	2	4	723-3748
5/8	5/8	1-5/8	3-3/4	723-3750
5/8	5/8	2-1/2	4-5/8	723-3758
3/4	3/4	1-5/8	3-7/8	723-3760
3/4	3/4	3	5-1/4	723-3768
7/8	7/8	1-7/8	4-1/8	723-3765
1	1	2	4-1/2	723-3775
1	1	2-1/4	4-3/4	723-3770
1	1	4	6-1/2	723-3778
1-1/4	1-1/4	2	4-1/2	723-3785
1-1/4	1-1/4	2-1/2	5	723-3780
1-1/2	1-1/4	2	4-1/2	723-3795
1-1/2	1-1/4	2-1/2	5	723-3790

M42 8% Cobalt 2 Flute Ball Nose Double End Mills

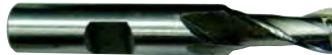
M42 2齿双头球头立铣刀



Size	Shank Dia.	Flute Length	Overall Length	Order No.
1/8"	3/8"	3/8"	3-3/16"	723-2100
9/64	3/8	7/16	3-1/8	723-2105
5/32	3/8	1/2	3-1/8	723-2110
11/64	3/8	7/16	3-1/8	723-2115
3/16	3/8	7/16	3-1/8	723-2120
13/64	3/8	1/2	3-1/8	723-2125
7/32	3/8	1/2	3-1/8	723-2130
15/64	3/8	1/2	3-1/8	723-2135
1/4	3/8	1/2	3-1/8	723-2140
17/64	3/8	9/16	3-1/8	723-2145
9/32	3/8	9/16	3-1/8	723-2150
19/64	3/8	9/16	3-1/8	723-2155
5/16	3/8	9/16	3-1/8	723-2160
21/64	3/8	9/16	3-1/8	723-2161
11/32	3/8	9/16	3-1/8	723-2162
23/64	1/2	9/16	3-1/8	723-2163
3/8	3/8	9/16	3-1/8	723-2165
13/32	1/2	13/16	3-3/4	723-2168
7/16	1/2	13/16	3-3/4	723-2170
1/2	1/2	13/16	3-3/4	723-2174
5/8	5/8	1-1/8	4-1/2	723-2185
3/4	3/4	1-5/16	5	723-2188
7/8	7/8	1-9/16	5-1/2	723-2190
1	1	1-5/8	5-7/8	723-2192

2 Flute Inch Shank Metric Size Single End Mills

英制柄公制2齿单头立铣刀



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
5mm	3/8"	1/2"	2-5/16"	720-9050	721-9050	723-9050
6mm	3/8	1/2	2-5/16	720-9060	721-9060	723-9060
7mm	3/8	9/16	2-5/16	720-9070	721-9070	723-9070
8mm	3/8	9/16	2-5/16	720-9080	721-9080	723-9080
9mm	3/8	9/16	2-5/16	720-9090	721-9090	723-9090
10mm	3/8	13/16	2-1/2	720-9100	721-9100	723-9100
11mm	3/8	13/16	2-1/2	720-9110	721-9110	723-9110
12mm	1/2	1	3	720-9120	721-9120	723-9120
13mm	1/2	1-1/8	3-1/8	720-9130	721-9130	723-9130
14mm	1/2	1-1/8	3-1/8	720-9140	721-9140	723-9140
15mm	1/2	1-1/8	3-1/8	720-9150	721-9150	723-9150
16mm	1/2	1-5/16	3-5/16	720-9160	721-9160	723-9160
18mm	1/2	1-5/16	3-5/16	720-9180	721-9180	723-9180
20mm	3/4	1-1/2	3-3/4	720-9200	721-9200	723-9200
22mm	3/4	1-1/2	3-3/4	720-9220	721-9220	723-9220
24mm	3/4	1-1/2	3-3/4	720-9240	721-9240	723-9240
25mm	1	1-5/8	4-1/8	720-9250	721-9250	723-9250

4 Flute Inch Shank Metric Size Single End Mills

英制柄公制4齿单头立铣刀

Center Cutting



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
5mm	3/8"	9/16"	2-7/16"	720-8050	721-8050	722-8050
6mm	3/8	5/8	2-1/2	720-8060	721-8060	722-8060
7mm	3/8	5/8	2-1/2	720-8070	721-8070	722-8070
8mm	3/8	3/4	2-1/2	720-8080	721-8080	722-8080
9mm	3/8	3/4	2-1/2	720-8090	721-8090	722-8090
10mm	3/8	3/4	2-1/2	720-8100	721-8100	722-8100
11mm	3/8	1	2-11/16	720-8110	721-8110	722-8110
12mm	3/8	1	2-11/16	720-8120	721-8120	722-8120
13mm	1/2	1-1/4	3-1/4	720-8130	721-8130	722-8130
14mm	1/2	1-3/8	3-3/8	720-8140	721-8140	722-8140
15mm	1/2	1-3/8	3-3/8	720-8150	721-8150	722-8150
16mm	5/8	1-5/8	3-3/4	720-8160	721-8160	722-8160
18mm	3/4	1-5/8	3-3/4	720-8180	721-8180	722-8180
20mm	3/4	1-7/8	4-1/8	720-8200	721-8200	722-8200
22mm	7/8	1-7/8	4-1/8	720-8220	721-8220	722-8220
24mm	7/8	1-7/8	4-1/8	720-8240	721-8240	722-8240
25mm	1	2	4-1/2	720-8250	721-8250	722-8250

Metric 2 Flute Single End Mills

2齿单头立铣刀

DIN327, High Speed Steel



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3mm	6	6	50	720-2303	721-2303	722-2303
4mm	6	7	51	720-2304	721-2304	722-2304
5mm	6	8	52	720-2305	721-2305	722-2305
6mm	6	8	52	720-2306	721-2306	722-2306
7mm	10	10	60	720-2307	721-2307	722-2307
8mm	10	11	61	720-2308	721-2308	722-2308
10mm	10	13	63	720-2310	721-2310	722-2310
12mm	12	16	73	720-2312	721-2312	722-2312
14mm	12	16	73	720-2314	721-2314	722-2314
16mm	16	19	79	720-2316	721-2316	722-2316
18mm	16	19	79	720-2318	721-2318	722-2318
20mm	20	22	88	720-2320	721-2320	722-2320
22mm	20	22	88	720-2322	721-2322	722-2322
24mm	25	26	102	720-2324	721-2324	722-2324
25mm	25	26	102	720-2325	721-2325	722-2325

Metric 4 Flute Single End Mills

DIN844B, High Speed Steel

4齿单头立铣刀



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3mm	6	8	52	720-4903	721-4903	722-4903
4mm	6	11	55	720-4904	721-4904	722-4904
5mm	6	13	57	720-4905	721-4905	722-4905
6mm	6	13	57	720-4906	721-4906	722-4906
7mm	10	16	66	720-4907	721-4907	722-4907
8mm	10	19	63	720-4908	721-4908	722-4908
10mm	10	22	72	720-4910	721-4910	722-4910
12mm	12	26	83	720-4912	721-4912	722-4912
14mm	12	26	83	720-4914	721-4914	722-4914
16mm	16	32	92	720-4916	721-4916	722-4916
18mm	16	32	92	720-4918	721-4918	722-4918
20mm	20	38	104	720-4920	721-4920	722-4920
22mm	20	38	104	720-4922	721-4922	722-4922
25mm	25	45	121	720-4925	721-4925	722-4925
28mm	25	45	121	720-4928	721-4928	722-4928
30mm	25	45	121	720-4930	721-4930	722-4930

Metric 4 Flute Single End Mills

DIN844B, High Speed Steel, Long Length

DIN844B 加长刃四齿单头立铣刀



Size	Shank Dia.	Flute Length	Overall Length	M2 Order No.	M2Al Order No.	TiN-Coated Order No.
3mm	6	12	56	720-4503	721-4503	722-4503
4mm	6	19	63	720-4504	721-4504	722-4504
5mm	6	24	68	720-4505	721-4505	722-4505
6mm	6	24	68	720-4506	721-4506	722-4506
7mm	10	30	80	720-4507	721-4507	722-4507
8mm	10	38	88	720-4508	721-4508	722-4508
10mm	10	45	95	720-4510	721-4510	722-4510
12mm	12	53	110	720-4512	721-4512	722-4512
14mm	12	53	110	720-4514	721-4514	722-4514
16mm	16	63	123	720-4516	721-4516	722-4516
18mm	16	63	123	720-4518	721-4518	722-4518
20mm	20	75	141	720-4520	721-4520	722-4520
22mm	20	75	141	720-4522	721-4522	722-4522
25mm	25	90	166	720-4525	721-4525	722-4525

M42 8% Cobalt 2 Flute Inch Shank Metric Size Single End Mills

2 齿英制柄公制尺寸铣刀 (M42 8% 钴)

F.Y.I

M-42 cobalt end mills are more economical than high speed steel end mills. They stay sharper longer to allow more cuts between grinds and reduce downtime to give you lower cost per machined workpiece!



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
3mm	3/8	3/8"	2-5/16	723-9030	10.5mm	3/8	13/16	2-1/2	723-9105	19mm	3/4	1-5/8	3-7/8	723-9190
3.5mm	3/8	7/16	2-5/16	723-9035	11mm	3/8	13/16	2-1/2	723-9110	20mm	3/4	1-1/2	3-3/4	723-9200
4.0mm	3/8	7/16	2-5/16	723-9040	11.5mm	3/8	13/16	2-1/2	723-9115	20mm	5/8	1-1/2	3-3/4	723-9201
4.5mm	3/8	7/16	2-5/16	723-9045	11.5mm	3/8	13/16	2-1/2	723-9119	21mm	3/4	1-1/2	3-3/4	723-9210
5mm	3/8	1/2	2-5/16	723-9050	12mm	1/2	1	3	723-9120	22mm	3/4	1-1/2	3-3/4	723-9219
5.5mm	3/8	1/2	2-3/8	723-9055	12.5mm	1/2	1	3	723-9125	22mm	7/8	1-1/2	3-3/4	723-9220
6mm	3/8	1/2	2-5/16	723-9060	13mm	1/2	1-1/8	3-1/8	723-9130	23mm	7/8	1-7/8	4-1/8	723-9230
6.5mm	3/8	9/16	2-3/8	723-9065	13.5mm	1/2	1-1/8	3-1/8	723-9135	24mm	1/2	1-1/2	3-1/2	723-9240
7mm	3/8	9/16	2-5/16	723-9070	14mm	1/2	1-1/8	3-1/8	723-9140	25mm	1	1-5/8	4-1/8	723-9250
7.5mm	3/8	9/16	2-5/16	723-9075	14.5mm	1/2	1-1/8	3-1/8	723-9145	28mm	1	2	4-1/2	723-9280
8mm	3/8	9/16	2-5/16	723-9080	15mm	1/2	1-1/8	3-1/8	723-9150	32mm	1	2	4-1/2	723-9320
8.5mm	3/8	9/16	2-5/16	723-9085	16mm	1/2	1-5/16	3-5/16	723-9160	35mm	1	2	4-1/2	723-9350
9mm	3/8	9/16	2-5/16	723-9090	16mm	5/8	1-5/16	3-5/16	723-9162	36mm	1	2	4-1/2	723-9360
9.5mm	3/8	9/16	2-5/16	723-9095	17mm	5/8	1-5/16	3-7/16	723-9170	40mm	1-1/4	2	4-1/2	723-9400
10mm	3/8	13/16	2-1/2	723-9100	18mm	5/8	1-5/16	3-5/16	723-9180	45mm	1-1/4	2	4-1/2	723-9450

M42 8% Cobalt 4 Flute Inch Shank Metric Size Single End Mills

Center Cutting

4 齿英制柄公制尺寸铣刀 (M42 8% 钴), 中心切削



Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.	Size	Shank Dia.	Flute Length	Overall Length	Order No.
3mm	3/8"	3/8"	2-5/16"	723-8610	10mm	3/8	1	2-1/2	723-8654	19mm	3/4	1-5/8	3-7/8	723-8695
3.5mm	3/8	7/16	2-5/16	723-8613	10.5mm	3/8	1	2-11/16	723-8656	20mm	5/8	1-7/8	4-1/8	723-8697
4mm	3/8	1/2	2-3/8	723-8616	11mm	3/8	1	2-11/16	723-8659	20mm	3/4	1-7/8	4-1/8	723-8698
4.5mm	3/8	7/16	2-5/16	723-8619	11.5mm	3/8	1	2-11/16	723-8662	21mm	3/4	1-7/8	4-1/8	723-8701
5mm	3/8	9/16	2-7/16	723-8622	12mm	3/8	1	2-11/16	723-8665	22mm	3/4	1-7/8	4-1/8	723-8703
5.5mm	3/8	5/8	2-1/2	723-8625	12.5mm	1/2	1-1/4	3-1/4	723-8668	22mm	7/8	1-7/8	4-1/8	723-8704
6mm	3/8	5/8	2-1/2	723-8628	13mm	1/2	1-1/4	3-1/4	723-8671	23mm	7/8	1-7/8	4-1/8	723-8707
6.5mm	3/8	11/16	2-1/2	723-8631	13.5mm	1/2"	1-3/8"	3-3/8"	723-8674	24mm	7/8	1-7/8	4-1/8	723-8710
7mm	3/8	5/8	2-1/2	723-8634	14mm	1/2	1-3/8	3-3/8	723-8677	25mm	1	2	4-1/2	723-8713
7.5mm	3/8	3/4	2-1/2	723-8637	14.5mm	1/2	1-3/8	3-3/8	723-8680	28mm	1	2	4-1/2	723-8718
8mm	3/8	3/4	2-1/2	723-8641	15mm	1/2	1-3/8	3-3/8	723-8683	32mm	1	2	4-1/2	723-8725
8.5mm	3/8	3/4	2-1/2	723-8644	16mm	5/8	1-5/8	3-3/4	723-8686	35mm	1	2	4-1/2	723-8729
9mm	3/8	3/4	2-1/2	723-8647	17mm	5/8	1-5/8	3-3/4	723-8689	36mm	1	2	4-1/2	723-8732
9.5mm	3/8	3/4	2-1/2	723-8650	18mm	5/8	1-5/8	3-3/4	723-8691	40mm	1-1/4	2	4-1/2	723-8739
10mm	3/8	3/4	2-1/2	723-8653	18mm	3/4	1-5/8	3-3/4	723-8692	45mm	1-1/4	2	4-1/2	723-8747

M42 8% Cobalt Metric 2 Flute Single End Mills

DIN327

M42 公制 2 齿单头立铣刀



Size	Shank Dia.	Flute Length	OAL	Order No.	Size	Shank Dia.	Flute Length	OAL	Order No.	Size	Shank Dia.	Flute Length	OAL	Order No.
2mm	6	4	48	723-2302	11mm	12	16	73	723-2311	20mm	20	22	88	723-2320
3mm	6	5	49	723-2303	12mm	12	16	73	723-2312	21mm	20	22	88	723-2321
4mm	6	7	51	723-2304	13mm	12	16	73	723-2313	22mm	20	22	88	723-2322
5mm	6	8	52	723-2305	14mm	12	16	73	723-2314	23mm	20	22	88	723-2323
6mm	6	8	52	723-2306	15mm	12	16	73	723-2315	24mm	25	26	102	723-2324
7mm	10	10	60	723-2307	16mm	16	19	79	723-2316	25mm	25	26	102	723-2325
8mm	10	11	61	723-2308	17mm	16	19	79	723-2317	26mm	25	26	102	723-2326
9mm	10	13	63	723-2309	18mm	16	19	79	723-2318	28mm	25	26	102	723-2328
10mm	10	13	63	723-2310	19mm	16	19	79	723-2319					

M42 8% Cobalt Metric 4 Flute Single End Mills

DIN844

M42 4齿单头立铣刀

Cobalt



Size	Shank Dia.	Flute Length	OAL	Order No.	Size	Shank Dia.	Flute Length	OAL	Order No.	Size	Shank Dia.	Flute Length	OAL	Order No.
2mm	6	7	51	723-4902	12mm	12	26	83	723-4912	21mm	20	38	104	723-4921
3mm	6	8	52	723-4903	13mm	12	26	83	723-4913	22mm	20	38	104	723-4922
4mm	6	11	55	723-4904	14mm	12	26	83	723-4914	23mm	20	38	104	723-4923
5mm	6	13	57	723-4905	15mm	12	2	83	723-4915	24mm	25	45	121	723-4924
6mm	6	13	57	723-4906	16mm	16	32	92	723-4916	25mm	25	45	121	723-4925
7mm	10	16	66	723-4907	17mm	16	32	92	723-4917	26mm	25	45	121	723-4926
8mm	10	19	63	723-4908	18mm	16	32	92	723-4918	28mm	25	45	121	723-4928
9mm	10	19	69	723-4909	19mm	16	32	92	723-4919	30mm	25	45	121	723-4930
10mm	10	22	72	723-4910	20mm	20	38	104	723-4920	32mm	32	53	133	723-4932
11mm	12	26	83	723-4911										

Metric Roughing End Mills

单头波刃立铣刀

High Speed Steel



Size (mm)	Shank Dia.	Flute L	Flute OAL	No. of Flute	Order No.	Tin-coated Order No.	Size (mm)	Shank Dia.	Flute L	Flute OAL	No. of Flute	Order No.	Tin-coated Order No.	Size (mm)	Shank Dia.	Flute L	Flute OAL	No. of Flute	Order No.	Tin-coated Order No.
6	6	13	57	4	720-5806	722-5806	20	20	38	104	4	720-5820	722-5820	38	32	53	133	6	720-5838	722-5838
8	10	19	69	4	720-5808	722-5808	22	20	38	104	4	720-5822	722-5822	40	40	63	155	6	720-5840	722-5840
10	10	22	72	4	720-5810	722-5810	22	20	38	104	5	720-5823	722-5823	40	40	63	155	8	720-5841	722-5841
11	12	22	79	4	720-5811	722-5811	24	25	45	121	4	720-5824	722-5824	45	40	63	155	6	720-5845	722-5845
12	12	26	83	4	720-5812	722-5812	25	25	45	121	4	720-5825	722-5825	45	40	63	155	8	720-5846	722-5846
13	12	26	83	4	720-5813	722-5813	25	25	45	121	5	720-5826	722-5826	50	50	75	177	6	720-5850	722-5850
14	12	26	83	4	720-5814	722-5814	26	25	45	121	6	720-5827	722-5827	50	50	75	177	8	720-5851	722-5851
15	12	26	83	4	720-5815	722-5815	28	25	45	121	6	720-5828	722-5828	55	50	75	177	6	720-5855	722-5855
16	16	32	92	4	720-5816	722-5816	30	25	45	121	5	720-5830	722-5830	55	50	75	177	8	720-5856	722-5856
17	16	32	92	4	720-5817	722-5817	30	25	45	121	6	720-5831	722-5831	63	63	90	202	6	720-5863	722-5863
18	16	32	92	4	720-5818	722-5818	32	32	53	133	5	720-5832	722-5832	63	63	90	202	8	720-5864	722-5864
19	16	32	92	4	720-5819	722-5819	32	32	53	133	6	720-5833	722-5833	71	63	90	202	8	720-5871	722-5871

Solid Carbide End Mills

硬制合金立铣刀(中心切削)

Four Flute End Mills: Produce finer finishes, recommend for finishing operation.**Two Flute End Mills:** Allow maximum chip ejection compare to four flute, recommend for roughing operation.

- Made of micro-grain tungsten carbide material.
- Suitable for general purpose of machining cast Iron, alloy steel, stainless steel, non-ferrous and non-metals material.
- Center cutting allows for three axis profile milling and plunge cutting.
- 30° Helix Flutes for both nonferrous and ferrous materials.
- Better surface finish on work piece.
- Higher feed rates and long tool life.

Tolerance

Shank Diameter : -0.0000"/-0.0005"

Cutter Diameter:

1/32" thru 1/4" +0.000"/-0.002"

9/32" thru 1" +0.000"/-0.003"

2 Flute Single End Mills**4 Flute Single End Mills**

Size	Shank Dia.	Flute Length	Overall Length	2 Flute Order No.	4Flute Order No.
1/16"	1/8"	3/16"	1-1/2"	244-2204	244-2404
3/32	1/8	3/8	1-1/2	244-2210	244-2410
1/8	1/8	1/2	1-1/2	244-2216	244-2416
5/32	3/16	9/16	2	244-2222	244-2422
3/16	3/16	5/8	2	244-2228	244-2428
7/32	1/4	5/8	2-1/2	244-2234	244-2434
1/4	1/4	3/4	2-1/2	244-2240	244-2440
9/32	5/16	7/8	2-1/2	244-2246	244-2446
5/16	5/16	3/4	2-1/2	244-2252	244-2452
3/8	3/8	7/8	2-1/2	244-2258	244-2458
7/16	7/16	7/8	2-1/2	244-2264	244-2464
1/2	1/2	1	3	244-2270	244-2470
9/16	9/16	1-3/8	3	244-2276	244-2476
5/8	5/8	1-3/8	3-1/2	244-2282	244-2482
11/16	3/4	1-1/2	4	244-2288	244-2488
3/4	3/4	1-1/2	4	244-2294	244-2494
7/8	7/8	1-1/2	4	244-2300	244-2500
1	1	1-1/2	4	244-2306	244-2506
1	1	3	6		244-2512

2 Flute Double End Mills**4 Flute Double End Mills**

Size	Shank Dia.	Flute Length	Overall Length	2 Flute Order No.	4 Flute Order No.
1/16"	1/8"	1/8"	1-1/2"	244-2604	244-2804
3/32	1/8	3/16	1-1/2	244-2610	244-2810
1/8	1/8	1/4	1-1/2	244-2616	244-2816
5/32	3/16	5/16	2	244-2622	244-2822
3/16	3/16	3/8	2	244-2628	244-2828
7/32	1/4	1/2	2-1/2	244-2634	244-2834
1/4	1/4	1/2	2-1/2	244-2640	244-2840
5/16	5/16	1/2	2-1/2	244-2652	244-2852
3/8	3/8	9/16	2-1/2	244-2658	244-2858
7/16	7/16	5/8	3	244-2664	244-2864
1/2	1/2	5/8	3	244-2670	244-2870

Carbide Tipped Single End Mills For Mild Steel

Spiral Flute, Right Hand, Straight Shank

单头镶齿硬质合金立铣刀



Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
1/4"	3/8"	1/2"	2-1/2"	2	243-0020	1"	1"	1-3/4"	4-3/4"	4	243-0205
5/16	3/8	5/8	2-1/2	2	243-0040	1-1/8	1	1-1/4	4-1/4	4	243-0220
3/8	3/8	5/8	2-1/2	2	243-0060	1-1/8	1	1-3/4	4-3/4	4	243-0225
7/16	3/8	1	2-11/16	2	243-0080	1-1/4	1	1-1/4	4-1/4	4	243-0240
1/2	1/2	1	3-1/4	2	243-0100	1-1/4	1-1/4	2-1/8	5-1/4	4	243-0245
9/16	1/2	1	3-3/8	2	243-0120	1-3/8	1-1/4	2-1/8	5-1/4	4	243-0250
5/8	1/2	1	3-3/8	4	243-0140	1-1/2	1-1/4	1-1/2	4-1/2	4	243-0260
5/8	5/8	1-1/4	3-5/8	3	243-0145	1-1/2	1-1/2	2-1/2	6-1/8	4	243-0265
3/4	5/8	1	3-5/8	4	243-0160	1-3/4	1-1/2	2-1/2	6-1/8	4	243-0270
3/4	3/4	1-1/2	4-1/8	3	243-0165	2	1-1/4	1-1/2	4-1/2	6	243-0300
7/8	5/8	1-1/4	4	4	243-0180	2	2	3	7	6	243-0305
1	7/8	1-1/4	4	4	243-0200						

Carbide Tipped Single End Mills For Cast Iron

Spiral Flute, Right Hand, Straight Shank

单头镶齿硬质合金立铣刀



Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Spiral Flute Order No.	Straight Flute Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Spiral Flute Order No.	Straight Flute Order No.
1/4"	3/8"	1/2"	2-1/2"	4	243-1020	243-1316	3/4"	1/2"	1"	3-5/8"	4		243-1349
5/16	3/8	5/8	2-1/2	4	243-1040	243-1320	7/8"	5/8"	1-1/4"	4"	4	243-1180	243-1356
3/8	3/8	5/8	2-1/2	4	243-1060	243-1324	1	7/8	1-1/4	4	4	243-1200	243-1364
7/16	3/8	1	2-11/16	4	243-1080	243-1328	1-1/8	1	1-1/4	4-1/4	4	243-1220	243-1368
1/2	1/2	1	3-1/4	4	243-1100	243-1332	1-1/4	1	1-1/4	4-1/4	4	243-1240	243-1380
9/16	1/2	1	3-3/8	4	243-1120	243-1336	1-1/2	1-1/4	1-1/2	4-1/2	4	243-1260	243-1396
5/8	1/2	1	3-3/8	4	243-1140	243-1340	1-3/4	1-1/4	1-1/2	4-1/2	6	243-1280	243-1412
3/4	5/8	1	3-5/8	4	243-1160	243-1348	2	1-1/4	1-1/2	4-1/2	6	243-1300	243-1428

Carbide Tipped 2 Flute Single End Mills 方柄单头镶齿硬质合金立铣刀

Straight Flute, Positive Rake, 90° Square Shoulder

- Used for N.C. machines and standard millers.
- Ideal for use in key-way slotting, slab milling, 90° shoulder milling.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flutes	Order No.
5/16"	3/8"	1/2"	2-3/8"	2	243-0312	9/16"	5/8"	3/4"	2-7/8"	2	243-0562
3/8	3/8	5/8	2-5/8	2	243-0375	5/8	5/8	3/4	2-7/8	2	243-0625
1/2	1/2	5/8	2-3/4	2	243-0500	3/4	3/4	1	3-5/32	2	243-0750

Carbide Tipped Heavy Duty End Mills 单头镶齿硬质合金立铣刀

- All material can be machined with these ultra micrograin end mills at high or low cutting speeds, and feeds with increased wear resistance.
- Specially designed with a 25° right hand helix.
- Tough carbide grade allows high speed milling operations.
- Ultra Fine. For General Purpose.

Two Flute Center Cutting



- Suited for the rough machining, heavy cutting and grooving machining as this allows larger chip pocket and increased feeding.

Three Flute Center Cutting



- Especially three flutes type vibrates less when entering and as result can increase feed rate over two flutes type.

Four Flute Center Cutting



- Allows better balance for machining.
- Suited for finish and side surface machining as this is less likely to tilt.

Size	Shank Dia.	Flute Length	Overall Length	Two Flute Order No.	Three Flute Order No.	Four Flute Order No.
5/8"	5/8"	1-3/16"	3-1/2"	243-2040	243-2240	
3/4	3/4	1-27/64	3-3/4	243-2048	243-2248	243-2448
7/8	3/4	1-27/64	3-3/4	243-2056	243-2256	243-2456
1	1	1-29/64	4-1/8	243-2064	243-2264	243-2464
1-1/8	1	1-9/16	4-1/2	243-2072	243-2272	
1-1/4	1-1/4	1-27/32	5-1/8	243-2080	243-2280	243-2480
1-1/2	1-1/4	2-1/4	5-1/2	243-2096	243-2296	243-2496
1-3/4	1-1/4	2-5/8	6-1/8	243-2112	243-2312	243-2512
2	1-1/4	2-5/8	6-1/8	243-2128	243-2328	243-2528

2 Flute Carbide Tipped End Mills

2 槽镶硬质合金立铣刀

with Weldon Shank

- 2 flutes are used for machining aluminum alloys, magnesium alloys etc.
- Center Cutting suitable for plunge cutting.
- Carbide tipped cutting edge can be resharped with diamond grinding wheel.



Center Cutting

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
5/8"	5/8"	1-5/16"	3-11/16"	2	244-1109
5/8	5/8	1-3/8	4-5/8	2	244-1112
11/16	5/8	1-5/16	3-11/16	2	244-1115
3/4	5/8	1-5/16	3-27/32	2	244-1118
3/4	3/4	1-5/8	5-3/8	2	244-1121
13/16	5/8	1-1/2	4-1/32	2	244-1124
7/8	7/8	1-1/2	4-5/16	2	244-1127
1	7/8	1-1/2	4-5/16	2	244-1130
1	1	1-5/8	4-11/16	2	244-1133
1	1	2-1/2	7-1/4	2	244-1136
1-1/8	1	1-5/8	4-11/16	2	244-1139
1-1/4	1-1/4	1-5/8	4-11/16	2	244-1142
1-1/4	1-1/4	3	7-1/4	2	244-1145
1-3/8	1	1-5/8	4-11/16	2	244-1148
1-1/2	1-1/4	1-5/8	4-25/32	2	244-1151
1-3/4	1-1/4	1-5/8	4-25/32	2	244-1154
2	1-1/4	1-5/8	4-25/32	2	244-1157

Non Center Cutting

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1/2"	1/2"	1"	3-1/4"	2	244-1003
9/16	1/2	1-1/8	3-3/8	2	244-1006
5/8	5/8	1-5/16	3-11/16	2	244-1009
5/8	5/8	1-3/8	4-5/8	2	244-1012
11/16	5/8	1-5/16	3-11/16	2	244-1015
3/4	5/8	1-5/16	3-27/32	2	244-1018
3/4	3/4	1-5/8	5-3/8	2	244-1021
13/16	5/8	1-1/2	4-1/32	2	244-1024
7/8	7/8	1-1/2	4-5/16	2	244-1027
1	7/8	1-1/2	4-5/16	2	244-1030
1	1	1-5/8	4-11/16	2	244-1033
1	1	2-1/2	7-1/4	2	244-1036
1-1/8	1	1-5/8	4-11/16	2	244-1039
1-1/4	1-1/4	1-5/8	4-11/16	2	244-1042
1-1/4	1-1/4	3	7-1/4	2	244-1045
1-3/8	1	1-5/8	4-11/16	2	244-1048
1-1/2	1-1/4	1-5/8	4-25/32	2	244-1051
1-3/4	1-1/4	1-5/8	4-25/32	2	244-1054
2	1-1/4	1-5/8	4-25/32	2	244-1057

3 Flute Carbide Tipped End Mills with Weldon Shank

3槽镶硬质合金立铣刀

- Use in finishing operation.
- Three flute's vibration is less than two flute when milling.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1/2"	1/2"	1-1/4"	3-1/2"	3	244-1203	13/16"	5/8"	1-7/8"	4-27/64"	3	244-1236
1/2	1/2	2	4-1/4	3	244-1206	7/8	7/8	1-7/8	4-17/32	3	244-1239
1/2	1/2	3	5-1/4	3	244-1209	7/8	7/8	3-1/2	6-5/32	3	244-1242
9/16	1/2	1-3/8	3-5/8	3	244-1212	7/8	7/8	5	7-21/32	3	244-1245
5/8	5/8	1-5/8	4	3	244-1215	1	7/8	1-7/8	4-11/16	3	244-1248
5/8	5/8	2-1/2	4-7/8	3	244-1218	1	1	2	5-1/16	3	244-1251
5/8	5/8	4	6-3/8	3	244-1221	1	1	4	7-1/16	3	244-1254
11/16	5/8	1-5/8	4	3	244-1224	1	1	6	9-1/16	3	244-1257
3/4	5/8	1-5/8	4-5/32	3	244-1227	1-1/8	1	2	5-1/16	3	244-1260
3/4	3/4	3	5-21/32	3	244-1230	1-1/8	1	4	7-1/16	3	244-1263
3/4	3/4	4	6-21/32	3	244-1233						

Multiple Flute Carbide Tipped End Mills

4, 6 槽镶硬质合金立铣刀 - 复合柄

- Use in finishing operation
- multi-flute can efficiently mill a wide range of materials: non ferrous materials and ferrous materials, including titanium alloy, cast iron, alloy steel, stainless steel, plastic and magnetic material etc.
- Heavy duty machining.



Combination Shank

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1-1/2"	1-1/2"	2-1/2"	6-1/8"	4	244-1406	2"	2"	6"	10"	4"	244-1424
2	2	3	7	6	244-1409	2	2	6	10	6	244-1427
2	2	4	8	4	244-1412	2	2	8	12	4	244-1430
2	2	4	8	6	244-1415	2	2	8	12	6	244-1433
2	2	5	9	4	244-1418	2	2	10	14	6	244-1436
2	2	5	9	6	244-1421						

Multiple Flute Carbide Tipped End Mills 4, 6 槽镶硬质合金立铣刀

Weldon Shank

- Use in finishing operation
- multi-flute can efficiently mill a wide range of materials: non ferrous materials and ferrous materials, including titanium alloy, cast iron, alloy steel, stainless steel, plastic and magnetic material etc.
- Heavy duty machining.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1"	7/8"	1-7/8"	4-11/16"	4	244-1303	1-1/2"	1-1/4"	4"	7-5/32"	4	244-1336
1	1	2	5-1/16	4	244-1306	1-1/2	1-1/4	8	11-5/32	4	244-1339
1	1	4	7-1/16	4	244-1309	1-3/4	1-1/4	2	5-5/32	4	244-1342
1	1	6	9-1/16	4	244-1312	1-3/4	1-1/4	2	5-5/32	6	244-1345
1-1/8	1	2	5-1/16	4	244-1315	1-3/4	1-1/4	4	7-5/32	4	244-1348
1-1/8	1	4	7-1/16	4	244-1318	1-3/4	1-1/4	4	7-5/32	6	244-1351
1-1/4	1-1/4	2	5-1/16	4	244-1321	2	1-1/4	2	5-5/32	4	244-1354
1-1/4	1-1/4	4	7-1/16	4	244-1324	2	1-1/4	2	5-5/32	6	244-1357
1-1/4	1-1/4	6	9-1/16	4	244-1327	2	1-1/4	4	7-5/32	4	244-1360
1-3/8	1	2	5-1/16	4	244-1330	2	1-1/4	4	7-5/32	6	244-1363
1-1/2	1-1/4	2	5-5/32	4	244-1333						

"CHIPBREAKER" Cutting Edge Carbide Tipped End Mills

4&6 Flute with Weldon Shank

4, 6槽断屑刃镶硬质合金立铣刀

- Use in semi-finishing operation.
- multi-flute can efficiently mill a wide range of materials: non ferrous materials and ferrous materials, including titanium alloy, cast iron, alloy steel, stainless steel, plastic and magnetic material etc.
- Heavy duty machining.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1"	7/8"	1-7/8"	4-11/16"	4	244-1803	1-1/2"	1-1/4"	4"	7-5/32"	4	244-1836
1	1	2	5-1/16	4	244-1806	1-1/2	1-1/4	8	11-5/32	4	244-1839
1	1	4	7-1/16	4	244-1809	1-3/4	1-1/4	2	5-5/32	4	244-1842
1	1	6	9-1/16	4	244-1812	1-3/4	1-1/4	2	5-5/32	6	244-1845
1-1/8	1	2	5-1/16	4	244-1815	1-3/4	1-1/4	4	7-5/32	4	244-1848
1-1/8	1	4	7-1/16	4	244-1818	1-3/4	1-1/4	4	7-5/32	6	244-1851
1-1/4	1-1/4	2	5-1/16	4	244-1821	2	1-1/4	2	5-5/32	4	244-1854
1-1/4	1-1/4	4	7-1/16	4	244-1824	2	1-1/4	2	5-5/32	6	244-1857
1-1/4	1-1/4	6	9-1/16	4	244-1827	2	1-1/4	4	7-5/32	4	244-1860
1-3/8	1	2	5-1/16	4	244-1830	2	1-1/4	4	7-5/32	6	244-1863
1-1/2	1-1/4	2	5-5/32	4	244-1833						

"CREST" Cutting Edge Carbide Tipped End Mills 3槽前波刃镶硬质合金立铣刀

3 Flute with Weldon Shank

- Use in roughing milling operation.
- Machining carbon steel, cast iron, alloy steel.
- Heavy duty machining.
- Crest cutting edges compensate cutting forces, minimum vibration and chatter, and offer maximum end mills life.



Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.	Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
5/8"	5/8"	1-5/8"	4"	3	244-1515	7/8"	7/8"	3-1/2"	6-5/32"	3	244-1542
5/8	5/8	2-1/2	4-7/8	3	244-1518	7/8	7/8	5	7-21/32	3	244-1545
5/8	5/8	4	6-3/8	3	244-1521	1	7/8	1-7/8	4-11/16	3	244-1548
11/16	5/8	1-5/8	4	3	244-1524	1	1	2	5-1/16	3	244-1551
3/4	5/8	1-5/8	4-5/32	3	244-1527	1	1	4	7-1/16	3	244-1554
3/4	3/4	3	5-21/32	3	244-1530	1	1	6	9-1/16	3	244-1557
3/4	3/4	4	6-21/32	3	244-1533	1-1/8	1	2	5-1/16	3	244-1560
13/16	5/8	1-7/8	4-27/64	3	244-1536	1-1/8	1	4	7-1/16	3	244-1563
7/8	7/8	1-7/8	4-17/32	3	244-1539						

"CREST" Cutting Edge Carbide Tipped End Mills

4, 6 槽前波刃镶硬质合金立铣刀-复合柄

- Use in roughing milling operation.
- Machining carbon steel, cast iron, alloy steel.
- Heavy duty machining.
- Crest cutting edges compensate cutting forces, minimum vibration and chatter, and offer maximum end mills life.



4 & 6 Flute with Combination Shank

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1-1/2"	1-1/2"	2-1/2"	6-1/8"	4	244-1706
2	2	3	7	6	244-1709
2	2	4	8	4	244-1712
2	2	4	8	6	244-1715
2	2	5	9	4	244-1718
2	2	5	9	6	244-1721
2	2	6	10	4	244-1724
2	2	6	10	6	244-1727
2	2	8	12	4	244-1730
2	2	8	12	6	244-1733
2	2	10	14	6	244-1736

4 & 6 Flute with Weldon Shank

Size	Shank Dia.	Flute Length	Overall Length	No. of Flute	Order No.
1"	7/8"	1-7/8"	4-11/16"	4	244-1603
1	1	2	5-1/16	4	244-1606
1	1	4	7-1/16	4	244-1609
1	1	6	9-1/16	4	244-1612
1-1/8	1	2	5-1/16	4	244-1615
1-1/8	1	4	7-1/16	4	244-1618
1-1/4	1-1/4	2	5-1/16	4	244-1621
1-1/4	1-1/4	4	7-1/16	4	244-1624
1-1/4	1-1/4	6	9-1/16	4	244-1627
1-3/8	1	2	5-1/16	4	244-1630
1-1/2	1-1/4	2	5-5/32	4	244-1633
1-1/2	1-1/4	4	7-5/32	4	244-1636
1-1/2	1-1/4	8	11-5/32	4	244-1639
1-3/4	1-1/4	2	5-5/32	4	244-1642
1-3/4	1-1/4	2	5-5/32	6	244-1645
1-3/4	1-1/4	4	7-5/32	4	244-1648
1-3/4	1-1/4	4	7-5/32	6	244-1651
2	1-1/4	2	5-5/32	4	244-1654
2	1-1/4	2	5-5/32	6	244-1657
2	1-1/4	4	7-5/32	4	244-1660
2	1-1/4	4	7-5/32	6	244-1663

Corner Rounding End Mill Sets

内R径立铣刀套装

- Used to mill rounded corners.
- From relieved for longer tool life.
- May be resharpened repeatedly without changing form.
- Ideal for your Bridgeport type machines.

4Pcs/set, Wooden Stand

Pieces	Size	Materials	Order No.
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	M2	182-6908
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	M2AL	181-6908
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	Tin-Coated	183-6908

8Pcs/set, Wooden Stand

Pieces	Size	Shank Dia.	M2 Order No.	M2 TiN Order No.	M2 Al Order No.
8	1/16, 3/32"	3/8	182-6006		
	1/8, 5/32, 3/16, 1/4, 5/16, 3/8	1/2			
8	1/16, 3/32, 1/8"	3/8	182-6007	183-6007	181-6007
	5/32, 3/16, 1/4, 5/16, 3/8	1/2			
8	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	3/4	182-6008	183-6008	181-6008

M42 8% Cobalt

Corner Rounding End Mill Sets



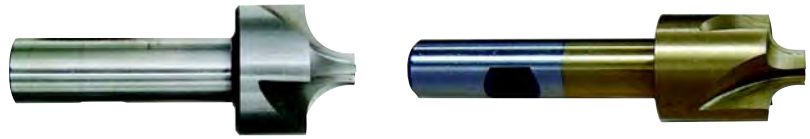
Pieces	Size	Shank Dia.	Order No.
4	1/2, 9/16, 5/8, 3/4"	3/4	723-6684
8	1/16, 3/32	3/8	723-6686
	1/8, 5/32, 3/16, 1/4, 5/16, 3/8	1/2	
8	1/16, 3/32, 1/8	3/8	723-6687
	5/32, 3/16, 1/4, 5/16, 3/8	1/2	
8	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	3/4	723-6688



4 Flute Corner Rounding End Mills

内R径4齿立铣刀

- Used to mill rounded corners.
- From relieved for longer tool life.
- May be resharpened repeatedly without changing form.
- Ideal for your Bridgeport type machines.



Radius Size	Shank Dia.	Cutter Dia.	Overall Length	M2 OrderNo.	M2AL Order No.	TiN-Coated Order No.	Radius Size	Shank Dia.	Cutter Dia.	Overall Length	M2 Order No.	M2AL Order No.	TiN-Coated Order No.
1/32"	3/8"	3/8"	2-1/2"	182-6023	181-6023	183-6023	3/8"	3/4"	1-1/4"	3-1/2"	182-6783	181-6783	183-6783
3/64	3/8	7/16	2-1/2	182-6031	181-6031	183-6031	3/8	7/8	1-1/4	3-3/4	182-6254	181-6254	183-6254
1/16	3/8	7/16	2-1/2	182-6049	181-6049	183-6049	13/32	3/4	1-1/4	3-1/2	182-6262	181-6262	183-6262
5/64	3/8	1/2	2-1/2	182-6056	181-6056	183-6056	7/16	3/4	1-3/8	3-3/4	182-6825	181-6825	183-6825
3/32	3/8	1/2	2-1/2	182-6064	181-6064	183-6064	7/16	3/4	1-3/8	4	182-6280	181-6280	183-6280
3/32	1/2	1/2	2-1/2	182-6809	181-6809	183-6809	7/16	1	1-3/8	4	182-6288	181-6288	183-6288
7/64	3/8	5/8	2-1/2	182-6072	181-6072	183-6072	15/32	3/4	1-3/8	3-3/4	182-6304	181-6304	183-6304
1/8	1/2	5/8	3	182-6080	181-6080	183-6080	1/2	1/2	1-1/2	3-7/8	182-6833	181-6833	183-6833
1/8	3/8	5/8	3	182-6668	181-6668	183-6668	1/2	3/4	1-1/2	3-7/8	182-6791	181-6791	183-6791
1/8	3/4	5/8	3	182-6817	181-6817	183-6817	1/2	1	1-1/2	4-1/8	182-6320	181-6320	183-6320
9/64	1/2	3/4	3	182-6098	181-6098	183-6098	17/32	3/4	1-1/2	3-7/8	182-6338	181-6338	183-6338
5/32	1/2	3/4	3	182-6106	181-6106	183-6106	17/32	1	1-1/2	4-1/8	182-6346	181-6346	183-6346
11/64	1/2	3/4	3	182-6114	181-6114	183-6114	9/16	3/4	1-15/16	4	182-6353	181-6353	183-6353
3/16	1/2	7/8	3	182-6122	181-6122	183-6122	9/16	1	1-15/16	4-1/4	182-6361	181-6361	183-6361
3/16	3/4	7/8	3-1/8	182-6130	181-6130	183-6130	19/32	3/4	1-15/16	4	182-6379	181-6379	183-6379
13/64	1/2	7/8	3-1/8	182-6676	181-6676	183-6676	19/32	1	1-15/16	4-1/4	182-6387	181-6387	183-6387
13/64	3/4	7/8	3-1/8	182-6684	181-6684	183-6684	5/8	3/4	1-15/16	4	182-6403	181-6403	183-6403
7/32	3/4	7/8	3-1/4	182-6692	181-6692	183-6692	5/8	1	1-15/16	4-1/4	182-6395	181-6395	183-6395
7/32	1/2	7/8	3-1/4	182-6148	181-6148	183-6148	21/32	3/4	1-15/16	4	182-6411	181-6411	183-6411
15/64	1/2	7/8	3-1/8	182-6155	181-6155	183-6155	21/32	1	1-15/16	4-1/4	182-6429	181-6429	183-6429
1/4	1/2	1	3	182-6162	181-6162	183-6162	11/16	3/4	2-1/4	4-1/8	182-6437	181-6437	183-6437
1/4	1/2	1	3-1/8	182-6163	181-6163	183-6163	11/16	1	2-1/4	4-5/16	182-6445	181-6445	183-6445
1/4	3/4	1	3-1/4	182-6171	181-6171	183-6171	23/32	3/4	2-1/4	4-1/8	182-6452	181-6452	183-6452
17/64	1/2	1	3-1/8	182-6700	181-6700	183-6700	23/32	1	2-1/4	4-5/16	182-6460	181-6460	183-6460
17/64	3/4	1	3-1/8	182-6718	181-6718	183-6718	3/4	3/4	1-7/8	4	182-6486	181-6486	183-6486
9/32	1/2	1-1/8	3-1/4	182-6189	181-6189	183-6189	3/4	3/4	2-1/4	4-1/8	182-6481	181-6481	183-6481
9/32	5/8	1	3	182-6190	181-6190	183-6190	3/4	1	2-1/4	4-5/16	182-6478	181-6478	183-6478
9/32	3/4	1-1/8	3-1/4	182-6197	181-6197	183-6197	25/32	3/4	2-1/4	4-1/8	182-6494	181-6494	183-6494
19/64	1/2	1-1/8	3-1/4	182-6726	181-6726	183-6726	25/32	1	2-1/4	4-5/16	182-6502	181-6502	183-6502
19/64	3/4	1-1/8	3-1/4	182-6734	181-6734	183-6734	13/16	3/4	2-1/4	4-1/8	182-6510	181-6510	183-6510
5/16	1/2	1-1/8	3-1/4	182-6205	181-6205	183-6205	13/16	1	2-1/4	4-5/16	182-6528	181-6528	183-6528
5/16	3/4	1-1/8	3-1/4	182-6742	181-6742	183-6742	27/32	3/4	2-1/2	4-1/2	182-6536	181-6536	183-6536
5/16	5/8	1-1/8	3-1/2	182-6215	181-6215	183-6215	27/32	1	2-1/2	4-1/2	182-6544	181-6544	183-6544
5/16	7/8	1-1/8	3-1/2	182-6213	181-6213	183-6213	7/8	3/4	2-1/2	4-1/2	182-6551	181-6551	183-6551
21/64	1/2	1-1/8	3-1/4	182-6759	181-6759	183-6759	7/8	1	2-1/2	4-1/2	182-6569	181-6569	183-6569
21/64	3/4	1-1/8	3-1/4	182-6767	181-6767	183-6767	15/16	3/4	2-5/8	4-1/2	182-6593	181-6593	183-6593
11/32	1/2	1-1/8	3-1/2	182-6221	181-6221	183-6221	15/16	1	2-5/8	4-3/4	182-6601	181-6601	183-6601
11/32	3/4	1-1/8	3-1/2	182-6775	181-6775	183-6775	1	3/4	2-5/8	4-1/2	182-6635	181-6635	183-6635
3/8	1/2	1-1/4	3-1/2	182-6247	181-6247	183-6247	1	1	2-5/8	4-3/4	182-6643	181-6643	183-6643

Corner Rounding End Mill Sets

4件套内R径立铣刀

4Pcs/set, Wooden Stand

Pieces	Size	Materials	Order No.
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	M2	182-6908
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	M2AL	181-6908
4	1/2, 9/16, 5/8, 3/4 have 3/4" shank	Tin-Coated	183-6908



M42 8% Cobalt 4 Flute Corner Rounding End Mills

内R径4齿立铣刀(M42 8% 钴)

- M-42 8% cobalt end mills are designed to cut difficult to machine materials.



Radius Size	Shank Dia.	Cutter Dia.	Overall Length	Order No.
1/32"	3/8"	3/8"	2-1/2"	723-6405
3/64	3/8	7/16	2-1/2	723-6408
1/16	3/8	7/16	2-1/2	723-6411
5/64	3/8	1/2	2-1/2	723-6414
3/32	3/8	1/2	2-1/2	723-6417
3/32	1/2	1/2	2-1/2	723-6420
7/64	3/8	5/8	2-1/2	723-6423
1/8	3/8	5/8	3	723-6426
1/8	1/2	5/8	3	723-6429
1/8	3/4	5/8	3	723-6432
9/64	1/2	3/4	3	723-6435
5/32	1/2	3/4	3	723-6438
11/64	1/2	3/4	3	723-6441
3/16	1/2	7/8	3	723-6444
3/16	1/2	7/8	3-1/8	723-6445
3/16	3/4	7/8	3-1/8	723-6447
13/64	1/2	7/8	3-1/8	723-6450
13/64	3/4	7/8	3-1/8	723-6453
7/32	1/2	7/8	3-1/4	723-6456
7/32	3/4	7/8	3-1/4	723-6459
15/64	1/2	7/8	3-1/8	723-6462
1/4	1/2	1	3-1/8	723-6465
1/4	3/4	1	3-1/4	723-6468
17/64	1/2	1	3-1/8	723-6471
17/64	3/4	1	3-1/8	723-6474
9/32	1/2	1-1/8	3-1/4	723-6477
9/32	3/4	1-1/8	3-1/4	723-6480
9/32	5/8	1	3	723-6481
19/64	1/2	1-1/8	3-1/4	723-6483
19/64	3/4	1-1/8	3-1/4	723-6486
5/16	1/2	1-1/8	3-1/4	723-6489
5/16	3/4	1-1/8	3-1/4	723-6492
5/16	7/8	1-1/8	3-1/2	723-6495
21/64	1/2	1-1/8	3-1/4	723-6498
21/64	3/4	1-1/8	3-1/4	723-6501
11/32	1/2	1-1/8	3-1/2	723-6504
11/32	3/4	1-1/8	3-1/2	723-6507

Radius Size	Shank Dia.	Cutter Dia.	Overall	Order No.
3/8"	1/2"	1-1/4"		723-6510
3/8"	3/4"	1-1/4"	3-1/2"	723-6513
3/8"	7/8"	1-1/4"	3-1/2"	723-6516
13/32	3/4	1-1/4"	3-1/4"	723-6519
7/16	3/4	1-3/8"	3-1/2"	723-6522
7/16	1	1-3/8"	4-3/4"	723-6525
15/32	3/4	1-3/8"	4	723-6528
1/2	1/2	1-1/2"	3-3/4"	723-6531
1/2	3/4	1-1/2"	3-7/8"	723-6534
1/2	1	1-1/2"	3-7/8"	723-6537
17/32	3/4	1-1/2"	4-1/8"	723-6540
17/32	1	1-1/2"	3-7/8"	723-6543
9/16	3/4	1-15/16"	4-1/8"	723-6546
9/16	1	1-15/16"	4	723-6549
19/32	3/4	1-15/16"	4-1/4"	723-6552
5/8	3/4	1-15/16"	4	723-6555
5/8	1	1-15/16"	4	723-6558
21/32	3/4	1-15/16"	4-1/4"	723-6561
21/32	1	1-15/16"	4	723-6564
11/16	3/4	2-1/4"	4-1/4"	723-6567
11/16	1	2-1/4"	4-1/8"	723-6570
23/32	3/4	2-1/4"	4-5/16"	723-6573
23/32	1	2-1/4"	4-1/8"	723-6576
3/4	3/4	2-1/4"	4-5/16"	723-6579
3/4	1	2-1/4"	4-1/8"	723-6582
25/32	3/4	2-1/4"	4-5/16"	723-6585
25/32	1	2-1/4"	4-1/8"	723-6588
13/16	3/4	2-1/4"	4-5/16"	723-6591
13/16	1	2-1/4"	4-1/8"	723-6594
27/32	3/4	2-1/2"	4-5/16"	723-6597
7/8	3/4	2-1/2"	4-1/2"	723-6603
7/8	1	2-1/2"	4-1/2"	723-6606
15/16	3/4	2-5/8"	4-1/2"	723-6609
15/16	1	2-5/8"	4-1/2"	723-6612
1	3/4	2-5/8"	4-3/4"	723-6615
1	1	2-5/8"	4-1/2"	723-6618

M42 8% Cobalt Corner Rounding End Mill Sets

套装内R径4齿立铣刀(M42 8% 钴)



Pieces	Size	Shank Dia.	Order No.
4	1/2, 9/16, 5/8, 3/4"	3/4	723-6684
8	1/16, 3/32	3/8	723-6686
	1/8", 5/32"-3/8	1/2	
8	1/16, 3/32, 1/8	3/8	723-6687
	5/32, 3/16, 1/4, 5/16, 3/8	1/2	
8	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	3/4	723-6688



Corner Rounding Milling Cutters

套式R角铣刀

High Speed Steel

Use for radius milling

Radius of Circle	Hole Diameter	Hole Size	Right Hand Order No.	Left Hand Order No.	Radius of Circle	Hole Diameter	Hole Size	Right Hand Order No.	Left Hand Order No.
1/8"	2"	7/8"	317-5080	317-6088	7/16"	3-1/4"	1"	317-5288	317-6286
1/8	2-1/2	1	317-5098	317-6096	1/2	3-1/4	1	317-5320	317-6328
3/16	2-1/2	1	317-5122	317-6120	1/2	4-1/4	1-1/4	317-5338	317-6336
1/4	2-1/4	7/8	317-5163	317-6161	9/16	3-1/2	1	317-5361	317-6369
1/4	3	1	317-5171	317-6179	5/8	3-1/2	1	317-5403	317-6401
5/16	2-3/4	1	317-5205	317-6203	5/8	4-1/4	1-1/4	317-5411	317-6419
5/16	3	1	317-5209	317-6209	3/4	3-3/4	1	317-5486	317-6484
3/8	3	1	317-5247	317-6245	7/8	4-1/2	1-1/4	317-5569	317-6567
3/8	3-3/4	1-1/4	317-5254	317-6252	1	4-1/2	1-1/4	317-5643	317-6641



Straight Tooth Side Milling Cutters

轻型直齿三面刃铣刀

High Speed Steel

- Used in slotting, light-duty side milling and straddle milling for where deep cutting is required.



Dia.	Face Width	Hole Size	Order No.
2"	3/16"	1/2"	301-2127
2	1/4	1/2	301-2168
2	5/16	1/2	301-2200
2	3/8	1/2	301-2242
2	3/16	5/8	301-2135
2	1/4	5/8	301-2176
2	5/16	5/8	301-2218
2	3/8	5/8	301-2259
2	1/4	7/8	301-2182
2	5/16	7/8	301-2268
2	3/8	7/8	301-2262
2	7/16	7/8	301-2285
2-1/2	3/16	7/8	301-2506
2-1/2	1/4	7/8	301-2515
2-1/2	5/16	7/8	301-2523
2-1/2	3/8	7/8	301-2531
2-1/2	7/16	7/8	301-2538
2-1/2	1/2	7/8	301-2556
2-1/2	3/16	1	301-2614
2-1/2	1/4	1	301-2622
2-1/2	5/16	1	301-2630
2-1/2	3/8	1	301-2648
2-1/2	7/16	1	301-2655
2-1/2	1/2	1	301-2663
2-1/2	5/8	1	301-2671
3	3/16	1	301-3125
3	7/32	1	301-3141
3	1/4	1	301-3166
3	9/32	1	301-3182
3	5/16	1	301-3208
3	11/32	1	301-3224
3	3/8	1	301-3240
3	13/32	1	301-3259
3	13/32	1	301-3265
3	7/16	1	301-3281
3	1/2	1	301-3323
3	9/16	1	301-3335
3	5/8	1	301-3336
3	11/16	1	301-3341
3	3/4	1	301-3343
3	13/16	1	301-3347
3	7/8	1	301-3348
3	15/16	1	301-3604
3	1	1	301-3646
3	1/4	1-1/4	301-3174
3	5/16	1-1/4	301-3216
3	3/8	1-1/4	301-3257
3	7/16	1-1/4	301-3263
3	1/2	1-1/4	301-3331
3	5/8	1-1/4	301-3339
3	3/4	1-1/4	301-3346
3	7/8	1-1/4	301-3349
3	1	1-1/4	301-3356
3-1/2	3/16	1	301-3506
3-1/2	1/4	1	301-3513
3-1/2	5/16	1	301-3521
3-1/2	3/8	1	301-3539
3-1/2	7/16	1	301-3547
3-1/2	1/2	1	301-3554

Dia.	Face Width	Hole Size	Order No.
3-1/2"	5/8"	1"	301-3570
3-1/2	3/4	1	301-3580
3-1/2	1	1	301-3590
3-1/2	3/8	1-1/4	301-3540
3-1/2	7/16	1-1/4	301-3544
3-1/2	1/2	1-1/4	301-3559
3-1/2	5/8	1-1/4	301-3575
4	3/16	1	301-4123
4	7/32	1	301-4149
4	1/4	1	301-4164
4	9/32	1	301-4180
4	5/16	1	301-4206
4	11/32	1	301-4222
4	3/8	1	301-4248
4	13/32	1	301-4263
4	7/16	1	301-4289
4	1/2	1	301-4321
4	9/16	1	301-4340
4	5/8	1	301-4404
4	11/16	1	301-4446
4	3/4	1	301-4487
4	13/16	1	301-4529
4	7/8	1	301-4560
4	15/16	1	301-4602
4	1	1	301-4644
4	3/16	1-1/4	301-4131
4	7/32	1-1/4	301-4152
4	1/4	1-1/4	301-4172
4	9/32	1-1/4	301-4198
4	5/16	1-1/4	301-4214
4	11/32	1-1/4	301-4235
4	3/8	1-1/4	301-4255
4	13/32	1-1/4	301-4269
4	7/16	1-1/4	301-4262
4	1/2	1-1/4	301-4339
4	9/16	1-1/4	301-4342
4	5/8	1-1/4	301-4412
4	11/16	1-1/4	301-4423
4	3/4	1-1/4	301-4495
4	13/16	1-1/4	301-4503
4	7/8	1-1/4	301-4578
4	15/16	1-1/4	301-4605
4	1	1-1/4	301-4586
4	1-1/8	1-1/4	301-4701
4	1-1/4	1-1/4	301-4743
4	1-1/2	1-1/4	301-4749
4-1/2	3/8	1	301-4840
4-1/2	1/2	1	301-4865
4-1/2	3/8	1-1/4	301-4842
4-1/2	1/2	1-1/4	301-4867
5	1/4	1	301-5161
5	9/32	1	301-5187
5	5/16	1	301-5203
5	11/32	1	301-5229
5	3/8	1	301-5245
5	13/32	1	301-5260
5	7/16	1	301-5286
5	1/2	1	301-5228
5	9/16	1	301-5269

Dia.	Face Width	Hole Size	Order No.
5	5/8	1	301-5401
5	11/16	1	301-5443
5	3/4	1	301-5484
5	13/16	1	301-5526
5	7/8	1	301-5513
5	15/16	1	301-5609
5	1	1	301-5616
5	1/4	1-1/4	301-5179
5	9/32	1-1/4	301-5195
5	5/16	1-1/4	301-5211
5	11/32	1-1/4	301-5231
5	3/8	1-1/4	301-5252
5	13/32	1-1/4	301-5259
5	7/16	1-1/4	301-5263
5	1/2	1-1/4	301-5336
5	9/16	1-1/4	301-5342
5	5/8	1-1/4	301-5419
5	11/16	1-1/4	301-5426
5	3/4	1-1/4	301-5492
5	13/16	1-1/4	301-5501
5	7/8	1-1/4	301-5516
5	15/16	1-1/4	301-5522
5	1	1-1/4	301-5641
5	1-1/4	1-1/4	301-5656
6	1/4	1	301-6169
6	5/16	1	301-6201
6	3/8	1	301-6243
6	7/16	1	301-6251
6	1/2	1	301-6326
6	9/16	1	301-6332
6	5/8	1	301-6345
6	11/16	1	301-6352
6	3/4	1	301-6482
6	13/16	1	301-6486
6	7/8	1	301-6492
6	15/16	1	301-6494
6	1	1	301-6496
6	1	1-1/4	301-6649
6	1-1/4	1	301-6654
6	1/4	1-1/4	301-6177
6	9/32	1-1/4	301-6193
6	5/16	1-1/4	301-6219
6	11/32	1-1/4	301-6222
6	3/8	1-1/4	301-6250
6	13/32	1-1/4	301-6256
6	7/16	1-1/4	301-6253
6	1/2	1-1/4	301-6328
6	9/16	1-1/4	301-6334
6	5/8	1-1/4	301-6347
6	11/16	1-1/4	301-6441
6	3/4	1-1/4	301-6490
6	13/16	1-1/4	301-6488
6	7/8	1-1/4	301-6565
6	15/16	1-1/4	301-6495
6	1	1-1/4	301-6497
6	1-1/8	1-1/4	301-6652
6	1-1/4	1-1/4	301-6659

Dia.	Face Width	Hole Size	Order No.
7	1/4	1-1/4	301-7167
7	5/16	1-1/4	301-7209
7	3/8	1-1/4	301-7241
7	7/16	1-1/4	301-7282
7	1/2	1-1/4	301-7324
7	9/16	1-1/4	301-7328
7	5/8	1-1/4	301-7407
7	11/16	1-1/4	301-7415
7	3/4	1-1/4	301-7480
7	13/16	1-1/4	301-7482
7	7/8	1-1/4	301-7486
7	15/16	1-1/4	301-7489
7	1	1-1/4	301-7647
8	1/4	1	301-8165
8	5/16	1	301-8207
8	3/8	1	301-8249
8	7/16	1	301-8260
8	7/16	1	301-8280
8	1/2	1	301-8322
8	1/4	1-1/4	301-8173
8	5/16	1-1/4	301-8215
8	3/8	1-1/4	301-8256
8	7/16	1-1/4	301-8262
8	1/2	1-1/4	301-8330
8	9/16	1-1/4	301-8363
8	5/8	1-1/4	301-8405
8	11/16	1-1/4	301-8447
8	3/4	1-1/4	301-8488
8	13/16	1-1/4	301-8520
8	7/8	1-1/4	301-8561
8	15/16	1-1/4	301-8603
8	1	1-1/4	301-8645
8	1/4	1-1/2	301-8175
9	1/4	1-1/4	301-9002
9	3/8	1-1/4	301-9004
9	1/2	1-1/4	301-9006
9	5/8	1-1/4	301-9008
9	3/4	1-1/4	301-9012
9	1	1-1/4	301-9014
10	5/8	1-1/4	301-9160
10	3/4	1-1/4	301-9162
10	1/4	1-1/2	301-9163
10	5/16	1-1/2	301-9205
10	3/8	1-1/2	301-9247
10	7/16	1-1/2	301-9249
10	1/2	1-1/2	301-9320
10	9/16	1-1/2	301-9326
10	5/8	1-1/2	301-9403
10	11/16	1-1/2	301-9416
10	3/4	1-1/2	301-9486
10	13/16	1-1/2	301-9492
10	7/8	1-1/2	301-9569
10	15/16	1-1/2	301-9573
10	1	1-1/2	301-9643
10	1-1/4	1-1/2	301-9651
10	1-1/2	1-1/2	301-9660

Staggered Tooth Side Milling Cutters M35 钴错齿三面刃铣刀

Cobalt, M35

- Used in deep slotting, and heavy-duty side milling



Dia. (In.)	Face W.(In.)	Hole Size(In.)	Order No.
2"	3/16"	1/2"	326-2125
2	3/16	5/8	326-2133
2	1/4	1/2	326-2166
2	1/4	5/8	326-2174
2	5/16	1/2	326-2198
2	5/16	5/8	326-2216
2	3/8	1/2	326-2240
2	3/8	5/8	326-2257
2-1/8	3/16	3/4	326-2290
2-1/8	3/8	3/4	326-2294
2-1/2	3/16	7/8	326-2504
2-1/2	1/4	7/8	326-2513
2-1/2	5/16	7/8	326-2521
2-1/2	3/8	7/8	326-2539
2-1/2	1/2	7/8	326-2554
2-1/2	3/16	1	326-2612
2-1/2	1/4	1	326-2620
2-1/2	5/16	1	326-2628
2-1/2	3/8	1	326-2646
2-1/2	7/16	1	326-2653
2-1/2	1/2	1	326-2661
2-1/2	5/8	1	326-2669
2-3/4	1/4	1	326-2711
2-3/4	5/16	1	326-2729
2-3/4	3/8	1	326-2737
2-3/4	7/16	1	326-2745
2-3/4	1/2	1	326-2752
3	1/8	1	326-2900
3	5/32	1	326-3107
3	3/16	1	326-3123
3	7/32	1	326-3149
3	1/4	1	326-3164
3	1/4	1-1/4	326-3172
3	9/32	1	326-3180
3	5/16	1	326-3208
3	5/16	1-1/4	326-3214
3	11/32	1	326-3222
3	3/8	1	326-3248
3	3/8	1-1/4	326-3255
3	13/32	1	326-3263
3	7/16	1	326-3289
3	1/2	1	326-3313
3	1/2	1-1/4	326-3321
3	9/16	1	326-3336
3	5/8	1	326-3393
3	5/8	1-1/4	326-3404
3	3/4	1	326-3485
3	3/4	1-1/4	326-3487
3	13/16	1	326-3495
3	7/8	1	326-3496
3	15/16	1	326-3350
3	1	1	326-3352
3-1/2	1/4	1	326-3511
3-1/2	5/16	1	326-3519
3-1/2	3/8	1	326-3537
3-1/2	7/16	1	326-3545
3-1/2	1/2	1	326-3552
3-1/2	5/8	1	326-3568
4	1/8	1	326-4100
4	5/32	1	326-4102
4	3/16	1	326-4121

Dia. (In.)	Face W.(In.)	Hole Size(In.)	Order No.
4	3/16	1-1/4	326-4139
4	7/32	1	326-4147
4	1/4	1	326-4154
4	1/4	1-1/4	326-4162
4	9/32	1	326-4178
4	9/32	1-1/4	326-4188
4	5/16	1	326-4196
4	5/16	1-1/4	326-4204
4	11/32	1	326-4220
4	3/8	1	326-4238
4	3/8	1-1/4	326-4246
4	13/32	1	326-4261
4	7/16	1-1/4	326-4287
4	7/16	1	326-4295
4	1/2	1	326-4311
4	1/2	1-1/4	326-4329
4	9/16	1	326-4352
4	9/16	1-1/4	326-4360
4	5/8	1	326-4378
4	5/8	1-1/4	326-4402
4	11/16	1	326-4444
4	3/4	1	326-4477
4	3/4	1-1/4	326-4485
4	13/16	1	326-4527
4	7/8	1	326-4558
4	7/8	1-1/4	326-4576
4	15/16	1	326-4600
4	1	1	326-4640
4	1	1	326-4642
4	1-1/8	1-1/4	326-4699
4	1-1/4	1-1/4	326-4741
4-1/2	3/8	1-1/4	326-4840
4-1/2	1/2	1-1/4	326-4865
5	1/8	1-1/4	326-5036
5	5/32	1-1/4	326-5089
5	3/16	1-1/4	326-5118
5	7/32	1-1/4	326-5134
5	1/4	1	326-5159
5	1/4	1-1/4	326-5169
5	9/32	1	326-5174
5	9/32	1-1/4	326-5176
5	5/16	1	326-5193
5	5/16	1-1/4	326-5201
5	11/32	1	326-5227
5	3/8	1	326-5243
5	3/8	1-1/4	326-5244
5	13/32	1	326-5258
5	7/16	1	326-5284
5	1/2	1	326-5318
5	1/2	1-1/4	326-5326
5	9/16	1	326-5367
5	5/8	1	326-5391
5	5/8	1-1/4	326-5409
5	11/16	1	326-5442
5	3/4	1	326-5474
5	3/4	1-1/4	326-5482
5	13/16	1	326-5516
5	7/8	1	326-5557
5	15/16	1	326-5599
5	1	1-1/4	326-5631
5	1	1-1/4	326-5649

Dia. (In.)	Face W.(In.)	Hole Size(In.)	Order No.
6	1/8	1-1/4	326-6016
6	5/32	1-1/4	326-6087
6	3/16	1-1/4	326-6136
6	1/4	1	326-6159
6	1/4	1-1/4	326-6167
6	9/32	1-1/4	326-6191
6	5/16	1	326-6199
6	5/16	1-1/4	326-6209
6	3/8	1	326-6233
6	3/8	1-1/4	326-6241
6	7/16	1-1/4	326-6282
6	1/2	1	326-6316
6	1/2	1-1/4	326-6324
6	9/16	1-1/4	326-6332
6	5/8	1-1/4	326-6407
6	11/16	1-1/4	326-6431
6	3/4	1	326-6472
6	3/4	1-1/4	326-6480
6	13/16	1-1/4	326-6522
6	7/8	1-1/4	326-6563
6	15/16	1-1/4	326-6605
6	1	1-1/4	326-6647
7	1/4	1-1/4	326-7165
7	5/16	1-1/4	326-7207
7	3/8	1-1/4	326-7231
7	7/16	1-1/4	326-7280
7	1/2	1-1/4	326-7322
7	5/8	1-1/4	326-7405
7	3/4	1-1/4	326-7478
7	1	1-1/4	326-7645
8	1/4	1	326-8155
8	1/4	1-1/4	326-8163
8	5/16	1	326-8197
8	5/16	1-1/4	326-8205
8	3/8	1	326-8237
8	3/8	1-1/2	326-8247
8	3/8	1-1/4	326-8254
8	7/16	1	326-8278
8	1/2	1	326-8312
8	1/2	1-1/4	326-8318
8	1/2	1-1/2	326-8320
8	9/16	1-1/4	326-8361
8	5/8	1-1/4	326-8395
8	5/8	1-1/2	326-8403
8	11/16	1-1/4	326-8445
8	3/4	1-1/4	326-8478
8	3/4	1-1/2	326-8486
8	13/16	1-1/4	326-8518
8	7/8	1-1/4	326-8559
8	15/16	1-1/4	326-8601
8	1	1-1/4	326-8643
10	1/4	1-1/2	326-9161
10	5/16	1-1/2	326-9203
10	3/8	1-1/2	326-9245
10	1/2	1-1/2	326-9318
10	5/8	1-1/2	326-9401
10	3/4	1-1/2	326-9484
10	7/8	1-1/2	326-9567
10	1	1-1/2	326-9641

Staggered Tooth Side Milling Cutters

重型错齿三面刃铣刀

High Speed Steel

- For milling deep slots, grooves and the other operations where either or both the peripheral or side cutting edges are used for machining.
- Arbor mounted with mounting holes having standardized size and made to suit a variety of machine arbors.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Ground from solid.
- Bright and black finish.



Dia.	Width of Face	Hole Size	Order No.
2-1/8	3/16	3/4	306-1127
2-1/8	1/4	3/4	306-1168
2-1/8	5/16	3/4	306-1200
2-1/8	3/8	3/4	306-1242
2-1/2	3/16	7/8	306-2505
2-1/2	1/4	7/8	306-2513
2-1/2	1/4	1	306-2515
2-1/2	5/16	7/8	306-2521
2-1/2	5/16	1	306-2523
2-1/2	3/8	7/8	306-2539
2-1/2	7/16	7/8	306-2542
2-1/2	7/16	1	306-2546
2-1/2	1/2	7/8	306-2554
2-1/2	1/2	1	306-2556
2-3/4	1/4	1	306-2711
2-3/4	5/16	1	306-2729
2-3/4	3/8	1	306-2737
2-3/4	7/16	1	306-2745
2-3/4	1/2	1	306-2752
3	1/8	1	306-2900
3	5/32	1	306-3107
3	3/16	1	306-3123
3	3/16	1-1/4	306-3131
3	7/32	1	306-3149
3	1/4	1	306-3164
3	1/4	1-1/4	306-3172
3	9/32	1	306-3180
3	5/16	1	306-3206
3	5/16	1-1/4	306-3214
3	11/32	1	306-3222
3	3/8	1	306-3248
3	3/8	1-1/4	306-3255
3	13/32	1	306-3263
3	7/16	1	306-3289
3	7/16	1-1/4	306-3292
3	1/2	1	306-3313
3	1/2	1-1/4	306-3321
3	9/16	1	306-3336
3	9/16	1-1/4	306-3362
3	5/8	1	306-3378
3	5/8	1-1/4	306-3404
3	11/16	1	306-3408
3	11/16	1-1/4	306-3412
3	3/4	1	306-3485
3	3/4	1-1/4	306-3487
3	13/16	1	306-3488
3	13/16	1-1/4	306-3489
3	7/8	1	306-3558
3	7/8	1-1/4	306-3560
3	15/16	1	306-3562
3	15/16	1-1/4	306-3566
3	1	1	306-3642
3	1	1-1/4	306-3644
3-1/2	7/32	1	306-3670
3-1/2	1/4	1	306-3685
3-1/2	9/32	1	306-3701
3-1/2	5/16	1	306-3727
3-1/2	3/8	1	306-3735
3-1/2	7/16	1	306-3743
3-1/2	1/2	1	306-3750
3-1/2	9/16	1	306-3768
3-1/2	5/8	1	306-3776
3-1/2	11/16	1	306-3784

Dia.	Width of Face	Hole Size	Order No.
3-1/2	3/4	1	306-3792
4	1/8	1	306-3856
4	3/16	1	306-4121
4	3/16	1-1/4	306-4139
4	7/32	1	306-4143
4	1/4	1	306-4145
4	7/32	1-1/4	306-4147
4	1/4	1	306-4154
4	1/4	1-1/4	306-4162
4	9/32	1	306-4186
4	9/32	1-1/4	306-4188
4	5/16	1	306-4196
4	5/16	1-1/4	306-4204
4	11/32	1	306-4218
4	11/32	1-1/4	306-4220
4	3/8	1	306-4238
4	3/8	1-1/4	306-4246
4	13/32	1-1/4	306-4261
4	7/16	1	306-4285
4	7/16	1-1/4	306-4287
4	7/16	1	306-4295
4	1/2	1	306-4311
4	1/2	1-1/4	306-4329
4	9/16	1	306-4358
4	9/16	1-1/4	306-4360
4	5/8	1	306-4378
4	5/8	1-1/4	306-4402
4	11/16	1	306-4406
4	11/16	1-1/4	306-4408
4	3/4	1	306-4477
4	3/4	1-1/4	306-4485
4	13/16	1	306-4487
4	13/16	1-1/4	306-4489
4	7/8	1	306-4566
4	7/8	1-1/4	306-4568
4	1/8	1	306-4579
4	5/32	1	306-4586
4	15/16	1	306-4632
4	15/16	1-1/4	306-4636
4	1	1	306-4640
4	1	1-1/4	306-4642
4	1-1/8	1-1/4	306-4709
4	1-3/16	1-1/4	306-4738
4	1-1/4	1-1/4	306-4741
4	1-1/2	1-1/4	306-4824
4-1/2	1/2	1	306-4826
4-1/2	1/2	1-1/4	306-4828
5	1/8	1-1/4	306-5036
5	5/32	1-1/4	306-5089
5	3/16	1-1/4	306-5118
5	7/32	1-1/4	306-5134
5	1/4	1	306-5151
5	1/4	1-1/4	306-5169
5	9/32	1-1/4	306-5176
5	5/16	1	306-5193
5	5/16	1-1/4	306-5201
5	3/8	1	306-5241
5	3/8	1-1/4	306-5243
5	3/8	1	306-5250
5	7/16	1	306-5281
5	7/16	1-1/4	306-5284
5	1/2	1	306-5318
5	1/2	1-1/4	306-5326

Dia.	Width of Face	Hole Size	Order No.
5	9/16	1	306-5330
5	9/16	1-1/4	306-5332
5	5/8	1	306-5336
5	5/8	1-1/4	306-5409
5	11/16	1	306-5412
5	11/16	1-1/4	306-5416
5	3/4	1	306-5480
5	3/4	1-1/4	306-5482
5	13/16	1	306-5486
5	13/16	1-1/4	306-5488
5	7/8	1	306-5492
5	7/8	1-1/4	306-5496
5	15/16	1-1/4	306-5498
5	1	1-1/4	306-5649
6	1/8	1-1/4	306-6016
6	5/32	1-1/4	306-6087
6	3/16	1-1/4	306-6136
6	7/32	1-1/4	306-6151
6	1/4	1	306-6159
6	1/4	1-1/4	306-6167
6	9/32	1-1/4	306-6183
6	5/16	1	306-6191
6	5/16	1-1/4	306-6209
6	3/8	1	306-6233
6	3/8	1-1/4	306-6241
6	7/16	1	306-6280
6	7/16	1-1/4	306-6282
6	1/2	1	306-6316
6	1/2	1-1/4	306-6324
6	9/16	1	306-6363
6	9/16	1-1/4	306-6365
6	5/8	1	306-6402
6	5/8	1-1/4	306-6407
6	11/16	1	306-6446
6	11/16	1-1/4	306-6449
6	3/4	1	306-6476
6	3/4	1-1/4	306-6480
6	13/16	1	306-6520
6	13/16	1-1/4	306-6522
6	7/8	1	306-6561
6	7/8	1-1/4	306-6563
6	15/16	1-1/4	306-6605
6	1	1	306-6642
6	1	1-1/4	306-6647
6	1	1-1/2	306-6649
6	1-1/8	1-1/4	306-6704
6	1-3/16	1-1/4	306-6706
6	1-1/4	1-1/4	306-6746
6	1-1/2	1-1/4	306-6829
7	1/4	1-1/4	306-7165
7	5/16	1-1/4	306-7207
7	3/8	1-1/4	306-7249
7	3/8	1-1/2	306-7252
7	7/16	1-1/4	306-7280
7	7/16	1-1/2	306-7282
7	1/2	1-1/4	306-7322
7	1/2	1-1/2	306-7326
7	9/16	1-1/4	306-7363
7	5/8	1-1/4	306-7405
7	5/8	1-1/2	306-7407
7	11/16	1-1/4	306-7447
7	3/4	1-1/4	306-7488
7	3/4	1-1/2	306-7489

Dia.	Width of Face	Hole Size	Order No.
7	13/16	1-1/4	306-7558
7	7/8	1-1/4	306-7561
7	7/8	1-1/2	306-7563
7	15/16	1-1/4	306-7566
7	1	1-1/4	306-7645
7	1	1-1/2	306-7648
8	1/4	1	306-8161
8	1/4	1-1/4	306-8163
8	1/4	1-1/2	306-8165
8	5/16	1-1/4	306-8205
8	5/16	1-1/2	306-8207
8	3/8	1	306-8243
8	3/8	1-1/4	306-8245
8	3/8	1-1/2	306-8247
8	7/16	1-1/4	306-8286
8	7/16	1-1/2	306-8288
8	1/2	1	306-8316
8	1/2	1-1/4	306-8318
8	1/2	1-1/2	306-8320
8	9/16	1-1/4	306-8359
8	9/16	1-1/2	306-8361
8	5/8	1-1/4	306-8401
8	5/8	1-1/2	306-8403
8	11/16	1-1/4	306-8443
8	11/16	1-1/2	306-8445
8	3/4	1-1/4	306-8483
8	3/4	1-1/2	306-8486
8	13/16	1-1/4	306-8526
8	13/16	1-1/2	306-8528
8	7/8	1-1/4	306-8567
8	7/8	1-1/2	306-8569
8	15/16	1-1/4	306-8636
8	15/16	1-1/2	306-8638
8	1	1-1/4	306-8641
8	1	1-1/2	306-8643
8	1-1/8	1-1/2	306-8700
8	1-1/4	1-1/2	306-8742
8	1-1/2	1-1/2	306-8825
9	3/8	1-1/4	306-8900
9	1/2	1-1/4	306-8902
9	5/8	1-1/4	306-8904
9	3/4	1-1/4	306-8906
9	1	1-1/4	306-8908
10	3/8	1-1/4	306-9156
10	13/16	1-1/4	306-9158
10	1/4	1-1/2	306-9161
10	5/16	1-1/2	306-9203
10	3/8	1-1/2	306-9245
10	7/16	1-1/2	306-9286
10	1/2	1-1/2	306-9328
10	9/16	1-1/2	306-9369
10	5/8	1-1/2	306-9401
10	11/16	1-1/2	306-9481
10	3/4	1-1/2	306-9484
10	13/16	1-1/2	306-9565
10	7/8	1-1/2	306-9567
10	15/16	1-1/2	306-9639
10	1	1-1/2	306-9641
10	1-1/8	1-1/2	306-9708
10	1-1/4	1-1/2	306-9740
10	1-1/2	1-1/2	306-9823

Metric Side Milling Cutters 德标 885 三面刃铣刀

DIN 885, High Speed Steel

- For milling deep slots, grooves and the other operations where either or both the peripheral or side cutting edges are used for machining.
- Arbor mounted with mounting holes having standardized size and made to suit a variety of machine arbors.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Ground from solid.
- Bright and black finish.

Straight Tooth

- Used in slotting, light-duty side milling and straddle milling for where deep cutting is required.



Cutter Dia.	Hole Size	Face Width	Straight Tooth Order No.	Staggered Tooth Order No.
50mm	16	4	364-0504	364-3504
50 mm	16	5	364-0505	364-3505
50 mm	16	6	364-0506	364-3506
50 mm	16	8	364-0508	364-3508
50 mm	16	10	364-0510	364-3510
63 mm	22	4	364-0604	364-3604
63 mm	22	5	364-0605	364-3605
63 mm	22	6	364-0606	364-3606
63 mm	22	8	364-0608	364-3608
63 mm	22	10	364-0610	364-3610
63 mm	22	12	364-0612	364-3612
63 mm	22	14	364-0614	364-3614
63 mm	22	16	364-0616	364-3616
80 mm	27	5	364-0805	364-3805
80 mm	27	6	364-0806	364-3806
80 mm	27	8	364-0808	364-3808
80 mm	27	10	364-0810	364-3810
80 mm	27	12	364-0812	364-3812
80 mm	27	14	364-0814	364-3814
80 mm	27	16	364-0816	364-3816
80 mm	27	18	364-0818	364-3818
80 mm	27	20	364-0820	364-3820
100 mm	32	5	364-1005	364-4005
100 mm	32	6	364-1006	364-4006
100 mm	32	8	364-1008	364-4008
100 mm	32	10	364-1010	364-4010
100 mm	32	12	364-1012	364-4012
100 mm	32	14	364-1014	364-4014
100 mm	32	16	364-1016	364-4016
100 mm	32	18	364-1018	364-4018
100mm	32	20	364-1020	364-4020
100 mm	32	22	364-1022	364-4022
100 mm	32	25	364-1025	364-4025
125 mm	32	8	364-1208	364-4208
125 mm	32	10	364-1210	364-4210
125 mm	32	12	364-1212	364-4212
125 mm	32	14	364-1214	364-4214
125 mm	32	16	364-1216	364-4216

Staggered Tooth

- Used for heavy duty side cutting and straddle milling operations.



Cutter Dia.	Hole Size	Face Width	Straight Tooth Order No.	Staggered Tooth Order No.
125 mm	32	18	364-1218	364-4218
125 mm	32	20	364-1220	364-4220
125 mm	32	22	364-1222	364-4222
125 mm	32	25	364-1225	364-4225
125 mm	32	28	364-1228	364-4228
160 mm	40	8	364-1608	364-4608
160 mm	40	10	364-1610	364-4610
160 mm	40	12	364-1612	364-4612
160 mm	40	14	364-1614	364-4614
160 mm	40	16	364-1616	364-4616
160 mm	40	18	364-1618	364-4618
160 mm	40	20	364-1620	364-4620
160 mm	40	22	364-1622	364-4622
160 mm	40	25	364-1625	364-4625
160 mm	40	28	364-1628	364-4628
160 mm	40	32	364-1632	364-4632
200 mm	40	8	364-2008	364-5008
200 mm	40	10	364-2010	364-5010
200 mm	40	12	364-2012	364-5012
200 mm	40	14	364-2014	364-5014
200 mm	40	16	364-2016	364-5016
200 mm	40	18	364-2018	364-5018
200 mm	40	20	364-2020	364-5020
200 mm	40	22	364-2022	364-5022
200 mm	40	25	364-2025	364-5025
200 mm	40	28	364-2028	364-5028
200 mm	40	32	364-2032	364-5032
250 mm	40	10	364-2510	364-5510
250 mm	40	12	364-2512	364-5512
250 mm	40	14	364-2514	364-5514
250 mm	40	16	364-2516	364-5516
250 mm	40	18	364-2518	364-5518
250 mm	40	20	364-2520	364-5520
250 mm	40	22	364-2522	364-5522
250 mm	40	25	364-2525	364-5525
250 mm	40	28	364-2528	364-5528
250 mm	40	32	364-2532	364-5532

Carbide Tipped Side Milling Cutters

镶齿硬质合金圆盘铣刀-键槽



For Steel



For Non-Ferrous Materials



For Cast Iron



For Stainless Steel

Cutter Dia.	Face Width	Arbor Hole	For Steel		For Non-Ferrous		For Stainless Steel	
			No. of Teeth	Order No.	No. of Teeth	Order No.	No. of Teeth	Order No.
3"	3/32"	1"					8	245-6671
3	1/8	1					8	245-6672
3	3/16	1					8	245-6673
4	3/32	1			6	245-6501	10	245-6674
4	1/8	1	8	245-6546	6	245-6502	10	245-6675
4	3/16	1	8	245-6547	6	245-6503	10	245-6676
5	3/32	1					12	245-6677
5	3/16	1					12	245-6678
6	1/8	1-1/4	12	245-6548	8	245-6504		245-6680
6	3/16	1-1/4	12	245-6549			14	245-6681
6	1/4	1-1/4	12	245-6550			14	245-6682
8	1/8	1-1/4			10	245-6505	14	

Straight Tooth

Cutter Dia.	Face Width	Arbor Hole	For Steel		For Non-Ferrous		For Cast Iron		For Stainless Steel	
			No. of Teeth	Order No.	No. of Teeth	Order No.	No. of Teeth	Order No.	No. of Teeth	Order No.
3"	1/4"	1"a	6	245-7001	4	245-6801	6	245-6901	8	245-6601
3	5/16	1	6	245-7002	4	245-6802	6	245-6902	8	245-6602
3	3/8	1	6	245-7003	4	245-6803	6	245-6903	8	245-6603
3	7/16	1	6	245-7004	4	245-6804	6	245-6904		
3	1/2	1	6	245-7005	4	245-6805	6	245-6905	8	245-6604
4	1/4	1	8	245-7006	4	245-6806	8	245-6906	10	245-6605
4	5/16	1	8	245-7007	4	245-6807	8	245-6907	10	245-6606
4	3/8	1	8	245-7008	4	245-6808	8	245-6908	10	245-6607
4	3/8	1-1/4	8	245-7009	4	245-6809	8	245-6909	10	245-6608
4	1/2	1	8	245-7011	4	245-6811	8	245-6911	10	245-6609
4	1/2	1-1/4	8	245-7012	4	245-6812	8	245-6912	10	245-6610
4	5/8	1	8	245-7014	4	245-6814	8	245-6914	10	245-6611
4	5/8	1-1/4			4	245-6815	8	245-6915	10	245-6612
4	3/4	1			4	245-6816	8	245-6916	10	245-6613
4	3/4	1-1/4			4	245-6817	8	245-6917	10	245-6614
5	1/2	1	10	245-7017	6	245-6819	10	245-6919	12	245-6615
5	1/2	1-1/4	10	245-7018	6	245-6820	10	245-6920	12	245-6616
5	5/8	1-1/4	10	245-7020	6	245-6822	10	245-6922	12	245-6617
5	3/4	1			6	245-6823	10	245-6923	12	245-6618
5	3/4	1-1/4			6	245-6824	10	245-6924	12	245-6619
6	1/2	1			6	245-6825	12	245-6925	14	245-6620
6	1/2	1-1/4			6	245-6826	12	245-6926	14	245-6621
6	5/8	1-1/4			6	245-6827	12	245-6927	14	245-6622
6	3/4	1			6	245-6828	12	245-6928	14	245-6623
6	3/4	1-1/4			6	245-6829	12	245-6929	14	245-6624
7	3/4	1-1/4			8	245-6830	12	245-6930		
8	3/4	1-1/4			8	245-6831	12	245-6931		
8	3/4	1-1/2			8	245-6832	12	245-6932		

Staggered Tooth for Steel

Cutter Dia.	Face Width	Arbor Hole	No. Of Teeth	Order No.
4"	3/4"	1"	8	245-7044
4	3/4	1-1/4	8	245-7045
5	3/4	1	10	245-7046
6	3/4	1	12	245-7049
6	1	1-1/4	12	245-7051

Staggered Tooth for Non-Ferrous and Cast Iron

Cutter Dia.	Face Width	Arbor Hole	For Non-Ferrous No. Of Teeth	For Non-Ferrous Order No.	For Cast Iron No. Of Teeth	For Cast Iron Order No.
5"	1"	1-1/4"	8	245-6855	10	245-6955
6	1	1-1/4	8	245-6856	12	245-6956

Carbide Tipped Shell End Mills

镶齿硬质合金套式铣刀

- Used for end milling applications requiring larger diameter cutters.
- Suit for non-ferrous materials, cast iron and steel.
- Must be used with shell mill holder.
- Bright and black finish.



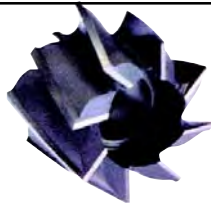
Mill Dia.	Hole Dia.	Overall Length	No. of Teeth	Straight Flute Cast Iron Order No.	Right hand Helix Non-Ferrous Order No.	Left Hand Helix Steel Order No.
1-1/4"	1"	1/2"	4	244-8701	244-8601	244-8801
1-1/2	1-1/8	1/2	4	244-8702	244-8602	244-8802
1-3/4	1-1/4	3/4	4	244-8703	244-8603	244-8803
2	1-3/8	3/4	4	244-8704	244-8604	244-8804
2-1/4	1-1/2	1	6	244-8705	244-8605	244-8805
2-1/2	1-5/8	1	6	244-8706	244-8606	244-8806
2-3/4	1-5/8	1	6	244-8707	244-8607	244-8807
3	1-3/4	1-1/4	6	244-8708	244-8608	244-8808
3-1/2	1-7/8	1-1/4	6	244-8709	244-8609	244-8809
4	2-1/4	1-1/2	6	244-8710	244-8610	244-8810

HSS Shell End Mills

Right Hand & Left Hand

右旋套式铣刀

For use with standard shell end mill arbors



Mill Dia.(In.)	Hole Dia.(In.)	LOC (In.)	Right Hand Order No.	Left Hand Order No.
1-1/4	1/2	1	306-0005	306-0205
1-1/2	1/2	1-1/8	306-0010	306-0210
1-3/4	3/4	1-1/4	306-0015	306-0215
2	3/4	1-3/8	306-0020	306-0220
2-1/4	1	1-1/2	306-0025	306-0225
2-1/2	1	1-5/8	306-0030	306-0230
2-3/4	1	1-5/8	306-0035	306-0235
3	1-1/4	1-3/4	306-0040	306-0240
3-1/2	1-1/4	1-7/8	306-0045	306-0245
4	1-1/2	2-1/4	306-0050	306-0250
4-1/2	1-1/2	2-1/4	306-0055	306-0255
5	1-1/2	2-1/4	306-0060	306-0260
5-1/2	2	2-1/4	306-0065	306-0265
6	2	2-1/4	306-0070	306-0270

HSS Shell End Mill for Aluminum

25 Deg Helix

HSS 铝用套式铣刀 (25 度螺旋)

For use with standard shell end mill arbors



Mill Dia.	Hole Dia.(In.)	LOC (In.)	Order No.
1-1/4"	1/2"	1"	306-0105
1-1/2	1/2	1-1/8	306-0110
1-3/4	3/4	1-1/4	306-0115
2	3/4	1-3/8	306-0120
2-1/4	1	1-1/2	306-0125
2-1/2	1	1-5/8	306-0130
2-3/4	1	1-5/8	306-0135
3	1-1/4	1-3/4	306-0140
3-1/2	1-1/4	1-7/8	306-0145
4	1-1/2	2-1/4	306-0150
4-1/2	1-1/2	2-1/4	306-0155
5	1-1/2	2-1/4	306-0160
5-1/2	2	2-1/4	306-0165
6	2	2-1/4	306-0170

M42 Cobalt Heavy-Duty Shell End Mills

Right Hand M42右旋重型含钴套式铣刀

For use with standard shell end mill arbors



Mill Dia.	Hole Dia.	LOC (In.)	Order No.	Mill Dia.	Hole Dia.	LOC (In.)	Order No.
1-1/4"	1/2"	1	326-0001	3	1-1/4	1-3/4	326-0013
1-1/2	1/2	1-1/8	326-0002	3-1/2	1-1/4	1-7/8	326-0015
1-3/4	3/4	1-1/4	326-0003	4	1-1/2	2-1/4	326-0016
2	3/4	1-3/8	326-0005	4-1/2	1-1/2	2-1/4	326-0017
2-1/4	1	1-1/2	326-0007	5	1-1/2	2-1/4	326-0018
2-1/2	1	1-5/8	326-0009	5-1/2	2	2-1/4	326-0010
2-3/4	1	1-5/8	326-0011	6	2	2-1/4	326-0019

M42 Cobalt Multiple Flute Rough Shell End Mills

M42右旋重型波刃套式铣刀



Mill Dia.	Hole Dia.	OAL (In.)	No. of Flutes	Order No.	Mill Dia.	Hole Dia.	OAL (In.)	No. of Flutes	Order No.
2"	3/4"	2	8	326-0020	4	1-1/2	2-1/4	10	326-0032
2-1/4	1	2	8	326-0022	4-1/2	1-1/2	2-1/4	12	326-0034
2-1/2	1	1-5/8	8	326-0024	5	1-1/2	2-1/4	12	326-0036
2-3/4	1	2	10	326-0026	5-1/2	2	2-1/4	14	326-0038
3	1-1/4	2	10	326-0028	6	2	2-1/4	14	326-0040
3-1/2	1-1/4	2	10	326-0030					

High Helical Plain Milling Cutters

High Speed Steel 重型圆柱平面铣刀

- Cutters have high 45° helix left hand spiral and right hand cut.
- All cutters feature 10° radial rake.



Size	Face Width	Hole Size	Ordr No.	Size	Face Width	Hole Size	Ordr No.
3"	4"	1-1/4"	304-7347	4	6	1-1/2	304-7467
3	6	1-1/4	304-7362	4	8	1-1/2	304-7487
4	3	1-1/2	304-7437	4-1/2	6	2	304-7560
4	4	1-1/2	304-7447				

Plain Milling Cutters-Heavy Duty

High Speed Steel 重型圆柱平面铣刀

- Cutters have 45° helix left hand spiral and right hand cut.
- All cutters feature 10° radial rake.



Size	Face Width	Hole Size	Ordr No.	Size	Face Width	Hole Size	Ordr No.
2-1/4"	1/4"	7/8"	304-2325	3	1-1/2	1-1/4	304-3815
2-1/2	3/4	1	304-2950	3	2	1-1/4	304-3940
2-1/2	1	1	304-2953	3	2-1/2	1-1/4	304-3957
2-1/2	1-1/2	1	304-2957	3	3	1-1/4	304-3973
2-1/2	2	1	304-2967	3	4	1-1/4	304-3981
2-1/2"	2"	1"	304-2967	3	6	1-1/4	304-3999
2-1/2	3	1	304-2978	4	2	1-1/2	304-4963
2-1/2	4	1	304-2983	4	3	1-1/2	304-4971
3	1/2	1	304-3325	4	4	1-1/2	304-4989
3	3/4	1	304-3475	4	6	1-1/2	304-4997
3	1	1	304-3645	4-1/2	6	2	304-5994
3	1-1/4	1-1/4	304-3805				

Plain Milling Cutters-Light Duty

High Speed Steel 轻型圆柱平面铣刀

- Cutters less than 3/4" width have straight teeth, 3/4" or wider have an 18° left hand helix and right hand cut.
- All cutters feature 10° radial rake.



Size	Width of Face	Hole Size	Order No.	Size	Width of Face	Hole Size	Order No.
2-1/4"	1/4"	7/8"	304-1223	3"	1/2"	1-1/4"	304-3329
2-1/4"	1/2"	7/8"	304-1323	3"	5/8"	1-1/4"	304-3402
2-1/4"	1"	7/8"	304-1646	3"	3/4"	1-1/4"	304-3485
2-1/2"	3/16"	1"	304-2123	3"	7/8"	1-1/4"	304-3568
2-1/2"	1/4"	1"	304-2164	3"	1"	1"	304-3588
2-1/2"	5/16"	1"	304-2206	3"	1"	1-1/4"	304-3642
2-1/2"	3/8"	1"	304-2248	3"	1-1/4"	1-1/4"	304-3741
2-1/2"	7/16"	1"	304-2289	3"	1-1/2"	1-1/4"	304-3824
2-1/2"	1/2"	1"	304-2321	3"	2"	1-1/4"	304-3964
2-1/2"	5/8"	1"	304-2404	3"	2-1/2"	1-1/4"	304-3968
2-1/2"	3/4"	1"	304-2487	3"	3"	1-1/4"	304-3972
2-1/2"	1"	1"	304-2644	4"	1/4"	1"	304-4160
2-1/2"	1-1/2"	1"	304-2826	4"	1/4"	1-1/4"	304-4178
2-1/2"	2"	1"	304-2909	4"	5/16"	1"	304-4202
2-1/2"	2-1/2"	1"	304-2958	4"	3/8"	1"	304-4244
2-1/2"	3"	1"	304-2974	4"	1"	1"	304-4247
2-1/2"	2-1/2"	1"	304-2958	4"	3/8"	1-1/4"	304-4251
3"	1/2"	1"	304-3328	4"	1/2"	1-1/4"	304-4327
3"	5/8"	1"	304-3401	4"	5/8"	1-1/4"	304-4400
3"	3/16"	1"	304-3121	4"	3/4"	1-1/4"	304-4483
3"	1/4"	1"	304-3162	4"	1"	1-1/4"	304-4640
3"	5/16"	1"	304-3204	4"	1-1/2"	1-1/4"	304-4822
3"	3/8"	1"	304-3246	4"	2"	1-1/4"	304-4962
3"	3/8"	1-1/4"	304-3253	4"	3"	1-1/4"	304-4970
3"	7/16"	1-1/4"	304-3287	4"	4"	1-1/4"	304-4988

Concave Milling Cutters

High Speed Steel 孔式凹半圆铣刀

Use for milling male half circle

- Teeth are from relieved and straight gashed.
- Cutting surfaces may be resharpened on face without changing contour or from for increased tool life.



Circle Dia.	Cutter Dia.	Hole Size	Order No.	Circle Dia.	Cutter Dia.	Hole Size	Order No.
1/16"	2-1/4"	1"	316-0041	9/16"	2-3/4"	1"	316-0358
3/32"	2-1/4"	1"	316-0066	9/16"	3"	1"	316-0363
1/8"	2"	7/8"	316-0090	5/8"	2-3/4"	1"	316-0378
1/8"	2-1/4"	1"	316-0098	5/8"	3"	1"	316-0405
5/32"	2-1/4"	1"	316-0108	5/8"	3-1/2"	1-1/4"	316-0413
3/16"	2"	7/8"	316-0116	11/16"	3"	1"	316-0447
3/16"	2-1/4"	1"	316-0132	3/4"	3"	1"	316-0488
7/32"	2-1/4"	1"	316-0140	3/4"	3-3/4"	1-1/4"	316-0496
1/4"	2"	7/8"	316-0165	13/16"	3-1/4"	1-1/4"	316-0539
1/4"	2-1/2"	1"	316-0173	7/8"	3-1/4"	1"	316-0561
9/32"	2-1/2"	1"	316-0181	7/8"	4"	1-1/4"	316-0579
5/16"	2-1/2"	7/8"	316-0195	15/16"	3-1/2"	1"	316-0603
5/16"	2-3/4"	1"	316-0215	1"	3-1/4"	1"	316-0645
11/32"	2-3/4"	1"	316-0223	1"	4-1/4"	1-1/4"	316-0652
3/8"	2-1/4"	7/8"	316-0249	1-1/8"	4"	1-1/4"	316-1080
3/8"	2-3/4"	1"	316-0256	1-1/4"	4"	1-1/4"	316-1163
13/32"	2-3/4"	1"	316-0264	1-3/8"	4-1/4"	1-1/4"	316-1247
7/16"	2-1/4"	7/8"	316-0280	1-1/2"	4-1/4"	1-1/4"	316-1320
7/16"	3"	1"	316-0298	1-5/8"	5-1/2"	1-1/4"	316-1403
1/2"	2-1/4"	7/8"	316-0322	1-3/4"	5-1/2"	1-1/4"	316-1486
1/2"	3"	1"	316-0330	1-7/8"	6"	1-1/2"	316-1569
				2"	6"	1-1/2"	316-2005

Single Angle Milling Cutters

High Speed Steel, 45° or 60° Angle

单角右旋孔式铣刀



Use for dovetails cutting

Size	Width of Face	Hole Dia.	45° Right Hand Order No.	45° Left hand Order No.	60° Right Hand Order No.	60° Left Hand Order No.
2-1/2"	1/2"	7/8"	328-0110	328-1110	328-2110	328-3110
2-3/4"	1/2"	1"	328-0219	328-1219	328-2219	328-3219
3"	1/2"	1"	328-0316	328-1316	328-2316	328-3316
3"	1/2"	1-1/4"	328-0318	328-1318	328-2318	328-3318
3"	5/8"	1"	328-0326	328-1326	328-2326	328-3326
3"	3/4"	1"	328-0334	328-1334	328-2334	328-3334
4"	1/2"	1"	328-0417	328-1417	328-2417	328-3417
4"	1/2"	1-1/4"	328-0419	328-1419	328-2419	328-3419
4"	3/4"	1"	328-0433	328-1433	328-2433	328-3433
4"	3/4"	1-1/4"	328-0436	328-1436	328-2436	328-3436
4"	1"	1-1/4"	328-0441	328-1441	328-2441	328-3441
5"	3/4"	1-1/4"	328-0532	328-1532	328-2532	328-3532
5"	1"	1-1/4"	328-0540	328-1540	328-2540	328-3540
6"	3/4"	1-1/4"	328-0631	328-1631	328-2631	328-3631
6"	1"	1-1/4"	328-0649	328-1649	328-2649	328-3649

Convex Milling Cutters

High Speed Steel 孔式凸半圆铣刀

Use for milling female half circle

- Teeth are from relieved and straight gashed.
- Cutting surfaces may be resharpened on face without changing contour or from for increased tool life.



Circle Dia.	Cutter Dia.	Hole Size	Order No.	Circle Dia.	Cutter Dia.	Hole Size	Order No.
1/16"	2-1/4"	1"	317-0041	1/2"	5"	1-1/4"	317-0350
3/32"	2-1/4"	1"	317-0065	9/16"	2-3/4"	1"	317-0362
1/8"	2"	7/8"	317-0081	9/16"	3"	1"	317-0389
1/8"	2-1/4"	1"	317-0099	5/8"	2-3/4"	1"	317-0404
5/32"	2-1/4"	1"	317-0107	5/8"	3-1/2"	1-1/4"	317-0412
3/16"	2"	7/8"	317-0123	11/16"	3"	1"	317-0446
3/16"	2-1/4"	1"	317-0131	3/4"	3"	1"	317-0487
7/32"	2-1/4"	1"	317-0149	3/4"	3-3/4"	1-1/4"	317-0495
1/4"	2"	7/8"	317-0164	13/16"	3-1/4"	1"	317-0529
1/4"	2-1/4"	1"	317-0170	13/16"	3-1/4"	1-1/4"	317-0536
1/4"	2-1/2"	1"	317-0172	7/8"	3-1/4"	1"	317-0569
1/4"	4"	1-1/4"	317-0176	7/8"	4"	1-1/4"	317-0578
9/32"	2-1/2"	1"	317-0180	15/16"	3-1/2"	1"	317-0602
5/16"	2-1/4"	7/8"	317-0206	1"	3-1/4"	1"	317-0644
5/16"	2-3/4"	1"	317-0214	1"	4-1/4"	1-1/4"	317-0651
11/32"	2-3/4"	1"	317-0222	1"	6"	1-1/4"	317-0670
3/8"	2-1/4"	7/8"	317-0248	1-1/8"	4"	1-1/4"	317-1089
3/8"	2-3/4"	1"	317-0255	1-1/4"	4"	1-1/4"	317-1162
3/8"	5"	1-1/4"	317-0260	1-3/8"	4-1/4"	1-1/4"	317-1246
13/32"	2-3/4"	1"	317-0263	1-1/2"	4-1/4"	1-1/4"	317-1329
7/16"	2-1/4"	7/8"	317-0278	1-5/8"	5-1/2"	1-1/4"	317-1402
7/16"	3"	1"	317-0297	1-3/4"	5-1/2"	1-1/4"	317-1485
1/2"	2-1/4"	7/8"	317-0321	1-7/8"	6"	1-1/2"	317-1568
1/2"	3"	1"	317-0339	2"	6"	1-1/2"	317-2004

1/2" Shank Woodruff Keyseat Cutters 1/2"柄直齿键槽铣刀

High Speed Steel or M42 Cobalt, Staggered & Straight Tooth

Designed for using together with normal end mills
for milling standard woodruff keyseat, slots.



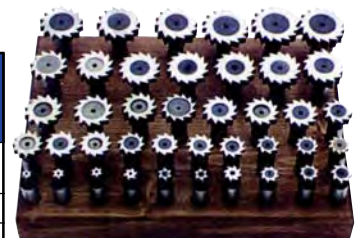
American Standard	Cutter Dia.	Face Width	Overall Length	High Speed Steel		M42 Cobalt	
				Straight Tooth Order No.	Staggered Tooth Order No.	Straight Tooth Order No.	Staggered Tooth Order No.
202	1/4"	1/16"	2-1/16"	296-2016	297-2016	295-2016	299-2016
202-1/2	5/16	1/16	2-1/16	296-2065	297-2065	295-2065	299-2065
302-1/2	5/16	3/32	2-3/32	296-2073	297-2073	295-2073	299-2073
203	3/8	1/16	2-1/16	296-2115	297-2115	295-2115	299-2115
303	3/8	3/32	2-3/32	296-2123	297-2123	295-2123	299-2123
403	3/8	1/8	2-1/8	296-2131	297-2131	295-2131	299-2131
204	1/2	1/16	2-1/16	296-0010	297-0010	295-0010	299-0010
304	1/2	3/32	2-3/32	296-0028	297-0028	295-0028	299-0028
404	1/2	1/8	2-1/8	296-0036	297-0036	295-0036	299-0036
305	5/8	3/32	2-3/32	296-0044	297-0044	295-0044	299-0044
405	5/8	1/8	2-1/8	296-0051	297-0051	295-0051	299-0051
505	5/8	5/32	2-5/32	296-0069	297-0069	295-0069	299-0069
605	5/8	3/16	2-3/16	296-0614	297-0614	295-0614	299-0614
406	3/4	1/8	2-1/8	296-0077	297-0077	295-0077	299-0077
506	3/4	5/32	2-5/32	296-0085	297-0085	295-0085	299-0085
606	3/4	3/16	2-3/16	296-0093	297-0093	295-0093	299-0093
806	3/4	1/4	2-1/4	296-0911	297-0911	295-0911	299-0911
507	7/8	5/32	2-5/32	296-0101	297-0101	295-0101	299-0101
607	7/8	3/16	2-3/16	296-0119	297-0119	295-0119	299-0119
707	7/8	7/32	2-7/32	296-0127	297-0127	295-0127	299-0127
807	7/8	1/4	2-1/4	296-9011	297-9011	295-9011	299-9011
608	1	3/16	2-3/16	296-0135	297-0135	295-0135	299-0135
708	1	7/32	2-7/32	296-0143	297-0143	295-0143	299-0143
808	1	1/4	2-1/4	296-0150	297-0150	295-0150	299-0150
1008	1	5/16	2-5/16	296-9029	297-9029	295-9029	299-9029
1208	1	3/8	2-3/8	296-1521	297-1521	295-1521	299-1521
609	1-1/8	3/16	2-3/16	296-0168	297-0168	295-0168	299-0168
709	1-1/8	7/32	2-7/32	296-0176	297-0176	295-0176	299-0176
809	1-1/8	1/4	2-1/4	296-0184	297-0184	295-0184	299-0184
1009	1-1/8	5/16	2-5/16	296-9037	297-9037	295-9037	299-9037
610	1-1/4	3/16	2-3/16	296-0192	297-0192	295-0192	299-0192
710	1-1/4	7/32	2-7/32	296-0200	297-0200	295-0200	299-0200
810	1-1/4	1/4	2-1/4	296-0218	297-0218	295-0218	299-0218
1010	1-1/4	5/16	2-5/16	296-9045	297-9045	295-9045	299-9045
1210	1-1/4	3/8	2-3/8	296-9052	297-9052	295-9052	299-9052
811	1-3/8	1/4	2-1/4	296-0226	297-0226	295-0226	299-0226
1011	1-3/8	5/16	2-5/16	296-0234	297-0234	295-0234	299-0234
1211	1-3/8	3/8	2-3/8	296-9060	297-9060	295-9060	299-9060
812	1-1/2	1/4	2-1/4	296-0242	297-0242	295-0242	299-0242
1012	1-1/2	5/16	2-5/16	296-0259	297-0259	295-0259	299-0259
1212	1-1/2	3/8	2-3/8	296-9078	297-9078	295-9078	299-9078

1/2" Shank Woodruff Keyseat Cutter Sets 1/2"柄直齿键槽铣刀套装

High Speed Steel or M42 Cobalt, Staggered & Straight Tooth



Pieces	American Standard	High Speed Steel		M42 Cobalt	
		Straight Tooth Order No.	Staggered Tooth Order No.	Straight Tooth Order No.	Staggered Tooth Order No.
10	403,204,404,305,505,406,606,806,608,808	296-9810	296-9910	296-9811	296-9911
41	202 thru 1212	296-9841	297-9941	296-9842	297-9942
8	204,304,305,406,605,606,608,806	296-9808	297-9908		



T-Slot Cutters 高速钢T型槽铣刀

High Speed Steel, M35 or M42 Cobalt



- H.S.S. and M35/M42 cobalt T-slot cutters are a rugged design with free cutting features.
- Cutters have positive radial rake, right and left hand spiral, with alternate side cutting teeth for maximum chip clearance.



Bolt Size	Cutter Dia.	Cutter Width	Neck Dia.	Shank Dia.	Undercut Length	Overall Length	Tooth	HSS Order No.	M35 Order No.	M42 Order No.	Tin Coated Order No.
1/4"	9/16"	15/64"	17/64"	1/2"	35/64"	2-19/32"	6	298-6016	298-7016	298-7316	298-7516
5/16	21/32	17/64	21/64	1/2	39/64	2-11/16	6	298-6020	298-7020	298-7320	298-7520
3/8	25/32	21/64	13/32	3/4	3/4	3-1/4	8	298-6024	298-7024	298-7324	298-7524
1/2	31/32	25/64	17/32	3/4	3/4	3-7/16	8	298-6032	298-7032	298-7332	298-7532
5/8	1-1/4	31/64	21/32	1	1-9/64	3-15/16	8	298-6040	298-7040	298-7340	298-7540
3/4	1-15/32	5/8	25/32	1	1-1/2	4-7/16	10	298-6048	298-7048	298-7348	298-7548
1	1-27/32	53/64	1-1/32	1-1/4	1-43/64	4-13/16	10	298-6064	298-7064	298-7364	298-7564
1-1/4	2-7/32	1-3/32	1-9/32	1-1/4	1-31/32	5-3/8	10	298-6080	298-7080	298-7380	298-7580
1-1/2	2-21/32	1-11/32	1-17/32	1-1/4	2-1/8	5-29/32	10	298-6096	298-7096	298-7396	298-7596

Cobalt Roughing T-Slot Cutters 波刃T型槽铣刀-M35

M35 or M42 Cobalt

- Faster Machining than regular T-Slot cutters,
- Roughing tooth design than permits faster cutting and minimizes vibration and chatter



Bolt Size	Cutter Dia.	Cutter Width	Neck Diameter	Shank Diameter	Overall Length	M35 Order No.	M42 Order No.
1/2"	31/32"	25/64"	17/32"	3/4"	3-7/16"	298-8032	298-8332
5/8	1-1/4	31/64	21/32	1	3-15/16	298-8040	298-8340
3/4	1-15/32	5/8	25/32	1	4-7/16	298-8048	298-8348
1	1-27/32	53/64	1-1/32	1-1/4	4-13/16	298-8064	298-8364
1-1/4	2-7/32	1-3/32	1-9/32	1-1/4	5-3/8	298-8080	298-8380
1-1/2	2-21/32	1-11/32	1-17/32	1-1/4	5-29/32	298-8096	298-8396

Long Shank T-Slot Milling Cutters 错齿长柄T型铣刀

High Speed Steel & M42, Staggered Tooth

- Used for milling when greater depth is required.



Cutter Dia.	Cutter Width	Shank Dia.	Overall Length	Tooth	HSS Order No.	M42 Order No.	Cutter Dia.	Cutter Width	Shank Dia.	Overall Length	Tooth	HSS Order No.	M42 Order No.
1"	1/8"	5/8"	4-15/16"	8	298-4100	298-4500	2	1/4	1	5-11/16	10	298-4166	298-4566
1	3/16	5/8	4-15/16	8	298-4103	298-4503	2	5/16	1	5-11/16	10	298-4169	298-4569
1	1/4	5/8	4-15/16	8	298-4106	298-4506	2	3/8	1	5-11/16	10	298-4172	298-4572
1	5/16	5/8	4-15/16	8	298-4109	298-4509	2	1/2	1	5-11/16	10	298-4175	298-4575
1	3/8	5/8	4-15/16	8	298-4112	298-4512	2	5/8	1	5-11/16	10	298-4178	298-4578
1	1/2	5/8	4-15/16	8	298-4115	298-4515	2	3/4	1	5-11/16	10	298-4181	298-4581
1	5/8	5/8	4-15/16	8	298-4118	298-4518	2-1/2	1/4	1		12		298-4583
1-1/4	1/8	3/4	5-1/8	8	298-4121	298-4521	2-1/2	5/16	1		12		298-4584
1-1/4	3/16	3/4	5-1/8	8	298-4124	298-4524	2-1/2	3/8	1		12		298-4585
1-1/4	1/4	3/4	5-1/8	8	298-4127	298-4527	2-1/2	1/2	1		12		298-4586
1-1/4	5/16	3/4	5-1/8	8	298-4130	298-4530	2-1/2	5/8	1		12		298-4587
1-1/4	3/8	3/4	5-1/8	8	298-4133	298-4533	2-1/2	3/4	1		12		298-4588
1-1/4	1/2	3/4	5-1/8	8	298-4136	298-4536	2-1/2	7/8	1		12		298-4589
1-1/4	5/8	3/4	5-1/8	8	298-4139	298-4539	2-1/2	1	1		12		298-4590
1-1/2	1/8	1	5-5/16	8	298-4142	298-4542	3	1/4	1-1/4		16		298-4591
1-1/2	3/16	1	5-5/16	8	298-4145	298-4545	3	5/16	1-1/4		16		298-4592
1-1/2	1/4	1	5-5/16	8	298-4148	298-4548	3	3/8	1-1/4		16		298-4593
1-1/2	5/16	1	5-5/16	8	298-4151	298-4551	3	1/2	1-1/4		16		298-4594
1-1/2	3/8	1	5-5/16	8	298-4154	298-4554	3	5/8	1-1/4		16		298-4595
1-1/2	1/2	1	5-5/16	8	298-4157	298-4557	3	3/4	1-1/4		16		298-4596
1-1/2	5/8	1	5-5/16	8	298-4160	298-4560	3	7/8	1-1/4		16		298-4597
2	3/16	1	5-11/16	10	298-4163	298-4563	3	1	1-1/4		16		298-4598

Concave Milling Cutters

-Shank Type 柄式凹半圆铣刀

High Speed Steel

Use for milling male half circle

- Teeth are from relieved and straight gashed.
- Cutting surfaces may be resharpened on face without changing contour or from for increased tool life.



Cutter Shank					Cutter Shank				
Radius	Dia.	Dia.	OAL	Order No.	Radius	Dia.	Dia.	OAL	Order No.
1/32"	3/4"	1/2"	3"	316-3028	3/16	1	3/4	3-1/2	316-3127
1/16	3/4	1/2	3	316-3044	1/4	1-1/4	3/4	4	316-3168
3/32	3/4	1/2	3	316-3069	5/16	1-1/4	3/4	4	316-3200
1/8	1	3/4	3-1/2	316-3085	3/8	1-1/2	3/4	4-3/16	316-3242
5/32	1	3/4	3-1/2	316-3101					

Convex Milling Cutters

-Shank Type 柄式凸半圆铣刀

High Speed Steel

Use for milling female half circle

- Teeth are from relieved and straight gashed.
- Cutting surfaces may be resharpened on face without changing contour or from for increased tool life.



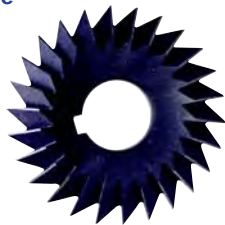
Cutter Shank					Cutter Shank				
Radius	Dia.	Dia.	OAL	Order No.	Radius	Dia.	Dia.	OAL	Order No.
1/32"	3/4"	1/2"	3"	317-4026	3/16	1-3/8	3/4	3-1/2	317-4125
1/16	3/4	1/2	3	317-4042	1/4	1-1/2	3/4	4	317-4166
3/32	7/8	1/2	3	317-4067	5/16	1-5/8	3/4	4	317-4208
1/8	1-1/4	3/4	3-1/2	317-4083	3/8	1-3/4	3/4	4	317-4240
5/32	1-5/16	3/4	3-1/2	317-4109					

Double Angle Milling Cutters

High Speed Steel, 45°, 60° or 90° Angle

双角孔式铣刀

Use for milling threads, notches, V-grooves, angles, serrations and chamfers



Size	Width of Face	Hole Dia.	45° Angle	60° Angle	90° Angle
			Order No.	Order No.	Order No.
2-3/4"	1/2"	1"	328-4211	328-5211	328-6211
3	5/8	1	328-4328	328-5328	328-6328
3	3/4	1	328-4366	328-5366	328-6366
4	1/2	1-1/4	328-4427	328-5427	328-6427
4	3/4	1	328-4435	328-5435	328-6435
4	3/4	1-1/4	328-4446	328-5446	328-6446
4	1	1-1/4	328-4468	328-5468	328-6468
5	3/4	1-1/4	328-4534	328-5534	328-6534
5	1	1-1/4	328-4542	328-5542	328-6542
6	3/4	1-1/4	328-4633	328-5633	328-6633
6	1	1-1/4	328-4641	328-5641	328-6641
6	1-1/4	1-1/4	328-4649	328-5649	328-6649
6	1-1/2	1-1/4	328-4658	328-5658	328-6658

Face Angle Milling Cutters-Shank Type

High Speed Steel or M35 Cobalt, Right Hand

带端齿柄式单角铣刀

Use for angular machine operations



60° Angle

Large Cutting Diameter	Small Cutting Diameter	Face Width	Shank Diameter	Overall Length	No. of Teeth	HSS Order No.
3/4"	5/16"	17/32"	3/8"	2-3/32"	8	316-8048
1	3/8	11/16	1/2	2-13/32	8	316-8064
1-1/4	1/2	25/32	5/8	2-21/32	10	316-8080
1-5/8	5/8	1-1/16	3/4	3-1/16	10	316-8104



Large Cutting Diameter	Small Cutting Diameter	Face Width	Shank Diameter	Overall Length	No. of Teeth	M35 Order No.
3/4"	5/16"	17/32"	3/8"	2-3/32"	8	327-4048
1	3/8	11/16	1/2	2-13/32	8	327-4064
1-1/4	1/2	25/32	5/8	2-21/32	10	327-4080
1-5/8	5/8	1-1/16	3/4	3-1/16	10	327-4104

90° Angle

Large Cutting Diameter	Small Cutting Diameter	Face Width	Shank Diameter	Overall Length	No. of Teeth	HSS Order No.
3/4"	5/16"	17/32"	3/8"	1-15/16"	8	317-8048
1	3/8	11/16	1/2	2-3/16	8	317-8064
1-1/4	1/2	25/32	5/8	2-13/32	10	317-8080
1-5/8	5/8	1-1/16	3/4	2-11/16	10	317-8104



Large Cutting Diameter	Small Cutting Diameter	Face Width	Shank Diameter	Overall Length	No. of Teeth	M35 Order No.
3/4"	5/16"	17/32"	3/8"	1-15/16"	8	327-6048
1	3/8	11/16	1/2	2-3/16	8	327-6064
1-1/4	1/2	25/32	5/8	2-13/32	10	327-6080
1-5/8	5/8	1-1/16	3/4	2-11/16	10	327-6104

Single Angle Chamfering Cutters

High Speed Steel, Right Hand

柄式单角铣刀

Use for chamfering and angle milling operations.



45° Chamfer Angle

Cutter Diameter	Face Width	Shank Diameter	Overall Length	Order No.
1/2"	1/8"	3/8"	2-1/8"	328-7321
3/4	3/16	3/8	2-1/8	328-7487
1	5/16	1/2	2-1/2	328-7644
1-1/2	1/2	3/4	2-3/4	328-7826

60° Chamfer Angle

Cutter Diameter	Face Width	Shank Diameter	Overall Length	Order No.
1/2"	7/32"	3/8"	2-1/8"	328-8329
3/4	5/16	3/8	2-1/8	328-8485
1	7/16	1/2	2-1/2	328-8642
1-1/2	5/8	3/4	2-3/4	328-8824

Double Angle Shank Type Cutters

柄式双角铣刀

M42 Cobalt

- General purpose use
- Extends tools life
- Used for aggressive machining of steels



Cut. Dia.	Cut. Thick.	Shank Dia.	Overall Length	60° Order No.	90° Order No.
3/4"	3/16"	3/8"	2-3/8"	327-7052	327-0050
3/4	3/16	1/2	2-3/8	327-7053	
1	5/16	1/2	2-27/32	327-7102	327-0100
1-3/8	7/16	5/8	3-7/32	327-7151	327-0159
1-1/2	1/2	5/8	3-3/8	327-7201	327-0209
1-7/8	5/8	3/4	3-25/32	327-7250	327-0258
2-1/4	3/4	7/8	4-5/32	327-7300	327-0308

High Speed Steel & M35 Cobalt



60° Double

Cutter Dia.	Face Width	Shank Dia.	Overall Length	HSS Order No.	M35 Order No.
3/4"	3/16"	3/8"	2-3/8"	328-8052	327-8052
1	5/16	1/2	2-27/32"	328-8102	327-8102
1-3/8	7/16	5/8	3-7/32"	328-8151	327-8151
1-1/2	1/2	5/8	3-3/8"	328-8201	327-8201
1-7/8	5/8	3/4	3-25/32"	328-8250	327-8250
2-1/4	3/4	7/8	4-5/32"	328-8300	327-8300
2-1/4	1/2	3/4	3-1/8"	328-8302	327-8302

90° Double

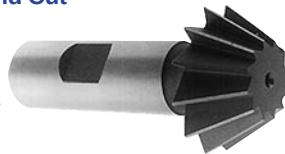
Cutter Dia.	Face Width	Shank Dia.	Overall Length	HSS Order No.	M35 Order No.
3/4"	1/4"	3/8"	2-7/16"	328-9050	327-9050
1	3/8	1/2	2-29/32	328-9100	327-9100
1-3/8	1/2	5/8	3-9/32	328-9159	327-9159
1-1/2	9/16	5/8	3-7/16	328-9209	327-9209
1-7/8	5/8	3/4	3-25/32	328-9258	327-9258
2-1/4	3/4	7/8	4-5/32	328-9308	327-9308
2-1/4	1/2	3/4	3-1/8	328-9310	327-9310

Single Angle Chamfering Cutters

M42 柄式单角铣刀

M42, High Speed Steel, Right Hand Cut

- General purpose use
- Extends tools life
- Used for aggressive machining of steels



45° Chamfer Angle

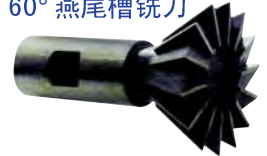
Cut. Dia.	Cut. Width	Shank Dia.	Overall Length	Order No.
1/2"	1/8"	3/8"	2-1/8"	327-1321
3/4	3/16	3/8	2-1/8	327-1487
1	5/16	1/2	2-1/2	327-1644
1-1/2	1/2	3/4	2-3/4	327-1826

60° Chamfer Angle

Cut. Dia.	Cut. Width	Shank Dia.	Overall Length	Order No.
1/2"	7/32"	3/8"	2-1/8"	327-2329
3/4	5/16	3/8	2-1/8	327-2485
1	7/16	1/2	2-1/2	327-2642
1-1/2	5/8	3/4	2-3/4	327-2824

60° Dovetail Cutters 60° 燕尾槽铣刀

High Speed Steel & Cobalt



Cut Dia.(In.)	Cut W.(In.)	Shank Dia.(In.)	OAL (In.)	HSS Order No.	Cobalt Order No.
3/8	3/16	3/8	2-1/8	243-6005	243-8005
1/2	1/4	3/8	2-1/8	243-6010	243-8010
3/4	5/16	3/8	2-1/8	243-6015	243-8015
1	7/16	1/2	2-1/2	243-6020	243-8020
1-3/8	9/16	5/8	2-7/8	243-6025	243-8025
1-7/8	13/16	7/8	3-1/4	243-6030	243-8030
2-1/4	1-1/16	1	3-1/4	243-6035	243-8035
2-1/2	1-1/8	1	3-3/4	243-6040	243-8040
3/8,1/2,3/4,1-3/8, 4pcs/set HSS 60deg w/stand				243-6001	243-8001
3/8,3/4,1-3/8,1-7/8,2-1/4 5pcs/set 60deg w/stand				243-6003	

45° Dovetail Cutters

High Speed Steel & M42 Cobalt

60° 燕尾槽铣刀



Cut Dia.(In.)	Cut W.(In.)	Shank Dia.(In.)	Shank L(In.)	OAL (In.)	HSS Order No.
3/8	1/8	3/8	1-15/16	2-1/8	243-4005
1/2	5/32	3/8	1-7/8	2-1/8	243-4010
3/4	1/4	3/8	1-13/16	2-1/8	243-4015
1	1/4	1/2		2-1/2	243-4020
1-3/8	7/16	5/8	2-5/16	2-7/8	243-4025
1-7/8	9/16	7/8	2-7/16	3-1/4	243-4030
2-1/4	5/8	1	2-11/16	3-1/4	243-4035
2-1/2	3/4	1		3-3/4	243-4040
3/8,1/2,3/4,1-3/8, 4pcs/set HSS 45deg w/stand.					243-4001
3/8,1/2,3/4,1-3/8,1-7/8.5pcs/set HSS 45deg w/stand.					243-4000



Cut Dia.(In.)	Cut W.(In.)	Shank Dia.(In.)	Shank L(In.)	OAL (In.)	M42 Order No.
3/8	1/8	3/8	1-15/16	2-1/8	243-7005
1/2	5/32	3/8	1-7/8	2-1/8	243-7010
3/4	1/4	3/8	1-13/16	2-1/8	243-7015
1	1/4	1/2		2-1/2	243-7020
1-3/8	7/16	5/8	2-5/16	2-7/8	243-7025
1-7/8	9/16	7/8	2-7/16	3-1/4	243-7030
2-1/4	5/8	1	2-11/16	3-1/4	243-7035
2-1/2	3/4	1		3-3/4	243-7040
3/8,1/2,3/4,1-3/8, 4pcs/set HSS 45deg w/stand.					243-7001

Carbide Tipped Dovetail Cutters

Straight Shank

镶硬质合金燕尾槽铣刀

- Used for all dovetail work.
- Convenient for production and tool room work.



Cutter Dia.	Shank Dia.	Overall Length	No. of Teeth	Cutter Width	45° Order No.	60° Order No.
3/4"	3/8"	2-1/4"	3	1/4	243-5048	243-5248
1	1/2	2-1/2	4	5/16	243-5064	243-5264
1-1/4	5/8	2-3/4	4	3/8	243-5080	243-5280
1-1/2	3/4	3-1/4	4	1/2	243-5096	243-5296
2	1	4-1/4	6	5/8	243-5128	243-5328
2-1/2	1-1/4	4-3/8	6	3/4	243-5160	243-5360
3	1-1/4	4-1/2	6	1	243-5192	243-5392

Inverted Dovetail Cutters

M2 HSS, Screwed Shank

螺纹柄反燕尾槽铣刀

NEW



Inch

Cutter Dia.	Cutter Angle	Cutter Width	Overall Length	Shank Dia.	No. of Teeth	M2 Order No.
1"	45°	5/16"	2-3/4"	1/2"	6	243-4364
1-1/2	45°	13/32	3-5/32	1	8	243-4396
1	60°	15/32	2-3/4	1/2	6	243-4464
1-1/2	60°	5/8	3-3/8	1	8	243-4496

Metric

Cutter Dia.	Cutter Angle	Cutter Width	Overall Length	Shank Dia.	No. of Teeth	M2 Order No.
16mm	45°	4.0mm	66.5mm	12mm	6	243-4116
19	45°	5.5	66.5	12	6	243-4119
22	45°	6.5	68.5	12	6	243-4122
25	45°	7.5	70.0	12	6	243-4125
28	45°	8.5	71.5	16	6	243-4128
32	45°	8.5	74.5	16	8	243-4132
19	60°	7.0	66.5	12	6	243-4219
22	60°	9.5	68.5	12	6	243-4222
25	60°	12.0	70.0	12	6	243-4225
28	60°	12.5	71.5	16	6	243-4228
32	60°	13.5	74.5	16	8	243-4232

Metric Module Involute Gear Cutters

公制模数齿轮铣刀

High Speed Steel, 20° Pressure Angle

Applications:

- Specialty cutting tools designed for milling gears.
- For cutting the teeth to suit a special gear shape called an involute form
- Designed as arbor mounted cutters for machine tools.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- For optimal performance and the best tools life the correct cutting speeds and feeds must be used and suitable lubricating/cutting oils or appropriate coolant fluids are recommended.

Features:

- For finishing with a 20° pressure angle
- 8 Cutters are made for each module.
- Form relieved to allow resharpener many times without changing the form.

Technical Data:

- Manufactured from high speed steel.
- Ground from solid
- Straight teeth on periphery of cutters.
- Cutter sets can accommodate gears from 12 teeth to a rack gear.
- Bright finish.



Cutter Number	Range of Teeth Cut
# 1	12-13
# 2	14-16
# 3	17-20
# 4	21-25
# 5	26-34
# 6	35-54
# 7	55-134
# 8	135 to rack

Module	Cutter Diameter	Arbor Hole	#1 Order No.	#2 Order No.	#3 Order No.	#4 Order No.	#5 Order No.	#6 Order No.	#7 Order No.	#8 Order No.
0.3	40	16	317-1601	317-1602	317-1603	317-1604	317-1605	317-1606	317-1607	317-1608
0.35	40	16	317-1611	317-1612	317-1613	317-1614	317-1615	317-1616	317-1617	317-1618
0.4	40	16	317-1621	317-1622	317-1623	317-1624	317-1625	317-1626	317-1627	317-1628
0.5	40	16	317-1631	317-1632	317-1633	317-1634	317-1635	317-1636	317-1637	317-1638
0.6	40	16	317-1641	317-1642	317-1643	317-1644	317-1645	317-1646	317-1647	317-1648
0.7	40	16	317-1651	317-1652	317-1653	317-1654	317-1655	317-1656	317-1657	317-1658
0.8	40	16	317-1661	317-1662	317-1663	317-1664	317-1665	317-1666	317-1667	317-1668
0.9	40	16	317-1671	317-1672	317-1673	317-1674	317-1675	317-1676	317-1677	317-1678
1	50	22	317-1681	317-1682	317-1683	317-1684	317-1885	317-1686	317-1687	317-1688
1.25	50	22	317-1691	317-1692	317-1693	317-1694	317-1695	317-1696	317-1697	317-1698
1.5	55	22	317-1701	317-1702	317-1703	317-1704	317-1705	317-1706	317-1707	317-1708
1.75	60	22	317-1711	317-1712	317-1713	317-1714	317-1715	317-1716	317-1717	317-1718
2	60	22	317-1721	317-1722	317-1723	317-1724	317-1725	317-1726	317-1727	317-1728
2.25	60	22	317-1731	317-1732	317-1733	317-1734	317-1735	317-1736	317-1737	317-1738
2.5	65	22	317-1741	317-1742	317-1743	317-1744	317-1745	317-1746	317-1747	317-1748
2.75	70	27	317-1751	317-1752	317-1753	317-1754	317-1755	317-1756	317-1757	317-1758
3	70	27	317-1761	317-1762	317-1763	317-1764	317-1765	317-1766	317-1767	317-1768
3.25	75	27	317-1771	317-1772	317-1773	317-1774	317-1775	317-1776	317-1777	317-1778
3.5	75	27	317-1781	317-1782	317-1783	317-1784	317-1785	317-1786	317-1787	317-1788
3.75	75	27	317-1791	317-1792	317-1793	317-1794	317-1795	317-1796	317-1797	317-1798
4	80	27	317-1801	317-1802	317-1803	317-1804	317-1805	317-1806	317-1807	317-1808
4.5	80	27	317-1811	317-1812	317-1813	317-1814	317-1815	317-1816	317-1817	317-1818
5	90	32	317-1821	317-1822	317-1823	317-1824	317-1825	317-1826	317-1827	317-1828
5.5	95	32	317-1831	317-1832	317-1833	317-1834	317-1835	317-1836	317-1837	317-1838
6	100	32	317-1841	317-1842	317-1843	317-1844	317-1845	317-1846	317-1847	317-1848
6.5	105	32	317-1851	317-1852	317-1853	317-1854	317-1855	317-1856	317-1857	317-1858
7	105	32	317-1861	317-1862	317-1863	317-1864	317-1865	317-1866	317-1867	317-1868
8	110	32	317-1871	317-1872	317-1873	317-1874	317-1875	317-1876	317-1877	317-1878
9	115	32	317-1881	317-1882	317-1883	317-1884	317-1885	317-1886	317-1887	317-1888
10	120	32	317-1891	317-1892	317-1893	317-1894	317-1895	317-1896	317-1897	317-1898
11	135	40	317-1901	317-1902	317-1903	317-1904	317-1905	317-1906	317-1907	317-1908
12	145	40	317-1911	317-1912	317-1913	317-1914	317-1915	317-1916	317-1917	317-1918
14	160	40	317-1921	317-1922	317-1923	317-1924	317-1925	317-1926	317-1927	317-1928
16	170	40	317-1931	317-1932	317-1933	317-1934	317-1935	317-1936	317-1937	317-1938

Module Involute Gear Cutters

英制模数齿轮铣刀

High Speed Steel

Applications:

- Specialty cutting tools designed for milling gears.
- For cutting the teeth to suit a special gear shape called an involute form
- Designed as arbor mounted cutters for machine tools.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- For optimal performance and the best tools life the correct cutting speeds and feeds must be used and suitable lubricating/cutting oils or appropriate coolant fluids are recommended.

Features:

- For finishing with a 14-1/2° or 20° pressure angle
- 8 Cutters are made for each module.
- Form relieved to allow resharpening many times without changing the form.

Technical Data:

- Manufactured from high speed steel.
- Ground from solid
- Straight teeth on periphery of cutters.
- Made to suit pitch diameters of 2" to 48" for either 14-1/2° or 20° pressure angle gears.
- Cutter sets can accommodate gears from 12 teeth to a rack gear.
- Bright finish.



Cutter Number	Range of Teeth Cut
# 1	135 to rack
# 2	55-134
# 3	35-54
# 4	26-34
# 5	21-25
# 6	17-20
# 7	14-16
# 8	12-13

14-1/2° Pressure Angle Module Involute Gear Cutters

Module	Cutter Diameter	Arbor Hole	#1 Order No.	#2 Order No.	#3 Order No.	#4 Order No.	#5 Order No.	#6 Order No.	#7 Order No.	#8 Order No.
1"	2"	1"	318-1701	318-1702	318-1703	318-1704	318-1705	318-1706	318-1707	318-1708
1-1/4	2	1	318-1711	318-1712	318-1713	318-1714	318-1715	318-1716	318-1717	318-1718
1-1/2	2	1	318-1721	318-1722	318-1723	318-1724	318-1725	318-1726	318-1727	318-1728
1-3/4	2-1/4	1	318-1731	318-1732	318-1733	318-1734	318-1735	318-1736	318-1737	318-1738
2	2-1/2	1	318-1741	318-1742	318-1743	318-1744	318-1745	318-1746	318-1747	318-1748
2-1/4	2-1/2	1	318-1751	318-1752	318-1753	318-1754	318-1755	318-1756	318-1757	318-1758
2-1/2	2-1/2	1	318-1761	318-1762	318-1763	318-1764	318-1765	318-1766	318-1767	318-1768
2-3/4	2-1/2	1	318-1771	318-1772	318-1773	318-1774	318-1775	318-1776	318-1777	318-1778
3	2-1/2	1	318-1781	318-1782	318-1783	318-1784	318-1785	318-1786	318-1787	318-1788
3-1/4	2-1/2	1-1/4	318-1791	318-1792	318-1793	318-1794	318-1795	318-1796	318-1797	318-1798
3-1/2	2-1/2	1-1/4	318-1801	318-1802	318-1803	318-1804	318-1805	318-1806	318-1807	318-1808
4	3	1	318-1891	318-1892	318-1893	318-1894	318-1895	318-1896	318-1897	318-1898

20° Pressure Angle Module Involute Gear Cutters

Module	Cutter Diameter	Arbor Hole	#1 Order No.	#2 Order No.	#3 Order No.	#4 Order No.	#5 Order No.	#6 Order No.	#7 Order No.	#8 Order No.
1"	2"	1"	318-1291	318-1292	318-1293	318-1294	318-1295	318-1296	318-1297	318-1298
1-1/4	2	1	318-1301	318-1302	318-1303	318-1304	318-1305	318-1306	318-1307	318-1308
1-1/2	2-1/4	1	318-1311	318-1312	318-1313	318-1314	318-1315	318-1316	318-1317	318-1318
1-3/4	2-1/4	1	318-1321	318-1322	318-1323	318-1324	318-1325	318-1326	318-1327	318-1328
2	2-1/2	1	318-1331	318-1332	318-1333	318-1334	318-1335	318-1336	318-1337	318-1338
2-1/4	2-5/8	1	318-1341	318-1342	318-1343	318-1344	318-1345	318-1346	318-1347	318-1348
2-1/2	2-3/4	1	318-1351	318-1352	318-1353	318-1354	318-1355	318-1356	318-1357	318-1358
2-3/4	2-7/8	1	318-1361	318-1362	318-1363	318-1364	318-1365	318-1366	318-1367	318-1368
3	2-7/8	1	318-1371	318-1372	318-1373	318-1374	318-1375	318-1376	318-1377	318-1378
3-1/4	3	1	318-1381	318-1382	318-1383	318-1384	318-1385	318-1386	318-1387	318-1388
3-1/2	3	1	318-1391	318-1392	318-1393	318-1394	318-1395	318-1396	318-1397	318-1398
3-3/4	3-1/4	1	318-1401	318-1402	318-1403	318-1404	318-1405	318-1406	318-1407	318-1408
4	3-1/4	1	318-1501	318-1502	318-1503	318-1504	318-1505	318-1506	318-1507	318-1508
4-1/4	4	1	318-1511	318-1512	318-1513	318-1514	318-1515	318-1516	318-1517	318-1518
4-1/2	4	1	318-1521	318-1522	318-1523	318-1524	318-1525	318-1526	318-1527	318-1528
5	4	1	318-1531	318-1532	318-1533	318-1534	318-1535	318-1536	318-1537	318-1538
5-1/2	4	1	318-1541	318-1542	318-1543	318-1544	318-1545	318-1546	318-1547	318-1548
6	4	1	318-1551	318-1552	318-1553	318-1554	318-1555	318-1556	318-1557	318-1558
7	4-3/4	1-1/4	318-1561	318-1562	318-1563	318-1564	318-1565	318-1566	318-1567	318-1568
8	4-3/4	1-1/4	318-1571	318-1572	318-1573	318-1574	318-1575	318-1576	318-1577	318-1578
8-1/2	5-1/4	1-1/2	318-1581	318-1582	318-1583	318-1584	318-1585	318-1586	318-1587	318-1588
9	5-1/4	1-1/2	318-1591	318-1592	318-1593	318-1594	318-1595	318-1596	318-1597	318-1598
9-1/2	5-1/2	1-1/2	318-1601	318-1602	318-1603	318-1604	318-1605	318-1606	318-1607	318-1608
10	5-1/2	1-1/2	318-1691	318-1692	318-1693	318-1694	318-1695	318-1696	318-1697	318-1698

14-1/2° Pressure Angle Involute Gear Cutters

High Speed Steel

14. 5度角齿轮铣刀

- For spur gears with 14-1/2°.
- 8 Cutters are made for each pitch.
- Form relieved to allow resharpening many times without changing the form.



Cutter Number	Range of Teeth Cut
# 1	135 to rack
# 2	55-134
# 3	35-54
# 4	26-34

Cutter Number	Range of Teeth Cut
# 5	21-25
# 6	17-20
# 7	14-16
# 8	12-13

Pitch	Cutter Diameter	Arbor Hole	#1 Order No.	#2 Order No.	#3 Order No.	#4 Order No.	#5 Order No.	#6 Order No.	#7 Order No.	#8 Order No.
2	5-3/4"	1-1/2"	319-0014	319-0022	319-0030	319-0048	319-0055	319-0063	319-0071	319-0089
2-1/2	5-3/4	1-1/2	319-0113	319-0121	319-0139	319-0147	319-0154	319-0162	319-0170	319-0188
2-1/2	5-3/4	1	319-0115	319-0125	319-0135	319-0145	319-0155	319-0165	319-0175	319-0185
3	5-3/4	1-1/2	319-0310	319-0320	319-0330	319-0340	319-0350	319-0363	319-0370	319-0380
3	5-1/4	1-1/2	319-0314	319-0324	319-0334	319-0344	319-0354	319-0364	319-0374	319-0384
3	5-1/4	1-1/4	319-0311	319-0329	319-0337	319-0345	319-0352	319-0360	319-0378	319-0386
3	4-3/4	1-1/4	319-0319	319-0328	319-0339	319-0349	319-0359	319-0369	319-0379	319-0389
4	4-1/2	1-1/2	319-0413	319-0423	319-0433	319-0443	319-0453	319-0463	319-0473	319-0483
4	4-1/4	1-1/4	319-0410	319-0428	319-0436	319-0444	319-0451	319-0469	319-0477	319-0485
4	3-5/8	1	319-0412	319-0422	319-0432	319-0442	319-0452	319-0462	319-0472	319-0482
4	3-3/8	1	319-0414	319-0394	319-0402	319-0445	319-0454	319-0464	319-0474	319-0484
5	3-3/4	1-1/4	319-0511	319-0521	319-0531	319-0541	319-0551	319-0561	319-0571	319-0581
5	3-5/8	1	319-0519	319-0527	319-0535	319-0543	319-0550	319-0568	319-0576	319-0584
5	3-5/8	1-1/4	319-0512	319-0522	319-0532	319-0542	319-0552	319-0562	319-0572	319-0582
5	3-3/8	1	319-0516	319-0526	319-0536	319-0546	319-0556	319-0566	319-0577	319-0586
6	3-1/2	1-1/4	319-0610	319-0620	319-0630	319-0640	319-0650	319-0660	319-0670	319-0680
6	3-1/8	1-1/4	319-0611	319-0621	319-0631	319-0641	319-0651	319-0661	319-0671	319-0681
6	3-1/8	1	319-0618	319-0626	319-0634	319-0642	319-0659	319-0667	319-0675	319-0683
7	3-3/8	1-1/4	319-0719	319-0729	319-0739	319-0749	319-0759	319-0769	319-0779	319-0789
7	2-7/8	1	319-0717	319-0725	319-0733	319-0741	319-0758	319-0766	319-0774	319-0782
8	3-1/4	1-1/4	319-0818	319-0828	319-0838	319-0848	319-0858	319-0868	319-0878	319-0888
8	2-7/8	1	319-0816	319-0824	319-0832	319-0840	319-0857	319-0865	319-0873	319-0881
9	3-1/8	1-1/4	319-0917	319-0927	319-0937	319-0947	319-0957	319-0967	319-0977	319-0987
9	2-3/4	1	319-0915	319-0923	319-0931	319-0949	319-0956	319-0964	319-0972	319-0980
10	2-3/4	1	319-1012	319-1020	319-1038	319-1046	319-1053	319-1061	319-1079	319-1087
10	2-3/8	7/8	319-1014	319-1024	319-1034	319-1044	319-1054	319-1064	319-1074	319-1084
11	2-5/8	1	319-1114	319-1124	319-1134	319-1144	319-1154	319-1164	319-1174	319-1184
11	2-3/8	7/8	319-1111	319-1129	319-1137	319-1145	319-1152	319-1160	319-1178	319-1186
12	2-5/8	1	319-1210	319-1228	319-1236	319-1244	319-1251	319-1269	319-1277	319-1285
12	2-1/4	7/8	319-1213	319-1223	319-1233	319-1243	319-1253	319-1263	319-1273	319-1283
13	2-5/8	1	319-1310	319-1320	319-1330	319-1340	319-1350	319-1360	319-1370	319-1380
13	2-1/4	7/8	319-1317	319-1327	319-1337	319-1347	319-1357	319-1367	319-1377	319-1387
14	2-1/2	1	319-1418	319-1426	319-1434	319-1442	319-1459	319-1467	319-1475	319-1483
14	2-1/8	7/8	319-1411	319-1421	319-1431	319-1441	319-1451	319-1461	319-1471	319-1481
14-1/2	2-3/8	1	319-1113	319-1123	319-1133	319-1143	319-1153	319-1163	319-1173	319-1183
16	2-1/2	1	319-1618	319-1628	319-1638	319-1648	319-1658	319-1668	319-1678	319-1688
16	2-1/8	1	319-1615	319-1626	319-1636	319-1646	319-1656	319-1666	319-1676	319-1686
16	2-1/8	7/8	319-1619	319-1629	319-1639	319-1649	319-1659	319-1669	319-1679	319-1689
16	2-3/8	1	319-1616	319-1624	319-1632	319-1640	319-1657	319-1665	319-1673	319-1681
18	2-3/8	1	319-1814	319-1822	319-1830	319-1848	319-1855	319-1863	319-1871	319-1889
18	2	7/8	319-1816	319-1826	319-1836	319-1846	319-1856	319-1866	319-1876	319-1886
20	2-3/8	1	319-2010	319-2028	319-2036	319-2044	319-2051	319-2069	319-2077	319-2085
20	2	7/8	319-2012	319-2022	319-2032	319-2042	319-2052	319-2062	319-2072	319-2082
22	2-1/4	1	319-2211	319-2221	319-2231	319-2241	319-2251	319-2261	319-2271	319-2281
22	2	7/8	319-2218	319-2226	319-2234	319-2242	319-2259	319-2267	319-2275	319-2283
24	2-1/4	1	319-2418	319-2428	319-2438	319-2448	319-2458	319-2468	319-2478	319-2488
24	1-3/4	7/8	319-2416	319-2424	319-2432	319-2440	319-2457	319-2465	319-2473	319-2481
26	2-1/2	1	319-2616	319-2626	319-2636	319-2646	319-2656	319-2666	319-2676	319-2686
26	2-1/4	1	319-2613	319-2623	319-2633	319-2643	319-2653	319-2663	319-2673	319-2683
26	1-3/4	7/8	319-2614	319-2622	319-2630	319-2648	319-2655	319-2661	319-2671	319-2689
28	2-1/4	1	319-2815	319-2825	319-2835	319-2845	319-2855	319-2865	319-2875	319-2885
28	1-3/4	7/8	319-2812	319-2820	319-2836	319-2846	319-2853	319-2861	319-2879	319-2887
30	2-1/4	1	319-3011	319-3021	319-3031	319-3041	319-3051	319-3061	319-3071	319-3081
30	1-3/4	7/8	319-3018	319-3026	319-3034	319-3042	319-3059	319-3067	319-3075	319-3083
32	2-1/4	1	319-3218	319-3228	319-3238	319-3248	319-3258	319-3268	319-3278	319-3288
32	2-1/4	7/8	319-3219	319-3229	319-3239	319-3249	319-3259	319-3269	319-3279	319-3289
32	1-3/4	7/8	319-3216	319-3224	319-3232	319-3240	319-3257	319-3265	319-3273	319-3281
34	2-1/4	1	319-3411	319-3421	319-3431	319-3441	319-3451	319-3461	319-3471	319-3481
34	1-3/4	7/8	319-3415	319-3425	319-3435	319-3445	319-3455	319-3465	319-3475	319-3485
36	2-1/4	1	319-3615	319-3625	319-3635	319-3645	319-3655	319-3665	319-3675	319-3685
36	1-3/4	7/8	319-3612	319-3620	319-3638	319-3646	319-3653	319-3661	319-3679	319-3687
40	2-1/4	1	319-4018	319-4028	319-4038	319-4048	319-4058	319-4068	319-4078	319-4088
40	1-3/4	7/8	319-4016	319-4024	319-4032	319-4040	319-4057	319-4065	319-4073	319-4081
48	2-1/4	1	319-4810	319-4820	319-4830	319-4840	319-4850	319-4860	319-4870	319-4880
48	1-3/4	7/8	319-4818	319-4826	319-4834	319-4842	319-4859	319-4867	319-4875	319-4883

20° Pressure Angle Involute Gear Cutters 20度角齿轮铣刀

High Speed Steel

Applications:

- Specialty cutting tools designed for milling gears.
- For cutting the teeth to suit a special gear shape called an involute form
- Designed as arbor mounted cutters for machine tools.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- For optimal performance and the best tools life the correct cutting speeds and feeds must be used and suitable lubricating/cutting oils or appropriate coolant fluids are recommended.



Cutter Number	Range of Teeth Cut
# 1	135 to rack
# 2	55-134
# 3	35-54
# 4	26-34
# 5	21-25
# 6	17-20
# 7	14-16
# 8	12-13

- For spur gears with 20°.
- 8 Cutters are made for each pitch.
- Form relieved to allow resharpening many times without changing the form.

Technical Data:

- Manufactured from high speed steel.
- Ground from solid
- Straight teeth on periphery of cutters.
- Made to suit pitch diameters of 2" to 48" for either 14-1/2° or 20° pressure angle gears.
- Cutter sets can accommodate gears from 12 teeth to a rack gear.
- Bright finish.

Pitch	Cutter Diameter	Arbor Hole	#1 Order No.	#2 Order No.	#3 Order No.	#4 Order No.	#5 Order No.	#6 Order No.	#7 Order No.	#8 Order No.
4"	4-1/4"	1-1/4"	318-0414	318-0424	318-0434	318-0444	318-0454	318-0464	318-0474	318-0484
4	3-5/8	1-1/4	318-0416	318-0426	318-0436	318-0446	318-0456	318-0466	318-0476	318-0486
4	3-5/8	1	318-0415	318-0425	318-0435	318-0449	318-0455	318-0465	318-0475	318-0485
4	3-1/2	1-1/4"	318-0413	318-0423	318-0433	318-0443	318-0453	318-0463	318-0473	318-0483
4	3-1/2	1	318-0411	318-0429	318-0437	318-0445	318-0452	318-0460	318-0478	318-0486
5	3-3/4	1-1/4	318-0513	318-0523	318-0533	318-0543	318-0553	318-0563	318-0573	318-0583
5	3-3/8	1	318-0510	318-0528	318-0536	318-0544	318-0551	318-0569	318-0577	318-0585
6	3-1/2	1-1/4	318-0612	318-0622	318-0632	318-0642	318-0652	318-0662	318-0672	318-0682
6	3-1/8	1	318-0619	318-0627	318-0635	318-0643	318-0650	318-0668	318-0676	318-0684
7	2-7/8	1	318-0718	318-0726	318-0734	318-0742	318-0759	318-0767	318-0775	318-0783
8	3-1/4	1-1/4	318-0819	318-0829	318-0839	318-0849	318-0859	318-0869	318-0879	318-0889
8	2-7/8	1	318-0817	318-0825	318-0833	318-0841	318-0858	318-0866	318-0874	318-0882
9	2-3/4	1	318-0916	318-0924	318-0932	318-0940	318-0957	318-0965	318-0973	318-0981
10	2-3/4	1	318-1013	318-1021	318-1039	318-1047	318-1054	318-1062	318-1070	318-1088
10	2-3/8	7/8	318-1015	318-1025	318-1035	318-1045	318-1055	318-1065	318-1075	318-1085
11	2-5/8	1	318-1111	318-1121	318-1131	318-1141	318-1151	318-1161	318-1171	318-1181
12	2-5/8	1	318-1211	318-1229	318-1237	318-1245	318-1252	318-1260	318-1278	318-1286
12	2-1/4	7/8	318-1213	318-1223	318-1233	318-1243	318-1253	318-1263	318-1273	318-1283
14	2-1/2	1	318-1419	318-1427	318-1435	318-1443	318-1450	318-1468	318-1476	318-1484
14	2-1/8	7/8	318-1412	318-1422	318-1432	318-1442	318-1452	318-1462	318-1472	318-1482
16	2-1/2	1	318-1617	318-1625	318-1633	318-1641	318-1658	318-1666	318-1674	318-1682
16	2-1/8	7/8	318-1619	318-1629	318-1639	318-1649	318-1659	318-1669	318-1679	318-1689
18	2-3/8	1	318-1815	318-1823	318-1831	318-1849	318-1856	318-1864	318-1872	318-1880
18	2	7/8	318-1817	318-1827	318-1837	318-1847	318-1857	318-1867	318-1877	318-1887
20	2-3/8	1	318-2111	318-2129	318-2137	318-2145	318-2152	318-2160	318-2178	318-2186
20	2	7/8	318-2113	318-2123	318-2133	318-2143	318-2153	318-2163	318-2173	318-2183
22	2-1/4	1	318-2212	318-2222	318-2232	318-2242	318-2252	318-2262	318-2272	318-2282
22	2	1	318-2213	318-2223	318-2233	318-2243	318-2253	318-2263	318-2273	318-2283
22	2	7/8	318-2214	318-2224	318-2234	318-2244	318-2254	318-2264	318-2274	318-2284
24	2-1/4	1	318-2417	318-2425	318-2433	318-2441	318-2458	318-2466	318-2474	318-2482
24	1-3/4	7/8	318-2419	318-2429	318-2439	318-2449	318-2459	318-2469	318-2479	318-2489
26	2-1/4	1	318-2611	318-2621	318-2631	318-2641	318-2651	318-2661	318-2671	318-2681
26	1-3/4	7/8	318-2617	318-2627	318-2637	318-2647	318-2657	318-2667	318-2677	318-2687
28	2-1/4	1	318-2812	318-2822	318-2832	318-2842	318-2852	318-2862	318-2872	318-2882
28	1-3/4	7/8	318-2817	318-2827	318-2837	318-2847	318-2857	318-2867	318-2877	318-2887
30	2-1/4	1	318-3112	318-3122	318-3132	318-3142	318-3152	318-3162	318-3172	318-3182
30	1-3/4	7/8	318-3117	318-3127	318-3137	318-3147	318-3157	318-3167	318-3177	318-3187
32	2-1/4	1	318-3118	318-3128	318-3138	318-3148	318-3158	318-3168	318-3178	318-3188
32	1-3/4	7/8	318-3217	318-3225	318-3233	318-3241	318-3258	318-3266	318-3274	318-3282
36	2-1/4	1	318-3611	318-3621	318-3631	318-3641	318-3651	318-3661	318-3671	318-3681
36	1-3/4	7/8	318-3617	318-3627	318-3637	318-3647	318-3657	318-3667	318-3677	318-3687
40	2-1/4	1	318-4019	318-4029	318-4039	318-4049	318-4059	318-4069	318-4079	318-4089
40	1-3/4	7/8	318-4017	318-4025	318-4033	318-4041	318-4058	318-4066	318-4074	318-4082
44	1-3/4	7/8	318-4417	318-4427	318-4437	318-4447	318-4457	318-4467	318-4477	318-4487
48	2-1/4	1	318-4811	318-4821	318-4831	318-4841	318-4851	318-4861	318-4871	318-4881
48	1-3/4	7/8	318-4819	318-4827	318-4835	318-4843	318-4850	318-4868	318-4876	318-4884

Plain Metal Slitting Saws

High Speed Steel 带键槽锯片铣刀

- Used in slitting and slotting.
- Sides are concave for clearance.
- Supplied with Keyway.



Screw Slotting Saws

High Speed Steel 带键槽锯片铣刀

- Used in slotting sheets and tubing.
- Good for shallow cuts and screw heads.
- Supplied with key-way.



Cut Dia.	Face Width	Hole Size	No. of Teeth	Order No.	Cut Dia.	Face Width	Hole Size	No. of Teeth	Order No.
2"	1/16"	1/2"	28	370-4004	4-1/2"	3/32"	1"	36	370-4506
2	1/8	1/2	28	370-4008	4-1/2	1/8	1	36	370-4508
2-1/2	3/64	3/8	28	370-4013	5	3/64	1	40	370-4603
2-1/2	1/32	7/8	28	370-4102	5	1/16	1	40	370-4604
2-1/2	3/64	7/8	28	370-4103	5	5/64	1	40	370-4605
2-1/2	1/16	7/8	28	370-4104	5	3/32	1	40	370-4606
2-1/2	3/32	7/8	28	370-4106	5	7/64	1	40	370-4607
2-1/2	1/8	7/8	28	370-4108	5	1/8	1	40	370-4608
3	1/64	1	30	370-4201	5	9/64	1	40	370-4609
3	1/32	1	30	370-4202	5	5/32	1	40	370-4610
3	3/64	1	30	370-4203	5	3/16	1	40	370-4612
3	1/16	1	30	370-4204	5	1/16	1-1/4	40	370-4704
3	5/64	1	30	370-4205	5	3/32	1-1/4	40	370-4706
3	3/32	1	30	370-4206	5	1/8	1-1/4	40	370-4708
3	7/64	1	30	370-4207	5	5/32	1-1/4	40	370-4710
3	1/8	1	30	370-4208	5	3/16	1-1/4	40	370-4712
3	9/64	1	30	370-4209	6	3/64	1	42	370-4803
3	5/32	1	30	370-4210	6	1/16	1	42	370-4804
3-1/2	1/32	1	30	370-4302	6	5/64	1	42	370-4805
3-1/2	3/64	1	30	370-4303	6	3/32	1	42	370-4806
3-1/2	1/16	1	30	370-4304	6	7/64	1	42	370-4807
3-1/2	5/64	1	30	370-4305	6	1/8	1	42	370-4808
3-1/2	3/32	1	30	370-4306	6	9/64	1	42	370-4809
3-1/2	1/8	1	30	370-4308	6	5/32	1	42	370-4810
4	1/64	1	36	370-4401	6	3/16	1	42	370-4812
4	1/32	1	36	370-4402	6	1/16	1-1/4	42	370-4904
4	3/64	1	36	370-4403	6	3/32	1-1/4	42	370-4906
4	1/16	1	36	370-4404	6	1/8	1-1/4	42	370-4908
4	5/64	1	36	370-4405	6	5/32	1-1/4	42	370-4910
4	3/32	1	36	370-4406	6	3/16	1-1/4	42	370-4912
4	7/64	1	36	370-4407	8	1/8	1	48	370-5008
4	1/8	1	36	370-4408	8	3/16	1	48	370-5012
4	9/64	1	36	370-4409	8	3/32	1-1/4	48	370-5106
4	5/32	1	36	370-4410	8	1/8	1-1/4	48	370-5108
4	3/16	1	36	370-4412	8	3/16	1-1/4	48	370-5112
4-1/2	1/32	1	36	370-4502	10	1/8	1-1/4	56	370-5208
4-1/2	3/64	1	36	370-4503	10	3/16	1-1/4	56	370-5212
4-1/2	1/16	1	36	370-4504					

Circular Saw Arbors & Sets

Use with saw blades .001" to 3/16" thick. black oxide finish 直柄小头锯片接杆

Circular Saw Arbor Set

3pcs /set:

1/2", 5/8", 3/4"

in wooden stand

Order No.712-0300



Individuals

Flange Size	Shank Dia.	Inside Hole Dia.	Order No.
1/2"	1/2"	1/4"	712-0205
5/8	1/2	3/8	712-0210
3/4	1/2	1/2	712-0215
1	5/8	5/8	712-0220

Slitting & Slotting Saw Arbors

- Spring loaded mechanism readily accepts saw blades with hole diameters from 1/2" to 1".
- Black oxide finish.
- A hex head screw makes saws firmly in position.

套式片铣刀接杆

Shank Dia.	Overall Length	Inside Hole Dia.	Order No.
1/2"	2-9/16"	1/2, 5/8, 3/4, 7/8, 1"	712-0005
1/2	4-3/4	3/8"	712-1010
R8	5-3/32	1/2, 5/8, 3/4, 7/8, 1"	712-0010



Jewelers Saws

高速钢珠宝切割锯片铣刀

High Speed Steel

For using in slotting, sheeting and tubing operations.



Dia.	Thickness	Hole	No. of Teeth	Order No.
1"	.010"	1/4"	98	370-0110
1	.012	1/4	98	370-0112
1	.014	1/4	76	370-0114
1	.016	1/4	76	370-0116
1	.018	1/4	76	370-0118
1	.020	1/4	76	370-0120
1	.023	1/4	76	370-0123
1	.025	1/4	76	370-0125
1	.028	1/4	76	370-0128
1	.032	1/4	76	370-0132
1	.008	3/8	98	370-0208
1	.010	3/8	98	370-0210
1	.012	3/8	98	370-0212
1	.014	3/8	76	370-0214
1	.016	3/8	76	370-0216
1	.018	3/8	76	370-0218
1	.020	3/8	76	370-0220
1	.023	3/8	76	370-0223
1	.025	3/8	76	370-0225
1	.028	3/8	76	370-0228
1	.032	3/8	76	370-0232
1-1/4	.008	3/8	114	370-0408
1-1/4	.010	3/8	114	370-0410
1-1/4	.012	3/8	114	370-0412
1-1/4	.014	3/8	98	370-0414
1-1/4	.016	3/8	98	370-0416
1-1/4	.018	3/8	98	370-0418
1-1/4	.020	3/8	98	370-0420
1-1/4	.023	3/8	98	370-0423
1-1/4	.025	3/8	98	370-0425
1-1/4	.028	3/8	98	370-0428
1-1/4	.032	3/8	98	370-0432
1-1/2	.008	3/8	140	370-0608
1-1/2	.010	3/8	140	370-0610
1-1/2	.012	3/8	140	370-0612
1-1/2	.014	3/8	110	370-0614
1-1/2	.016	3/8	110	370-0616
1-1/2	.018	3/8	110	370-0618
1-1/2	.020	3/8	110	370-0620
1-1/2	.023	3/8	110	370-0623
1-1/2	.025	3/8	110	370-0625
1-1/2	.028	3/8	110	370-0628
1-1/2	.032	3/8	110	370-0632
1-1/2	.008	1/2	140	370-0708
1-1/2	.010	1/2	140	370-0710
1-1/2	.012	1/2	140	370-0712
1-1/2	.014	1/2	110	370-0714
1-1/2	.016	1/2	110	370-0716
1-1/2	.018	1/2	110	370-0718
1-1/2	.020	1/2	110	370-0720
1-1/2	.023	1/2	110	370-0723
1-1/2	.025	1/2	110	370-0725
1-1/2	.028	1/2	110	370-0728
1-1/2	.032	1/2	110	370-0732
1-3/4	.008	1/2	160	370-0908
1-3/4	.010	1/2	160	370-0910
1-3/4	.012	1/2	160	370-0912
1-3/4	.014	1/2	132	370-0914
1-3/4	.016	1/2	132	370-0916
1-3/4	.018	1/2	132	370-0918
1-3/4	.020	1/2	132	370-0920
1-3/4	.023	1/2	132	370-0923
1-3/4	.025	1/2	132	370-0925
1-3/4	.028	1/2	132	370-0928
1-3/4	.032	1/2	132	370-0932
2	.008	3/8	190	370-1108
2	.010	3/8	190	370-1110
2	.012	3/8	190	370-1112
2	.014	3/8	152	370-1114

Dia.	Thickness	Hole	No. of Teeth	Order No.
2"	.016"	3/8"	152	370-1116
2	.018	3/8	152	370-1118
2	.020	3/8	152	370-1120
2	.023	3/8	152	370-1123
2	.025	3/8	152	370-1125
2	.028	3/8	152	370-1128
2	.032	3/8	110	370-1132
2	.035	3/8	110	370-1135
2	.040	3/8	110	370-1140
2	.045	3/8	110	370-1145
2	.051	3/8	110	370-1151
2	.057	3/8	110	370-1157
2	.010	1/2	190	370-1210
2	.012	1/2	190	370-1212
2	.014	1/2	152	370-1214
2	.016	1/2	152	370-1216
2	.018	1/2	152	370-1218
2	.020	1/2	152	370-1220
2	.023	1/2	152	370-1223
2	.025	1/2	152	370-1225
2	.028	1/2	152	370-1228
2	.032	1/2	110	370-1232
2	.035	1/2	110	370-1235
2	.040	1/2	110	370-1240
2	.045	1/2	110	370-1245
2	.051	1/2	110	370-1251
2	.057	1/2	110	370-1257
2-1/4	.010	1/2	210	370-1310
2-1/4	.012	1/2	210	370-1312
2-1/2	.010	1/2	240	370-1410
2-1/2	.012	1/2	240	370-1412
2-1/2	.014	1/2	190	370-1414
2-1/2	.016	1/2	190	370-1416
2-1/2	.018	1/2	190	370-1418
2-1/2	.020	1/2	190	370-1420
2-1/2	.023	1/2	190	370-1423
2-1/2	.025	1/2	190	370-1425
2-1/2	.028	1/2	190	370-1428
2-1/2	.032	1/2	140	370-1432
2-1/2	.035	1/2	140	370-1435
2-1/2	.040	1/2	140	370-1440
2-1/2	.045	1/2	140	370-1445
2-1/2	.051	1/2	140	370-1451
2-1/2	.057	1/2	140	370-1457
3	.010	1/2	280	370-1610
3	.012	1/2	280	370-1612
3	.014	1/2	230	370-1614
3	.016	1/2	230	370-1616
3	.018	1/2	230	370-1618
3	.020	1/2	230	370-1620
3	.023	1/2	230	370-1623
3	.025	1/2	230	370-1625
3	.028	1/2	230	370-1628
3	.032	1/2	168	370-1632
3	.035	1/2	168	370-1635
3	.040	1/2	168	370-1640
3	.045	1/2	168	370-1645
3	.051	1/2	168	370-1651
3	.057	1/2	168	370-1657
3	.010	1	280	370-1710
3	.012	1	280	370-1712
3	.014	1	230	370-1714
3	.016	1	230	370-1716
3	.018	1	230	370-1718
3	.020	1	230	370-1720
3	.023	1	230	370-1723
3	.025	1	230	370-1725
3	.028	1	230	370-1728

Dia.	Thickness	Hole	No. of Teeth	Order No.
3"	.032"	1"	168	370-1732
3	.035	1	168	370-1735
3	.040	1	168	370-1740
3	.045	1	168	370-1745
3	.051	1	168	370-1751
4	.057	1	168	370-1757
4	.016	1/2	310	370-1816
4	.018	1/2	310	370-1818
4	.020	1/2	310	370-1820
4	.023	1/2	310	370-1823
4	.025	1/2	310	370-1825
4	.028	1/2	310	370-1828
4	.032	1/2	220	370-1832
4	.035	1/2	220	370-1835
4	.040	1/2	220	370-1840
4	.045	1/2	220	370-1845
4	.051	1/2	220	370-1851
4	.057	1/2	220	370-1857
4	.064	1/2	220	370-1864
4	.016	1	310	370-1916
4	.018	1	310	370-1918
4	.020	1	310	370-1920
4	.023	1	310	370-1923
4	.025	1	310	370-1925
4	.028	1	310	370-1928
4	.032	1	220	370-1932
4	.035	1	220	370-1935
4	.040	1	220	370-1940
4	.045	1	220	370-1945
4	.051	1	220	370-1951
4	.057	1	220	370-1957
4	.064	1	220	370-1964
5	.018	1/2	380	370-2118
5	.025	1/2	380	370-2125
5	.028	1/2	280	370-2128
5	.032	1/2	280	370-2132
5	.035	1/2	280	370-2135
5	.040	1/2	280	370-2140
5	.045	1/2	280	370-2145
5	.051	1/2	280	370-2151
5	.057	1/2	280	370-2157
5	.064	1/2	280	370-2164
5	.025	1	380	370-2225
5	.028	1	280	370-2228
5	.032	1	280	370-2232
5	.035	1	280	370-2235
5	.040	1	280	370-2240
5	.045	1	280	370-2245
5	.051	1	280	370-2251
5	.057	1	280	370-2257
5	.064	1	280	370-2264
6	.035	1/2	340	370-2435
6	.040	1/2	340	370-2440
6	.045	1/2	340	370-2445
6	.051	1/2	232	370-2451
6	.057	1/2	232	370-2457
6	.064	1/2	232	370-2464
6	.035	1	340	370-2535
6	.040	1	340	370-2540
6	.045	1	340	370-2545
6	.051	1	232	370-2551
6	.057	1	232	370-2557
6	.064	1	232	370-2564
6	.072	1	232	370-2572
6	.081	1	232	370-2581
6	.091	1	232	370-2591
6	.102	1	232	370-2602
6	.114	1	232	370-2614
6	.128	1	232	370-2628

Metric Plain Metal Slotting Saws 公制锯片铣刀

DIN 1837 A

High Speed Steel

- For general purpose slotting and cut-off operations.
- The number of teeth given is the standard number which is supplied for general purpose work.



Cutter Dia	Arbor Dia	Width of Face	No. of Teeth	Order No.
20mm	5	0.2	80	373-1201
20mm	5	0.25	64	373-1202
20mm	5	0.3	64	373-1203
20mm	5	0.4	64	373-1204
20mm	5	0.5	48	373-1205
20mm	5	0.6	48	373-1206
20mm	5	0.8	48	373-1208
20mm	5	1.0	40	373-1210
20mm	5	1.2	40	373-1212
20mm	5	1.6	40	373-1216
20mm	5	2.0	32	373-1220
20mm	5	2.5	32	373-1225
20mm	5	3.0	32	373-1230
20mm	5	4.0	24	373-1240
20mm	5	5.0	24	373-1250
20mm	5	6.0	24	373-1260
25mm	8	0.2	80	373-1301
25mm	8	0.25	80	373-1302
25mm	8	0.3	80	373-1303
25mm	8	0.4	64	373-1304
25mm	8	0.5	64	373-1305
25mm	8	0.6	64	373-1306
25mm	8	0.8	48	373-1308
25mm	8	1.0	48	373-1310
25mm	8	1.2	48	373-1312
25mm	8	1.6	40	373-1316
25mm	8	2.0	40	373-1320
25mm	8	2.5	40	373-1325
25mm	8	3.0	32	373-1330
25mm	8	4.0	32	373-1340
25mm	8	5.0	32	373-1350
25mm	8	6.0	24	373-1360
32mm	8	0.2	100	373-1401
32mm	8	0.25	100	373-1402
32mm	8	0.3	80	373-1403
32mm	8	0.4	80	373-1404
32mm	8	0.5	80	373-1405
32mm	8	0.6	64	373-1406
32mm	8	0.8	64	373-1408
32mm	8	1.0	64	373-1410
32mm	8	1.2	48	373-1412
32mm	8	1.6	48	373-1416
32mm	8	2.0	48	373-1420
32mm	8	2.5	40	373-1425
32mm	8	3.0	40	373-1430
32mm	8	4.0	40	373-1440
32mm	8	5.0	32	373-1450
32mm	8	6.0	32	373-1460
40mm	10	0.2	128	373-1501
40mm	10	0.25	100	373-1502
40mm	10	0.3	100	373-1503
40mm	10	0.4	100	373-1504
40mm	10	0.5	80	373-1505
40mm	10	0.6	80	373-1506
40mm	10	0.8	80	373-1508
40mm	10	1.0	64	373-1510
40mm	10	1.2	64	373-1512
40mm	10	1.6	64	373-1516
40mm	10	2.0	48	373-1520
40mm	10	2.5	48	373-1525
40mm	10	3.0	48	373-1530
40mm	10	4.0	40	373-1540
40mm	10	5.0	40	373-1550
40mm	10	6.0	40	373-1560
50mm	13	0.2	128	373-1601

Cutter Dia	Arbor Dia	Width Of Face	No. of Teeth	Order No.
50mm	13	0.25	128	373-1602
50mm	13	0.3	128	373-1603
50mm	13	0.4	100	373-1604
50mm	13	0.5	100	373-1605
50mm	13	0.6	100	373-1606
50mm	13	0.8	80	373-1608
50mm	13	1.0	80	373-1610
50mm	13	1.2	80	373-1612
50mm	13	1.6	64	373-1616
50mm	13	2.0	64	373-1620
50mm	13	2.5	64	373-1625
50mm	13	3.0	48	373-1630
50mm	13	4.0	48	373-1640
50mm	13	5.0	48	373-1650
50mm	13	6.0	40	373-1660
63mm	16	0.25	160	373-1702
63mm	16	0.3	128	373-1703
63mm	16	0.4	128	373-1704
63mm	16	0.5	128	373-1705
63mm	16	0.6	100	373-1706
63mm	16	0.8	100	373-1708
63mm	16	1.0	100	373-1710
63mm	16	1.2	80	373-1712
63mm	16	1.6	80	373-1716
63mm	16	1.7	80	373-1717
63mm	16	2.0	80	373-1720
63mm	16	2.5	64	373-1725
63mm	16	3.0	64	373-1730
63mm	16	4.0	64	373-1740
63mm	16	5.0	48	373-1750
63mm	16	6.0	48	373-1760
80mm	22	0.3	160	373-1803
80mm	22	0.4	160	373-1804
80mm	22	0.5	128	373-1805
80mm	22	0.6	128	373-1806
80mm	22	0.8	128	373-1808
80mm	22	1.0	100	373-1810
80mm	22	1.2	100	373-1812
80mm	22	1.6	100	373-1816
80mm	22	2.0	80	373-1820
80mm	22	2.5	80	373-1825
80mm	22	3.0	80	373-1830
80mm	22	4.0	64	373-1840
80mm	22	5.0	64	373-1850
80mm	22	6.0	64	373-1860
80mm	27	0.5	128	373-1905
80mm	27	0.6	128	373-1906
80mm	27	0.8	128	373-1908
80mm	27	1.0	100	373-1910
80mm	27	1.2	100	373-1912
80mm	27	1.6	100	373-1916
80mm	27	2.0	80	373-1920
80mm	27	2.5	80	373-1925
80mm	27	3.0	80	373-1930
80mm	27	4.0	64	373-1940
100mm	22	0.5	160	373-2005
100mm	22	0.6	160	373-2006
100mm	22	0.8	128	373-2008
100mm	22	1.0	128	373-2010
100mm	22	1.2	128	373-2012
100mm	22	1.6	100	373-2016
100mm	22	2.0	100	373-2020
100mm	22	2.5	100	373-2025
100mm	22	3.0	80	373-2030

Cutter Dia	Arbor Dia	Width Of Face	No. of Teeth	Order No.
100mm	22	4.0	80	373-2040
100mm	22	5.0	80	373-2050
100mm	22	6.0	64	373-2060
100mm	27	0.5	160	373-2105
100mm	27	0.6	160	373-2106
100mm	27	0.8	128	373-2108
100mm	27	1.0	128	373-2110
100mm	27	1.2	128	373-2112
100mm	27	1.6	100	373-2116
100mm	27	2.0	100	373-2120
100mm	27	2.5	100	373-2125
100mm	27	3.0	80	373-2130
100mm	27	4.0	80	373-2140
100mm	27	5.0	80	373-2150
125mm	22	0.6	160	373-2206
125mm	22	0.8	160	373-2208
125mm	22	1.0	160	373-2210
125mm	22	1.2	128	373-2212
125mm	22	1.6	128	373-2216
125mm	22	2.0	128	373-2220
125mm	22	2.5	100	373-2225
125mm	22	3.0	100	373-2230
125mm	22	4.0	100	373-2240
125mm	22	5.0	80	373-2250
125mm	22	6.0	80	373-2260
125mm	27	0.8	80	373-2308
125mm	27	1.0	80	373-2310
125mm	27	1.2	64	373-2312
125mm	27	1.6	64	373-2316
125mm	27	2.0	64	373-2320
125mm	27	2.5	48	373-2325
125mm	27	3.0	48	373-2330
125mm	27	4.0	48	373-2340
125mm	27	5.0	40	373-2350
160mm	32	1.0	160	373-2410
160mm	32	1.2	160	373-2412
160mm	32	1.6	160	373-2416
160mm	32	2.0	128	373-2420
160mm	32	2.5	128	373-2425
160mm	32	3.0	128	373-2430
160mm	32	4.0	100	373-2440
160mm	32	5.0	100	373-2450
160mm	32	6.0	100	373-2460
200mm	32	1.0	200	373-2510
200mm	32	1.2	200	373-2512
200mm	32	1.6	160	373-2516
200mm	32	2.0	160	373-2520
200mm	32	2.5	160	373-2525
200mm	32	3.0	128	373-2530
200mm	32	4.0	128	373-2540
200mm	32	5.0	128	373-2550
200mm	32	6.0	100	373-2560
250mm	32	1.6	200	373-2616
250mm	32	2.0	200	373-2620
250mm	32	2.5	160	373-2625
250mm	32	3.0	160	373-2630
250mm	32	4.0	160	373-2640
250mm	32	5.0	128	373-2650
250mm	32	6.0	128	373-2660
315mm	40	2.0	200	373-2720
315mm	40	3.0	200	373-2730
315mm	40	4.0	160	373-2740
315mm	40	5.0	160	373-2750
315mm	40	6.0	160	373-2760

Metric Plain Metal Slotting Saws

DIN 1838B

公制锯片铣刀

High Speed Steel

- For general purpose slotting and cut-off operations.
- The number of teeth given is the standard number which is supplied for general purpose work.



Cutter Dia.	Arbor Dia.	Face Width	No. of Teeth	Order No.	Cutter Dia.	Arbor Dia.	Face Width	No. of Teeth	Order No.
50mm	13	0.3	48	373-0003	100	22	6.0	32	373-0460
50mm	13	0.4	48	373-0004	100	27	0.8	64	373-0508
50mm	13	0.5	48	373-0005	100	27	1.0	64	373-0510
50mm	13	0.6	48	373-0006	100	27	1.2	64	373-0512
50mm	13	0.8	40	373-0008	100	27	1.6	48	373-0516
50mm	13	1.0	40	373-0010	100	27	2.0	48	373-0520
50mm	13	1.2	40	373-0012	100	27	2.5	48	373-0525
50mm	13	1.6	32	373-0016	100	27	3.0	40	373-0530
50mm	13	2.0	32	373-0020	100	27	4.0	40	373-0540
50mm	13	2.5	32	373-0025	100	27	5.0	40	373-0550
50mm	13	3.0	24	373-0030	125	22	0.8	80	373-0608
50mm	13	4.0	24	373-0040	125	22	1.0	80	373-0610
50mm	13	5.0	24	373-0050	125	22	1.2	64	373-0612
50mm	13	6.0	20	373-0060	125	22	1.6	64	373-0616
63mm	16	0.5	64	373-0105	125	22	2.0	64	373-0620
63mm	16	0.6	48	373-0106	125	22	2.5	48	373-0625
63mm	16	0.8	48	373-0108	125	22	3.0	48	373-0630
63mm	16	1.0	48	373-0110	125	22	4.0	48	373-0640
63mm	16	1.2	40	373-0112	125	22	5.0	40	373-0650
63mm	16	1.6	40	373-0116	125	22	6.0	40	373-0660
63mm	16	1.7	40	373-0117	125	27	0.8	80	373-0708
63mm	16	2.0	40	373-0120	125	27	1.0	80	373-0710
63mm	16	2.5	32	373-0125	125	27	1.2	64	373-0712
63mm	16	3.0	32	373-0130	125	27	1.6	64	373-0716
63mm	16	4.0	32	373-0140	125	27	2.0	64	373-0720
63mm	16	5.0	24	373-0150	125	27	2.5	48	373-0725
63mm	16	6.0	24	373-0160	125	27	3.0	48	373-0730
80mm	22	0.5	64	373-0205	125	27	4.0	48	373-0740
80mm	22	0.6	64	373-0206	125	27	5.0	40	373-0750
80mm	22	0.8	64	373-0208	160	32	1.0	80	373-0810
80mm	22	1.0	48	373-0210	160	32	1.2	80	373-0812
80mm	22	1.2	48	373-0212	160	32	1.6	80	373-0816
80mm	22	1.6	48	373-0216	160	32	2.0	64	373-0820
80mm	22	2.0	40	373-0220	160	32	2.5	64	373-0825
80mm	22	2.5	40	373-0225	160	32	3.0	64	373-0830
80mm	22	3.0	40	373-0230	160	32	4.0	48	373-0840
80mm	22	4.0	32	373-0240	160	32	5.0	48	373-0850
80mm	22	5.0	32	373-0250	160	32	6.0	48	373-0860
80mm	22	6.0	32	373-0260	200	32	1.2	100	373-0912
80mm	27	0.6	64	373-0306	200	32	1.6	80	373-0916
80mm	27	0.8	64	373-0308	200	32	2.0	80	373-0920
80mm	27	1.0	48	373-0310	200	32	2.5	80	373-0925
80mm	27	1.2	48	373-0312	200	32	3.0	64	373-0930
80mm	27	1.6	48	373-0316	200	32	4.0	64	373-0940
80mm	27	2.0	40	373-0320	200	32	5.0	64	373-0950
80mm	27	2.5	40	373-0325	200	32	6.0	48	373-0960
80mm	27	3.0	40	373-0330	250	32	1.6	100	373-1016
80mm	27	4.0	32	373-0340	250	32	2.0	100	373-1020
100mm	22	0.6	80	373-0406	250	32	2.5	80	373-1025
100mm	22	0.8	64	373-0408	250	32	3.0	80	373-1030
100mm	22	1.0	64	373-0410	250	32	4.0	80	373-1040
100mm	22	1.2	64	373-0412	250	32	5.0	64	373-1050
100mm	22	1.6	48	373-0416	250	32	6.0	64	373-1060
100mm	22	2.0	48	373-0420	315	40	2.5	100	373-1125
100mm	22	2.5	48	373-0425	315	40	3.0	100	373-1130
100mm	22	3.0	40	373-0430	315	40	4.0	80	373-1140
100mm	22	4.0	40	373-0440	315	40	5.0	80	373-1150
100mm	22	5.0	40	373-0450	315	40	6.0	80	373-1160

Bi-metal Hole Saw Kits 双金属孔锯

Designed for professional trades



Pieces	Specification	Order No.
7pcs	3/4, 7/8, 1, 1-3/8, 1-1/2", drill 1/4", Arbor	402-0295
12pcs	3/4, 7/8, 1-1/8, 1-3/8, 1-1/2, 1-3/4, 2, 2-1/4, 2-1/2", drill 1/4", 2pcs Arbor	402-0296
15pcs	3/4, 7/8, 1, 1-1/8, 1-3/8, 1-1/2, 1-3/4, 2, 2-1/4, 2-1/2, 3", drill 1/4", 2pcs Arbor	402-0297

Bi-metal Hole Saws 双金属孔锯

Patented tooth design. Results in sharp teeth, fast cutting and long blade life in a wide variety of applications, ranging from wood to stainless steel.



Saw Dia. (In/mm)	Order No.	M42 Order No.	Saw Dia. (In/mm)	Order No.	M42 Order No.
9/16(14)	402-0302	402-0402	2-1/4(57)	402-0352	402-0452
5/8(16)	402-0304	402-0404	2-5/16(59)	402-0354	402-0454
11/16(17)	402-0306	402-0406	2-3/8(60)	402-0356	402-0456
3/4(19)	402-0308	402-0408	2-1/2(64)	402-0358	402-0458
25/32(20)	402-0309	402-0409	2-9/16(65)	402-0360	402-0460
13/16(21)	402-0310	402-0410	2-5/8(67)	402-0362	402-0462
7/8(22)	402-0312	402-0412	2-11/16(68)	402-0364	402-0464
15/16(24)	402-0314	402-0414	2-3/4(70)	402-0366	402-0466
1(25)	402-0316	402-0416	2-7/8(73)	402-0368	402-0468
1-1/16(27)	402-0318	402-0418	3(76)	402-0370	402-0470
1-1/8(28)	402-0320	402-0420	3-1/8(79)	402-0372	402-0472
1-9/64(29)	402-0321	402-0421	3-1/4(83)	402-0374	402-0474
1-3/16(30)	402-0322	402-0422	3-3/8(86)	402-0376	402-0476
1-1/4(32)	402-0324	402-0424	3-1/2(89)	402-0378	402-0478
1-5/16(33)	402-0326	402-0426	3-5/8(92)	402-0380	402-0480
1-3/8(35)	402-0328	402-0428	3-3/4(95)	402-0382	402-0482
1-7/16(37)	402-0330	402-0430	3-7/8(98)	402-0384	402-0484
1-1/2(38)	402-0332	402-0432	4(102)	402-0386	402-0486
1-9/16(40)	402-0334	402-0434	4-1/8(105)	402-0388	402-0488
1-5/8(41)	402-0336	402-0436	4-1/4(108)	402-0390	402-0490
1-11/16(43)	402-0338	402-0438	4-3/8(111)	402-0391	402-0491
1-3/4(44)	402-0340	402-0440	4-1/2(114)	402-0392	402-0492
1-13/16(46)	402-0342	402-0442	4-3/4(121)	402-0394	402-0494
1-7/8(48)	402-0344	402-0444	5(127)	402-0395	402-0495
2(51)	402-0346	402-0446	5-1/2(140)	402-0396	402-0496
2-1/16(52)	402-0348	402-0448	6(152)	402-0398	402-0498
2-1/8(54)	402-0350	402-0450			

Annular Cutters 钢板钻

- Cut clean, burr free periphery holes
- Pilot pin eject the center as a plug of steel
- Suitable for drilling in hard-cutting materials



Size	Shank Diameter	M35			M2		
		1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.	1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.
7/16"	3/4"	402-1028	402-1328	402-1628	402-2028	402-2328	402-2628
1/2"	3/4"	402-1032	402-1332	402-1632	402-2032	402-2332	402-2632
9/16"	3/4"	402-1036	402-1336	402-1636	402-2036	402-2336	402-2636
19/32"	3/4"	402-1038	402-1338	402-1638	402-2038	402-2338	402-2638
5/8"	3/4"	402-1040	402-1340	402-1640	402-2040	402-2340	402-2640
11/16"	3/4"	402-1044	402-1344	402-1644	402-2044	402-2344	402-2644
23/32"	3/4"	402-1046	402-1346	402-1646	402-2046	402-2346	402-2646
3/4"	3/4"	402-1048	402-1348	402-1648	402-2048	402-2348	402-2648
25/32"	3/4"	402-1050	402-1350	402-1650	402-2050	402-2350	402-2650
13/16"	3/4"	402-1052	402-1352	402-1652	402-2052	402-2352	402-2652
7/8"	3/4"	402-1056	402-1356	402-1656	402-2056	402-2356	402-2656
29/32"	3/4"	402-1058	402-1358	402-1658	402-2058	402-2358	402-2658
15/16"	3/4"	402-1060	402-1360	402-1660	402-2060	402-2360	402-2660
1"	3/4"	402-1064	402-1364	402-1664	402-2064	402-2364	402-2664
1-1/32"	3/4"	402-1102	402-1402	402-1702	402-2102	402-2402	402-2702
1-1/16"	3/4"	402-1104	402-1404	402-1704	402-2104	402-2404	402-2704
1-3/32"	3/4"	402-1106	402-1406	402-1706	402-2106	402-2406	402-2706
1-1/8"	3/4"	402-1108	402-1408	402-1708	402-2108	402-2408	402-2708
1-3/16"	3/4"	402-1112	402-1412	402-1712	402-2112	402-2412	402-2712
1-7/32"	3/4"	402-1114	402-1414	402-1714	402-2114	402-2414	402-2714
1-1/4"	3/4"	402-1116	402-1416	402-1716	402-2116	402-2416	402-2716
1-9/32"	3/4"	402-1118	402-1418	402-1718	402-2118	402-2418	402-2718
1-5/16"	3/4"	402-1120	402-1420	402-1720	402-2120	402-2420	402-2720
1-3/8"	3/4"	402-1124	402-1424	402-1724	402-2124	402-2424	402-2724
1-13/32"	3/4"	402-1126	402-1426	402-1726	402-2126	402-2426	402-2726
1-7/16"	3/4"	402-1128	402-1428	402-1728	402-2128	402-2428	402-2728
1-1/2"	3/4"	402-1132	402-1432	402-1732	402-2132	402-2432	402-2732
1-17/32"	3/4"	402-1134	402-1434	402-1734	402-2134	402-2434	402-2734
1-9/16"	3/4"	402-1136	402-1436	402-1736	402-2136	402-2436	402-2736
1-5/8"	3/4"	402-1140	402-1440	402-1740	402-2140	402-2440	402-2740
1-21/32"	3/4"	402-1142	402-1442	402-1742	402-2142	402-2442	402-2742
1-11/16"	3/4"	402-1144	402-1444	402-1744	402-2144	402-2444	402-2744
1-23/32"	3/4"	402-1146	402-1446	402-1746	402-2146	402-2446	402-2746
1-3/4"	3/4"	402-1148	402-1448	402-1748	402-2148	402-2448	402-2748
1-13/16"	3/4"	402-1152	402-1452	402-1752	402-2152	402-2452	402-2752
1-27/32"	3/4"	402-1154	402-1454	402-1754	402-2154	402-2454	402-2754
1-7/8"	3/4"	402-1156	402-1456	402-1756	402-2156	402-2456	402-2756
1-15/16"	3/4"	402-1160	402-1460	402-1760	402-2160	402-2460	402-2760
1-31/32"	3/4"	402-1162	402-1462	402-1762	402-2162	402-2462	402-2762
2"	3/4"	402-1164	402-1464	402-1764	402-2164	402-2464	402-2764
2-1/32"	3/4"	402-1202	402-1502	402-1802	402-2202	402-2502	402-2802
2-1/16"	3/4"	402-1204	402-1504	402-1804	402-2204	402-2504	402-2804
2-1/8"	3/4"	402-1208	402-1508	402-1808	402-2208	402-2508	402-2808
2-5/32"	3/4"	402-1210	402-1510	402-1810	402-2210	402-2510	402-2810
2-3/16"	3/4"	402-1212	402-1512	402-1812	402-2212	402-2512	402-2812
2-7/32"	3/4"	402-1214	402-1514	402-1814	402-2214	402-2514	402-2814
2-1/4"	3/4"	402-1216	402-1516	402-1816	402-2216	402-2516	402-2816
2-5/16"	3/4"	402-1220	402-1520	402-1820	402-2220	402-2520	402-2820
2-11/32"	3/4"	402-1222	402-1522	402-1822	402-2222	402-2522	402-2822

Metric Annular Cutters 公制钢板钻

- Cut clean, burr free Periphery holes
- Pilot pin eject the center as a plug of steel
- Suitable for drilling in hard-cutting materials



Size	Shank Diameter	M35			M2		
		1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.	1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.
12mm	19.05mm	402-3028	402-3328	402-3628	402-6028	402-6328	402-6628
13	19.05mm	402-3032	402-3332	402-3632	402-6032	402-6332	402-6632
14	19.05mm	402-3036	402-3336	402-3636	402-6036	402-6336	402-6636
15	19.05mm	402-3038	402-3338	402-3638	402-6038	402-6338	402-6638
16	19.05mm	402-3040	402-3340	402-3640	402-6040	402-6340	402-6640
17	19.05mm	402-3044	402-3344	402-3644	402-6044	402-6344	402-6644
18	19.05mm	402-3046	402-3346	402-3646	402-6046	402-6346	402-6646
19	19.05mm	402-3048	402-3348	402-3648	402-6048	402-6348	402-6648
20	19.05mm	402-3050	402-3350	402-3650	402-6050	402-6350	402-6650
21	19.05mm	402-3052	402-3352	402-3652	402-6052	402-6352	402-6652
22	19.05mm	402-3056	402-3356	402-3656	402-6056	402-6356	402-6656
23	19.05mm	402-3058	402-3358	402-3658	402-6058	402-6358	402-6658
24	19.05mm	402-3060	402-3360	402-3660	402-6060	402-6360	402-6660
25	19.05mm	402-3064	402-3364	402-3664	402-6064	402-6364	402-6664
26	19.05mm	402-3102	402-3402	402-3702	402-6102	402-6402	402-6702
27	19.05mm	402-3104	402-3404	402-3704	402-6104	402-6404	402-6704
28	19.05mm	402-3106	402-3406	402-3706	402-6106	402-6406	402-6706
29	19.05mm	402-3108	402-3408	402-3708	402-6108	402-6408	402-6708
30	19.05mm	402-3112	402-3412	402-3712	402-6112	402-6412	402-6712
31	19.05mm	402-3114	402-3414	402-3714	402-6114	402-6414	402-6714
32	19.05mm	402-3116	402-3416	402-3716	402-6116	402-6416	402-6716
33	19.05mm	402-3118	402-3418	402-3718	402-6118	402-6418	402-6718
34	19.05mm	402-3120	402-3420	402-3720	402-6120	402-6420	402-6720
35	19.05mm	402-3124	402-3424	402-3724	402-6124	402-6424	402-6724
36	19.05mm	402-3126	402-3426	402-3726	402-6126	402-6426	402-6726
37	19.05mm	402-3128	402-3428	402-3728	402-6128	402-6428	402-6728
38	19.05mm	402-3132	402-3432	402-3732	402-6132	402-6432	402-6732
39	19.05mm	402-3134	402-3434	402-3734	402-6134	402-6434	402-6734
40	19.05mm	402-3136	402-3436	402-3736	402-6136	402-6436	402-6736
41	19.05mm	402-3140	402-3440	402-3740	402-6140	402-6440	402-6740
42	19.05mm	402-3142	402-3442	402-3742	402-6142	402-6442	402-6742
43	19.05mm	402-3144	402-3444	402-3744	402-6144	402-6444	402-6744
44	19.05mm	402-3146	402-3446	402-3746	402-6146	402-6446	402-6746
45	19.05mm	402-3148	402-3448	402-3748	402-6148	402-6448	402-6748
46	19.05mm	402-3152	402-3452	402-3752	402-6152	402-6452	402-6752
47	19.05mm	402-3154	402-3454	402-3754	402-6154	402-6454	402-6754
48	19.05mm	402-3156	402-3456	402-3756	402-6156	402-6456	402-6756
49	19.05mm	402-3160	402-3460	402-3760	402-6160	402-6460	402-6760
50	19.05mm	402-3162	402-3462	402-3762	402-6162	402-6462	402-6762
51	19.05mm	402-3164	402-3464	402-3764	402-6164	402-6464	402-6764
52	19.05mm	402-3202	402-3502	402-3802	402-6202	402-6502	402-6802
53	19.05mm	402-3204	402-3504	402-3804	402-6204	402-6504	402-6804
54	19.05mm	402-3208	402-3508	402-3808	402-6208	402-6508	402-6808
55	19.05mm	402-3210	402-3510	402-3810	402-6210	402-6510	402-6810
56	19.05mm	402-3212	402-3512	402-3812	402-6212	402-6512	402-6812
57	19.05mm	402-3214	402-3514	402-3814	402-6214	402-6514	402-6814
58	19.05mm	402-3216	402-3516	402-3816	402-6216	402-6516	402-6816
59	19.05mm	402-3220	402-3520	402-3820	402-6220	402-6520	402-6820
60	19.05mm	402-3222	402-3522	402-3822	402-6222	402-6522	402-6822

Carbide Tip Annular Cutters

硬质合金头钢板钻

- Cut clean, burr free Periphery holes
- Pilot pin eject the center as a plug of steel
- Suitable for drilling in hard-cutting materials

Shank Diameter: Metric 19.05mm/Inch 3/4".



Inch 3/4" Shank Dia.				Metric 19.05mm Shank Dia.			
Size	1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.	Size	1" Depth of Cut Order No.	2" Depth of Cut Order No.	3" Depth of Cut Order No.
7/16"	402-9028	402-9328	402-9628	12mm	402-5028	402-5328	402-5628
1/2"	402-9032	402-9332	402-9632	13	402-5032	402-5332	402-5632
9/16"	402-9036	402-9336	402-9636	14	402-5036	402-5336	402-5636
19/32"	402-9038	402-9338	402-9638	15	402-5038	402-5338	402-5638
5/8"	402-9040	402-9340	402-9640	16	402-5040	402-5340	402-5640
11/16"	402-9044	402-9344	402-9644	17	402-5044	402-5344	402-5644
23/32"	402-9046	402-9346	402-9646	18	402-5046	402-5346	402-5646
3/4"	402-9048	402-9348	402-9648	19	402-5048	402-5348	402-5648
25/32"	402-9050	402-9350	402-9650	20	402-5050	402-5350	402-5650
13/16"	402-9052	402-9352	402-9652	21	402-5052	402-5352	402-5652
7/8"	402-9056	402-9356	402-9656	22	402-5056	402-5356	402-5656
29/32"	402-9058	402-9358	402-9658	23	402-5058	402-5358	402-5658
15/16"	402-9060	402-9360	402-9660	24	402-5060	402-5360	402-5660
1"	402-9064	402-9364	402-9664	25	402-5064	402-5364	402-5664
1-1/32"	402-9102	402-9402	402-9702	26	402-5102	402-5402	402-5702
1-1/16"	402-9104	402-9404	402-9704	27	402-5104	402-5404	402-5704
1-3/32"	402-9106	402-9406	402-9706	28	402-5106	402-5406	402-5706
1-1/8"	402-9108	402-9408	402-9708	29	402-5108	402-5408	402-5708
1-3/16"	402-9112	402-9412	402-9712	30	402-5112	402-5412	402-5712
1-7/32"	402-9114	402-9414	402-9714	31	402-5114	402-5414	402-5714
1-1/4"	402-9116	402-9416	402-9716	32	402-5116	402-5416	402-5716
1-9/32"	402-9118	402-9418	402-9718	33	402-5118	402-5418	402-5718
1-5/16"	402-9120	402-9420	402-9720	34	402-5120	402-5420	402-5720
1-3/8"	402-9124	402-9424	402-9724	35	402-5124	402-5424	402-5724
1-13/32"	402-9126	402-9426	402-9726	36	402-5126	402-5426	402-5726
1-7/16"	402-9128	402-9428	402-9728	37	402-5128	402-5428	402-5728
1-1/2"	402-9132	402-9432	402-9732	38	402-5132	402-5432	402-5732
1-17/32"	402-9134	402-9434	402-9734	39	402-5134	402-5434	402-5734
1-9/16"	402-9136	402-9436	402-9736	40	402-5136	402-5436	402-5736
1-5/8"	402-9140	402-9440	402-9740	41	402-5140	402-5440	402-5740
1-21/32"	402-9142	402-9442	402-9742	42	402-5142	402-5442	402-5742
1-11/16"	402-9144	402-9444	402-9744	43	402-5144	402-5444	402-5744
1-23/32"	402-9146	402-9446	402-9746	44	402-5146	402-5446	402-5746
1-3/4"	402-9148	402-9448	402-9748	45	402-5148	402-5448	402-5748
1-13/16"	402-9152	402-9452	402-9752	46	402-5152	402-5452	402-5752
1-27/32"	402-9154	402-9454	402-9754	47	402-5154	402-5454	402-5754
1-7/8"	402-9156	402-9456	402-9756	48	402-5156	402-5456	402-5756
1-15/16"	402-9160	402-9460	402-9760	49	402-5160	402-5460	402-5760
1-31/32"	402-9162	402-9462	402-9762	50	402-5162	402-5462	402-5762
2"	402-9164	402-9464	402-9764	51	402-5164	402-5464	402-5764
2-1/32"	402-9202	402-9502	402-9802	52	402-5202	402-5502	402-5802
2-1/16"	402-9204	402-9504	402-9804	53	402-5204	402-5504	402-5804
2-1/8"	402-9208	402-9508	402-9808	54	402-5208	402-5508	402-5808
2-5/32"	402-9210	402-9510	402-9810	55	402-5210	402-5510	402-5810
2-3/16"	402-9212	402-9512	402-9812	56	402-5212	402-5512	402-5812
2-7/32"	402-9214	402-9514	402-9814	57	402-5214	402-5514	402-5814
2-1/4"	402-9216	402-9516	402-9816	58	402-5216	402-5516	402-5816
2-5/16"	402-9220	402-9520	402-9820	59	402-5220	402-5520	402-5820
2-11/32"	402-9222	402-9522	402-9822	60	402-9522	402-5522	402-5822

Keyway Broach Sets

套装美制高速钢键槽拉刀 (含垫片和衬套)

9pc No.00 Precision Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/16, 3/32, 1/8	A	1/4, 5/16, 3/8, 7/16, 1/2"	1	15	395-0109

18pc No.10 Standard Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/8, 3/16	B	1/2, 5/8, 3/4, 7/8"	5	18	395-0718
1/4, 3/8	C	1, 1-1/8, 1-1/4, 1-3/8, 1-1/2"			

18pc No.10A Standard Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/8, 3/16	B	9/16, 11/16, 13/16"	5	18	395-0719
1/4, 3/8	C	15/16, 1-1/16, 1-3/16, 1-5/16, 1-7/16, 1-9/16"			

27pc No.10-10A Standard Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/8	B	1/2, 9/16, 5/8, 11/16"	5	36	395-0727
3/16	B	3/4, 13/16, 7/8"			
1/4	C	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4"			
3/8	C	1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16"			

30pc No.20 Combination Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/8	B	1/2, 9/16, 5/8, 11/16"	7	47	395-0730
3/16	B	3/4, 13/16, 7/8"			
1/4	C	15/16, 1, 1-1/16, 1-1/8"			
5/16	C	1-3/16, 1-1/4, 1-5/16, 1-3/8"			
3/8	C	1-7/16, 1-1/2, 1-9/16"			

15pc No.30 Standard Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/8	B	1/2, 5/8, 3/4"	3	15	395-0717
3/16, 1/4"	C	7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2"			

22pc No.40 Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
5/16, 3/8	D	1-7/16, 1-9/16, 1-11/16, 1-13/16"	10	32	395-0322
7/16, 1/2	D	1-15/16, 2-3/16, 2-7/16, 2-15/16"			

22pc No.40A Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
5/16, 3/8	D	1-1/2, 1-5/8, 1-3/4, 1-7/8"	10	32	395-0323
7/16, 1/2	D	2, 2-1/8, 2-1/4, 2-1/2"			

17pc No.40-1/2 Heavy Duty Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
5/8	E	2-5/16, 2-7/16, 2-9/16"	9	12	395-0217
3/4	E	2-11/16, 2-13/16, 2-15/16"			

17pc No.40-1/2A Heavy Duty Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
5/8	E	2-3/8, 2-1/2, 2-5/8"	9	12	395-0218
3/4	E	2-3/4, 2-7/8, 3"			



Large Size Wooden Case

32pc No.50 Heavy Duty Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
1/2	D	2, 2-1/16, 2-1/8, 2-3/16, 2-1/4"	12	29	395-0432
5/8	E	2-5/16, 2-3/8, 2-7/16, 2-1/2, 2-9/16, 2-5/8"			
3/4	E	2-11/16, 2-3/4, 2-13/16, 2-7/8, 2-15/16, 3"			

6pc No.60 Metric Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
2mm, 3mm	A	6, 8, 10mm	1	6	395-0806

22pc No.70 Metric Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
4, 5mm	B1	12, 14, 15, 16mm	5	26	395-0822
6mm	C1	18, 19, 20, 22mm			
8mm	C1	24, 25, 26, 28, 30mm			

21pc No.80 Metric Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
10mm	D1	32, 34, 35, 36mm	6	36	395-0821
12mm	D1	38, 40, 42, 44mm			
14mm	D1	45, 46, 48, 50mm			

16pc No.90 Metric Set

Keyway Sizes	Broach Style	Plain Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
16mm	E1	52, 54, 55, 56mm	6	16	395-0816
18mm	E1	58, 60, 62, 65mm			

18pc Metric Set

Keyway Sizes	Broach Style	Collared Bushing Diameters	No. of Shim	Keyway Comb.	Order No.
4, 5mm	B1	12, 14, 16mm	5	18	395-0818
6, 8mm	C1	18, 20, 22, 24, 26, 28mm			

75pc No.100 Heavy Duty Combination Set

Keyway Sizes	Broach Style	B-C Collared/D-E Plain Bushing Dia.	No. of Shim	Keyway Comb.	Order No.
1/8"	B	1/2, 9/16, 5/8, 11/16"	22	102	395-0575
3/16	B	3/4, 13/16, 7/8"			
1/4	C	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4"			
5/16	C	1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16"			
3/8	D	1-7/16, 1-1/2, 1-9/16, 1-5/8, 1-11/16"			
7/16	D	1-3/4, 1-13/16, 1-7/8, 1-15/16, 2"			
1/2	D	2-1/16, 2-1/8, 2-3/16, 2-1/4"			
5/8	E	2-5/16, 2-3/8, 2-7/16, 2-1/2, 2-9/16, 2-5/8"			
3/4	E	2-11/16, 2-3/4, 2-13/16, 2-7/8, 2-15/16, 3"			

Keyway Broaches with Shims 高速钢键槽拉刀(含垫片)

High Speed Steel

- Specialty tools designed for cutting keyways in machined holes.
 - Well suited for use in a variety of ferrous and non-ferrous materials.
 - Hardened and ground bars with cutting teeth on one side.
 - Size and proportioned to afford a good cutting range and ample rigidity.
- Replacement shims are also available.
 - Broach is tapered, allowing teeth to cut keyway to proper depth.
 - Made to cut either inch or millimeter size keyways.
 - Bright finish.



Inch Size

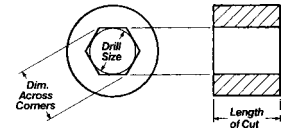
Broach Size	Type	Broach Dimensions	Shims Required	Length of Cut Min.	Length of Cut Max.	Tolerances	Order No.	TIN-Coated Order No.
1/16"	A	1/8x5"	0	13/64"	1-1/8"	.0625-.0635	395-1004	396-1004
3/32	A	1/8x5	0	13/64	1-1/8	.0938-.0948	395-1006	396-1006
1/8	A	1/8x5	1	13/64	1-1/8	.1252-.1262	395-1008	396-1008
3/32	B	3/16x6-3/4	0	19/64	1-11/16	.0937-.0947	395-1106	396-1106
1/8	B	3/16x6-3/4	1	19/64	1-11/16	.1252-.1262	395-1108	396-1108
5/32	B	3/16x6-3/4	1	19/64	1-11/16	.1564-.1574	395-1110	396-1110
3/16	B	3/16x6-3/4	1	19/64	1-11/16	.1877-.1887	395-1112	396-1112
3/16	C	3/8x11-3/4	1	25/64	2-1/2	.1877-.1887	395-1212	396-1212
1/4	C	3/8x11-3/4	1	25/64	2-1/2	.2502-.2512	395-1216	396-1216
5/16	C	3/8x11-3/4	2	25/64	2-1/2	.3127-.3137	395-1220	396-1220
3/8	C	3/8x11-3/4	2	25/64	2-1/2	.3755-.3765	395-1224	396-1224
5/16	D	9/16x13-7/8	2	1	6	.3127-.3137	395-1324	396-1324
3/8	D	9/16x13-7/8	2	1	6	.3755-.3765	395-1328	396-1328
7/16	D	9/16x13-7/8	3	1	6	.4380-.4390	395-1332	396-1332
1/2	D	9/16x13-7/8	3	1	6	.5006-.5016	395-1336	396-1336
5/8	E	3/4x15-1/2	4	1	6	.6260-.6270	395-1440	396-1440
3/4	E	3/4x15-1/2	5	1	6	.7515-.7525	395-1448	396-1448
7/8	F	1x20-1/4	6	1	6	.8765-.8775	395-1556	396-1556
1	F	1x20-1/4	7	1	6	1.0015-1.0025	395-1564	396-1564
1-1/8		1-1/8x20-1/4	8	1	6	1.1265-1.1275	395-1570	396-1570
1-1/4		1-1/4x20-1/4	9	1-1/2	8	1.2520-1.2530	395-1572	396-1572
1-3/8		1-3/8x20-1/4	10	1-1/2	8	1.3770-1.3780	395-1574	396-1574
1-1/2		1-1/2x20-1/4	11	1-1/2	8	1.5020-1.5030	395-1576	396-1576

Metric Size

Size	S.Keys	Piece of Shim	Dimension	Tooth Pitch	Teeth	Length of Cut Min.	Length of cut Max.	Tolerance	Order No.	TIN-Coated Order No.
2mm-A	2x2		1/8x5"	3/16"	18	13/64"	1-1/8"	.0782-.0791	395-2006	396-2006
3mm-A	3x3	1	1/8x5	3/16	18	13/64	1-1/8	.1176-.1185	395-2008	396-2008
4mm-B-1	4x4	1	1/4x6-3/4	9/32	16	19/64	1-11/16	.1569-.1579	395-2110	396-2110
5mm-B-1	5x5	1	1/4x6-3/4	9/32	16	19/64	1-11/16	.1963-.1972	395-2112	396-2112
5mm-C	5x5	1	3/8x11-3/4	3/8	22	25/64	2-1/2	.1963-.1972	395-2212	396-2212
6mm-C-1	6x6	1	3/8x11-3/4	3/8	22	25/64	2-1/2	.2356-.2366	395-2216	396-2216
8mm-C-1	8x7	2	3/8x11-3/4	3/8	22	25/64	2-1/2	.3143-.3155	395-2220	396-2220
10mm-D-1	10x8	2	9/16x13-7/8	5/8	17	1	6	.3930-.3942	395-2224	396-2224
12mm-D-1	12x8	2	9/16x13-7/8	5/8	17	1	6	.4716-.4730	395-2324	396-2324
14mm-D-1	14x9	2	9/16x13-7/8	5/8	17	1	6	.5503-.5517	395-2328	396-2328
16mm-E-1	16x10	3	3/4x15-1/2	5/8	20	1	6	.6290-.6304	395-2332	396-2332
18mm-E-1	18x11	3	3/4x15-1/2	5/8	20	1	6	.7078-.7092	395-2336	396-2336
20mm-F-1	20x12	3	1x20-1/4	5/8	26	1	6	.7864-.7880	395-2440	396-2440
22mm-F-1	22x14	4	1x20-1/4	5/8	26	1	6	.8651-.8667	395-2448	396-2448
24mm-F	24x14	5	1x20-1/4	5/8	26	1	6	.9439-.9455	395-2556	396-2556
25mm-F-1	25x14	4	1x20-1/4	5/8	26	1	6	.9832-.9848	395-2564	396-2564

Hexagon Push Broaches 六方孔英制高速钢推刀

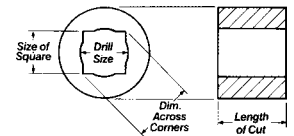
- For cutting hexagonal shaped hole in round machined holes.
- Used to re-cut a round hole into a hole having a hexagonal shape in a single pass through the workpiece.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Broach is tapered, allowing teeth to cut hole to proper depth and width.
- Bright finish.



Broach Size	Broach Length	Pilot Dia.	Drill Size	Length of Cut Min.	Length of Cut Max.	Tolerance	Order No.
1/8"	4-1/8"	1/8"	1/8"	3/16"	3/8"	.1255-.1260	395-5996
5/32	4-15/16	5/32	5/32	1/4	1/2	.1565-.1570	395-5998
3/16	5-1/16	3/16	3/16	1/4	5/8	.1880-.1890	395-6002
7/32	5-3/8	7/32	7/32	1/4	3/4	.2190-.2200	395-6004
1/4	6	1/4	1/4	1/4	3/4	.2505-.2515	395-6006
9/32	7-1/4	9/32	9/32	5/16	1	.2815-.2825	395-6008
5/16	7-3/4	5/16	5/16	3/8	1	.3130-.3140	395-6010
11/32	7-3/4	11/32	11/32	3/8	1-1/4	.3440-.3450	395-6012
3/8	8-1/2	3/8	3/8	3/8	1-1/4	.3755-.3765	395-6014
13/32	9-5/8	13/32	13/32	1/2	1-3/8	.4065-.4075	395-6016
7/16	10-5/8	7/16	7/16	1/2	1-3/8	.4385-.4395	395-6018
15/32	11-7/8	15/32	15/32	1/2	1-3/8	.4690-.4700	395-6020
1/2	11-7/8	1/2	1/2	1/2	1-3/8	.5005-.5015	395-6022
9/16	13-3/4	9/16	9/16	1/2	1-5/8	.5630-.5640	395-6024
5/8	16-1/4	5/8	5/8	5/8	2	.6260-.6270	395-6026
11/16	16-3/4	11/16	11/16	5/8	2	.6880-.6890	395-6030
3/4	17-1/4	3/4	3/4	5/8	2	.7510-.7520	395-6032
7/8	18-1/2	7/8	7/8	5/8	2	.8765-.8775	395-6034
1	19-3/4	1	1	5/8	2	1.002-1.003	395-6038

Square Push Broaches 四方孔英制高速钢推刀

- For cutting hexagonal shaped hole in round pilot holes.
- Used to re-cut a round hole into a hole having a square shape in a single pass through the workpiece.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Broach is tapered, allowing teeth to cut hole to proper depth and width.
- Bright finish.



Broach Size	Broach Length	Pilot Dia.	Drill Size	Length of Cut Min.	Length of Cut Max.	Tolerance	Order No.
1/8"	4-1/8"	.1285"	#30	3/16"	1/2"	.1250-.1260	395-4002
5/32	5-1/8	.1590	#21	1/4	1/2	.1565-.1575	395-4004
3/16	5-9/16	.1935	#10	1/4	5/8	.1880-.1890	395-4006
7/32	6-3/8	.2280	#1	1/4	3/4	.2190-.2200	395-4010
1/4	6-1/2	17/64	17/64	1/4	3/4	.2505-.2515	395-4014
9/32	7-3/4	19/64	19/64	5/16	1	.2815-.2825	395-4016
5/16	7-7/8	21/64	21/64	5/16	1	.3130-.3140	395-4018
11/32	9-3/8	23/64	23/64	3/8	1-1/4	.3440-.3450	395-4020
3/8	9-3/8	25/64	25/64	3/8	1-1/4	.3755-.3765	395-4022
13/32	10-5/8	27/64	27/64	1/2	1-3/8	.4065-.4075	395-4023
7/16	10-7/8	29/64	29/64	1/2	1-3/8	.4385-.4395	395-4024
15/32	12	1/2	1/2	1/2	1-3/8	.4690-.4700	395-4025
1/2	12	17/32	17/32	1/2	1-3/8	.5005-.5015	395-4026
9/16	14-3/4	19/32	19/32	1/2	1-1/2	.5630-.5640	395-4028
5/8	16-5/16	21/32	21/32	5/8	1-5/8	.6260-.6270	395-4030
11/16	17-3/4	3/4	3/4	5/8	1-5/8	.6885-.6895	395-4034
3/4	17-3/4	13/16	13/16	5/8	1-5/8	.7510-.7520	395-4038
7/8	22-3/4	15/16	15/16	1/2	2	.8765-.8775	395-4056
1	24-1/8	1-3/32	1-3/32	1/2	2	1.0020-1.0030	395-4064

Standard Keyway Bushings 拉刀导套

Different size bushings enable the individual keyway broaches to be used in a variety of bore sizes.

Broaches and bushings with the same letter signify same size of broache width and bushing opening, please use bushings with the same letter designated broaches,

D,E Style: Plain
A,B,C Style: Collared



Inch Bushings

Bushing Type	Diameter	Order No.	Bushing Type	Diameter	Order No.
A	1/4"	395-3102	D	1-13/16"	395-3212
A	5/16	395-3104	D	1-7/8	395-3214
A	3/8	395-3106	D	1-15/16	395-3216
A	7/16	395-3108	D	2	395-3218
A	1/2	395-3110	D	2-1/16	395-3220
B	1/2	395-3120	D	2-1/8	395-3222
B	9/16	395-3122	D	2-3/16	395-3224
B	5/8	395-3124	D	2-1/4	395-3226
B	11/16	395-3126	D	2-5/16	395-3228
B	3/4	395-3128	D	2-3/8	395-3230
B	13/16	395-3130	D	2-7/16	395-3232
B	7/8	395-3132	D	2-1/2	395-3234
C	3/4	395-3140	D	2-9/16	395-3236
C	13/16	395-3142	D	2-5/8	395-3238
C	7/8	395-3144	D	2-11/16	395-3240
C	15/16	395-3146	D	2-3/4	395-3242
C	1	395-3148	D	2-13/16	395-3244
C	1-1/16	395-3150	D	2-7/8	395-3246
C	1-1/8	395-3152	D	2-15/16	395-3248
C	1-3/16	395-3154	E	2-5/16	395-3270
C	1-1/4	395-3156	E	2-3/8	395-3272
C	1-5/16	395-3158	E	2-7/16	395-3274
C	1-3/8	395-3160	E	2-1/2	395-3276
C	1-7/16	395-3162	E	2-9/16	395-3278
C	1-1/2	395-3164	E	2-5/8	395-3280
C	1-9/16	395-3166	E	2-11/16	395-3282
D	1-7/16	395-3200	E	2-3/4	395-3284
D	1-1/2	395-3202	E	2-13/16	395-3286
D	1-9/16	395-3204	E	2-7/8	395-3288
D	1-5/8	395-3206	E	2-15/16	395-3290
D	1-11/16	395-3208	E	3	395-3292
D	1-3/4	395-3210			

Metric Bushings

Bushing Type	Diameter	Order No.	Bushing Type	Diameter	OrderNo.
A	6mm	395-3300	D	35mm	395-3404
A	8mm	395-3302	D	36mm	395-3406
A	10mm	395-3304	D	38mm	395-3408
A	12mm	395-3306	D	40mm	395-3410
A	15mm	395-3308	D	42mm	395-3412
B-1	12mm	395-3320	D	44mm	395-3414
B-1	14mm	395-3322	D	45mm	395-3416
B-1	15mm	395-3324	D	46mm	395-3418
B-1	16mm	395-3326	D	48mm	395-3420
B-1	17mm	395-3328	D	50mm	395-3422
B-1	18mm	395-3330	D	52mm	395-3424
B-1	19mm	395-3332	D	54mm	395-3426
C	18mm	395-3340	D	56mm	395-3428
C	19mm	395-3342	E	52mm	395-3470
C	20mm	395-3344	E	54mm	395-3472
C	22mm	395-3346	E	55mm	395-3474
C	24mm	395-3348	E	56mm	395-3476
C	25mm	395-3350	E	58mm	395-3478
C	26mm	395-3352	E	60mm	395-3480
C	28mm	395-3354	E	62mm	395-3482
C	30mm	395-3356	E	63mm	395-3484
C	32mm	395-3358	E	64mm	395-3486
C	34mm	395-3360	E	65mm	395-3488
C	35mm	395-3362	E	66mm	395-3490
C	36mm	395-3364	E	68mm	395-3492
D	32mm	395-3400	E	70mm	395-3494
D	34mm	395-3402	E	72mm	395-3496

Shims For Keyway Broaches 拉刀垫片



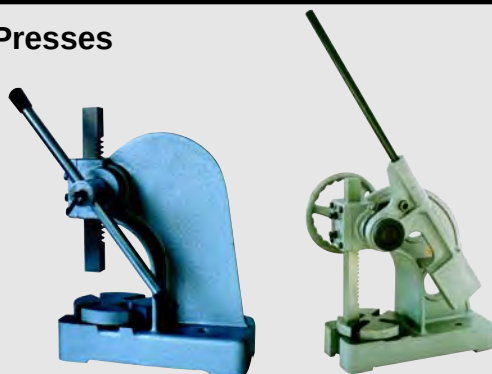
Inch & Metric

Size	Order No.
A 1/8"&A 3mm	395-4208
B 1/8"	395-4212
B 5/32"	395-4216
B-1 4mm	395-4220
B 3/16"	395-4224
B-1 5mm	395-4228
C 3/16"	395-4232
C 5mm	395-4236
C 1/4 & 3/8", C-1 6mm	395-4240
C 5/16 & C-1 8mm	395-4244
D 5/16"	395-4248
D 3/8 & 1/2", D-1 14mm	395-4252
D-1 10 & 12mm	395-4256
D 7/16"	395-4260
E 5/8, 3/4" E-1 16&18mm	395-4264
F 7/8&1" F-1 20-25mm	395-4268

For Arbor Presses Turn to Page422

Arbor Presses

压力机



Carbide Tools

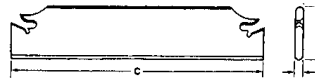
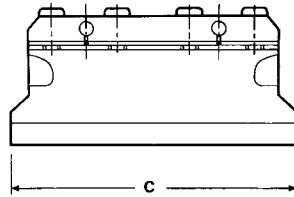
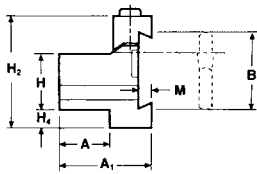
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Inch Indexable Cut-Off Tool Kits

英制套装切断刀

Individual Blade



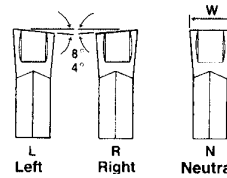
Blade Style	Blade Length	Order No.
26-3	4-5/16"	250-3103
26-4	4-5/16"	250-3104
26-5	4-5/16"	250-3105
32-3	5-7/8"	250-3113
32-4	5-7/8"	250-3114
32-5	5-7/8"	250-3115

Individual Tool Blocks

Clamping Height H	Blade Height B	Clamping Depth A	Overall Block Width A1	Overall Block Height H2	Shoulder Height H4	Blade Pocket Depth M	Block OAL C	Blade	Order No.
0.75"	1.02"	0.790"	1.45"	1.70"	.39"	.16"	3.400"	26-3,26-4,26-5	250-3003
0.75	1.25	0.790	1.50	1.94	.55	.21	3.950	32-3,32-4,32-5	250-3009
1.00	1.25	1.030	1.75	1.95	.30	.21	4.330	32-3,32-4,32-5	250-3015
1.25	1.25	1.140	1.90	2.10	.20	.21	4.330	32-3,32-4,32-5	250-3021

Individual Inserts

Insert Size w	Blade Style	C2 Order No.	C6 Order No.
0.120"	GTN-3	250-3430	250-3530
0.160"	GTN-4	250-3440	250-3540
0.200"	GTN-5	250-3450	250-3550



Cut-Off Tool Sets

Tool Block Clamping Ht x Blade Ht	Blade	Insert	C2 Order No.	C6 Order No.
1pc 0.75"x1.02"	1pc/26-3	10pcs 0.120"/GTN-3	250-3203	250-3253
1pc 0.75x1.25	1pc/32-3	10pcs 0.120"/GTN-3	250-3206	250-3256
1pc 1.00x1.25	1pc/32-3	10pcs 0.120"/GTN-3	250-3209	250-3259
1pc 1.25x1.25	1pc/32-3	10pcs 0.120"/GTN-3	250-3212	250-3262

16 Piece 3/4" Shank Cut-Off Tool Kit

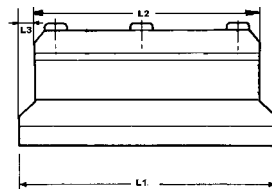
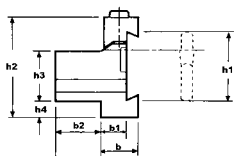
- 1pc .75x1.02" Tool Block
- 1pc 26-3 Blade
- 1pc 26-4 Blade
- 5pcs C6 0.120" GTN-3 Carbide Inserts
- 5pcs C6 0.160" GTN-4 Carbide Inserts
- 2pcs Insert Holders
- 1pc Allen Wrench

Order No. 250-3291

Metric Indexable Cut-Off Tool Kits

公制套装切断刀

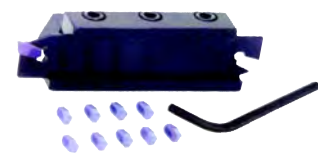
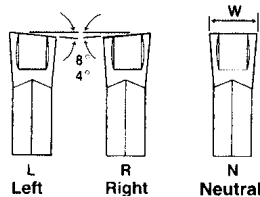
Individual Blades



Blade Style	Blade Length	Order No.
26-3	109mm	250-3153
26-4	109mm	250-3154
26-5	109mm	250-3155
32-3	149mm	250-3163
32-4	149mm	250-3164
32-5	149mm	250-3165

Individual Tool Blocks

Clamping Height h3	Blade Height h1	Overall Block Height h2	Shoulder Height h4	Shoulder Width b	Shoulder Width b1	Clamping Depth b2	Block OAL L1	Beveled Side Length L2	Top Clamping Length L3	Blade	Order No.
20mm	20	45.5	10	18	13.4	20	80	70	5	26-3,26-4,26-5	250-3053
25mm	25	52.5	10	18	13.4	20	120	110	5	26-3,26-4,26-5	250-3059
32mm	32	54.5	5	18	13.4	32	120	110	5	32-3,32-4,32-5	250-3065
32mm	32	82.5	29.7	20.4	13.4	31.6	160	150	5	32-3,32-4,32-5	250-3071



Individual Inserts

Insert Size w	Blade Style	C2 Order No.	C6 Order No.
3mm	GTN-3	250-3730	250-3830
4mm	GTN-4	250-3740	250-3840
5mm	GTN-5	250-3750	250-3850

Cut-Off Tool Sets

Tool Block Clamping Ht x Blade Ht	Blade	Insert	C2 Order No.	C6 Order No.
1pc 20x20mm	1pc 26-3	10pcs 3mm/GTN-3	250-3223	250-3273
1pc 25x25mm	1pc 26-3	10pcs 3mm/GTN-3	250-3226	250-3276
1pc 32x32mm	1pc 32-3	10pcs 3mm/GTN-3	250-3229	250-3279
1pc 32x32mm	1pc 32-3	10pcs 3mm/GTN-3	250-3232	250-3282

Indexable Countersink & Chamfering Tools

可转位铰钻

- Overall Length 2-3/8"
- Positive rake for smooth cutting without chatter.
- Uses standard inserts.



Individuals & Sets

Cutter body	Shank	Insert	60° Order No.	82° Order No.	90° Order No.
1/4 - 3/4"	1/2"	TPGH321	380-4010	380-4110	380-4210
1/2 - 1-3/4	1/2	SPGH433	380-4015	380-4115	380-4215
1-1/4 - 2-1/2	3/4	SPGH433	380-4020	380-4120	380-4220
3 Pcs/set with wooden stand			380-4000	380-4100	380-4200

Inserts & Screw

Insert	Radius	I.C.	Thickness	Order No.
TPGH321	1/64"	3/8"	1/8"	380-4310
SPGH433	3/16	1/2	1/8	380-4320
Locking Screw				380-4300

Indexable Carbide Insert End Mills

R8 Shank

硬质合金可转位立铣刀



3 Piece Set

Size including 1-3/4, 2, 2-1/2"

Order No. 242-3202

3 Piece Set

Size including 1, 1-1/4, 1-1/2"

Order No. 242-3201

Cutter Dia.	Inserts	Order No.
1"	2 inserts TP-22	242-3205
1-1/4	2 inserts TP-32	242-3210
1-3/8	3 inserts TP-32	242-3215
1-1/2	3 inserts TP-32	242-3220
1-5/8	3 inserts TP-32	242-3225
1-3/4	3 inserts TP-32	242-3230
2	3 inserts TP-43	242-3235
2-1/2	3 inserts TP-43	242-3240
3	3 inserts TP-43	242-3245

Indexable Carbide Insert End Mills

Straight Shank

硬质合金可转位立铣刀



Cutter Dia.	Insert	Shank Dia.	Order No.
3/4"	1 insert TP-21	3/4"	242-3005
7/8	2 inserts TP-21	3/4	242-3010
1	2 inserts TP-32	3/4	242-3015
1-1/4	2 inserts TP-32	3/4	242-3020
1-3/8	2 inserts TP-32	3/4	242-3025
1-1/2	3 inserts TP-32	3/4	242-3030
1-5/8	3 inserts TP-32	3/4	242-3035
1-3/4	3 inserts TP-32	3/4	242-3040
2	3 inserts TP-43	3/4	242-3045
1	2 inserts TP-22	1	242-3105
1-1/4	2 inserts TP-32	1	242-3110
1-3/8	2 inserts TP-32	1	242-3115
1-1/2	3 inserts TP-32	1	242-3120
1-5/8	3 inserts TP-32	1	242-3125
1-3/4	3 inserts TP-32	1	242-3130
2	3 inserts TP-43	1	242-3135

1/2" Shank Mini Indexable End Mills

1/2" 柄可转位立铣刀



Cutter Dia.	Overall Length	Body Length	Insert	Order No.
1/2"	3"	1"	TPG22	320-0820
9/16	3	1	TPG22	320-0825
5/8	3	1	TPG22	320-0830

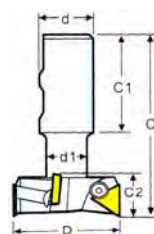
Set

No. of Pieces	Include	Order No.
3 Pcs/set	1/2", 9/16, 5/8"	320-0835

Indexable T-slot Cutter 夹可转位刀片 T 型槽铣刀 (含刀片)

Weld on shank

Bolt Size	Cutter Dia.	Cutter Width	Shank Dia.	Undercut Length	Overall Length	Tooth	Right Order No.	Left Order No.
3/4	1-15/32	5/8	1	1-1/2	4-7/16	2	298-6148	298-6248
1	1-27/32	53/64	1-1/4	1-43/64	4-13/16	4	298-6164	298-6264
1-1/4	2-7/32	1-3/32	1-1/4	1-31/32	5-3/8	4	298-6180	298-6280
1-1/2	2-21/32	1-11/32	1-1/4	2-1/8	5-29/32	4	298-6196	298-6296



NEW

Heavy-Duty Turning Toolholders

重型车刀刀夹-HSS 割刀用

NEW



Holder	Blade	Straigh Order No.	Left Order No.	Right Order No.
5/16x3/4x4-1/2	3/32x1/16x4-1/2	950-6720	950-6820	950-6920
3/8x7/8x5	3/32x5/8x5	950-6724	950-6824	950-6924
1/2x1-1/8x6	1/8x3/4x5	950-6732	950-6832	950-6932
5/8x1-3/8x7	1/8x7/8x6	950-6740	950-6840	950-6940
3/4x1-5/8x8	3/16x1x6-1/2	950-6748	950-6848	950-6948
7/8x1-3/4x9	3/16x1-1/8x7	950-6756	950-6856	950-6956

Turning Toolholders

for Standard HSS Tool Bits

车刀刀夹-白钢刀用

NEW



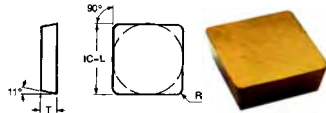
Holder	Tool Bit	Height from Bottom of Shank to Blade Pt.	Straigh Order No.	Left Order No.	Right Order No.
5/16x3/4x4-1/2	3/16	3/16	950-6120	950-6220	950-6320
3/8x7/8x5	1/4	13/16	950-6124	950-6224	950-6324
1/2x1-1/8x6	5/16	1-1/16	950-6132	950-6232	950-6332
5/8x1-3/8x7	3/8	1-1/4	950-6140	950-6240	950-6340
3/4x1-5/8x8	7/16	1-15/32	950-6148	950-6248	950-6348
7/8x1-3/4x9	1/2	1-1/2	950-6156	950-6256	950-6356
1x2x11	5/5	2	950-6164	950-6264	950-6364

Carbide Inserts

硬质合金刀片

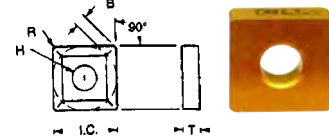
SPU

Triangle/positive. Ground top & bottom. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



SNMA

Triangle/positive. Ground top & bottom. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
322	3/8	1/8	1/32	431-1811	431-1812	431-1813*
422	1/2	1/8	1/32	431-1815	431-1816	431-1817
423	1/2	1/8	3/64	431-1821	431-1822	431-1823
633	3/4	3/16	3/64	431-1831	431-1832	431-1833
634	3/4	3/16	1/16	431-1835	431-1836	431-1837

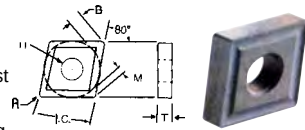
* WSL CLOSE-OUT

Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
322	3/8	1/8	1/32	431-1911	431-1912	431-1913*
432	1/2	3/16	1/32	431-1915	431-1916	431-1917
433	1/2	3/16	3/64	431-1921	431-1922	431-1923
543	5/8	1/4	3/64	431-1925	431-1926	431-1927
644	3/4	1/4	1/16	431-1931	431-1932	431-1933
866	1	3/8	3/32	431-1935	431-1936	431-1937

* WSL CLOSE-OUT

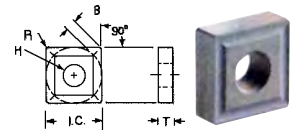
CNMG

- 80° Diamond Lapped with holes and cast chipbreaker.
- Use for turning, facing, profiling and boring.



SNMG

Square/negative. Precision ground with chip control. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating.



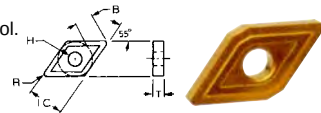
Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
431	1/2	3/16	1/32	431-1011	431-1012	431-1013
432	1/2	3/16	3/64	431-1015	431-1016	431-1017
433	1/2	3/16	1/16	431-1021	431-1022	431-1023
434				431-1024	431-1025	431-1026

Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
322	3/8	1/8	1/32	431-1211	431-1212	431-1213*
323	3/8	1/8	3/64	431-1215	431-1216	431-1217*
432	1/2	3/16	1/32	431-1221	431-1222	431-1223
433	1/2	3/16	3/64	431-1225	431-1226	431-1227
434	1/2	3/16	1/16	431-1231	431-1232	431-1233
543	5/8	1/4	3/64	431-1235	431-1236	431-1237
642	3/4	1/4	1/32	431-1241	431-1242	431-1243*
643	3/4	1/4	3/64	431-1245	431-1246	431-1247*
644	3/4	1/4	1/16	431-1251	431-1252	431-1253*
866	1	3/8	3/32	431-1255	431-1256	431-1257*

* WSL CLOSE-OUT

DNMG

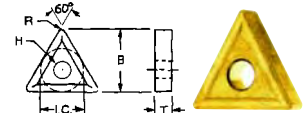
- 55° Diamond - negative with chip control.
- Use for turning, facing, profiling and boring.



Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
432	1/2	3/16	1/32	431-1031	431-1032	431-1033
442	1/2	1/4	1/32	431-1035	431-1036	431-1037
431	182	3/16	1/16	431-1041	431-4042	431-1043

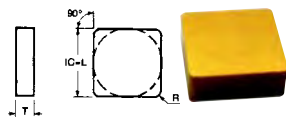
TNMG

Triangle/negative. Precision ground with chip control. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating.



SNG

Triangle/negative. Ground all over. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
321	3/8	1/8	1/64	431-1711	431-1712	431-1713*
322	3/8	1/8	1/32	431-1715	431-1716	431-1717*
323	3/8	1/8	3/64	431-1721	431-1722	431-1723*
422	1/2	1/8	1/32	431-1725	431-1726	431-1727
423	1/2	1/8	3/64	431-1731	431-1732	431-1733*
432	1/2	3/16	1/32	431-1735	431-1736	431-1737*
433	1/2	3/16	3/64	431-1741	431-1742	431-1743*
434	1/2	3/16	1/16	431-1745	431-1746	431-1747*
632	3/4	3/16	1/32	431-1751	431-1752	431-1753*
633	3/4	3/16	3/64	431-1755	431-1756	431-1757*
634	3/4	3/16	1/16	431-1761	431-1762	431-1763*

* WSL CLOSE-OUT

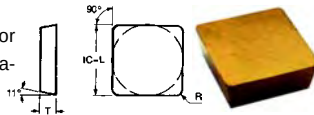
Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
222	1/4	1/8	1/32	431-1111	431-1112	431-1113
321	3/8	1/8	1/64	431-1115	431-1116	431-1117
322	3/8	1/8	1/32	431-1121	431-1122	431-1123
323	3/8	1/8	3/64	431-1125	431-1126	431-1127
324	3/8	1/8	1/16	431-1131	431-1132	431-1133
332	3/8	3/16	1/32	431-1135	431-1136	431-1137
333	3/8	3/16	3/64	431-1141	431-1142	431-1143
431	1/2	3/16	1/64	431-1145	431-1146	431-1147
432	1/2	3/16	1/32	431-1151	431-1152	431-1153
433	1/2	3/16	3/64	431-1155	431-1156	431-1157
434	1/2	3/16	1/16	431-1161	431-1162	431-1163
438	1/2	3/16	1/8	431-1165	431-1166	431-1167
542	5/8	1/4	1/32	431-1171	431-1172	431-1173
543	5/8	1/4	3/64	431-1175	431-1176	431-1177
544	5/8	1/4	1/16	431-1181	431-1182	431-1183
666	3/4	3/8	3/32	431-1185	431-1186	431-1187

Carbide Inserts

硬质合金刀片

SPG

Triangle/positive. Ground all over. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
321	3/8	1/8	1/64	431-1501	431-1502	431-1503*
322	3/8	1/8	1/32	431-1505	431-1506	431-1507*
323	3/8	1/8	3/64	431-1511	431-1512	431-1513*
422	1/2	1/8	1/32	431-1515	431-1516	431-1517
423	1/2	1/8	3/64	431-1521	431-1522	431-1523
424	1/2	1/8	1/16	431-1525	431-1526	431-1527
432	1/2	3/16	1/32	431-1531	431-1532	431-1533
433	1/2	3/16	3/64	431-1535	431-1536	431-1537
632	3/4	3/16	1/32	431-1541	431-1542	431-1543
633	3/4	3/16	3/64	431-1545	431-1546	431-1547
634	3/4	3/16	1/16	431-1551	431-1552	431-1553

* WSL CLOSE-OUT

SDKN,TCMT

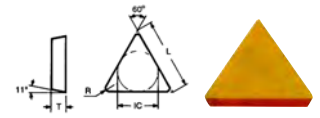
TCMT



Style	Insert No.	Grade	Order No.
SDKN	42	C5	431-1401
	42	C5	431-1402
	42	C5 + Gold Tin Coated	431-1403
TCMT	21.51	C5	431-1451
	32.51	C5	431-1457
	32.52	C5	431-1461

TPG

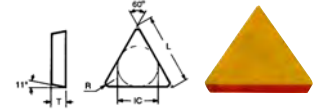
Triangle/positive. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
221	1/4	1/8	1/64	431-1311	431-1312	431-1313
222	1/4	1/8	1/32	431-1315	431-1316	431-1317
223	1/4	1/8	3/64	431-1321	431-1322	431-1323
321	3/8	1/8	1/64	431-1325	431-1326	431-1327
322	3/8	1/8	1/32	431-1331	431-1332	431-1333
323	3/8	1/8	3/64	431-1335	431-1336	431-1337
324	3/8	1/8	1/16	431-1341	431-1342	431-1343
431	1/2	3/16	1/64	431-1345	431-1346	431-1347

TPU

Triangle/positive. Ground top & bottom. C-2 for cast iron cutting, C-6 for steel cutting. Titanium Nitride coating for extra strength.



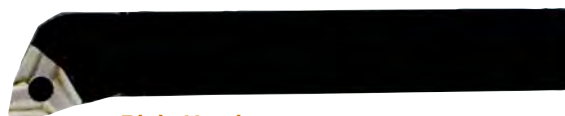
Insert No.	I.C.	T	R	C2 Order No.	C6 Order No.	Tin Coated Order No.
212	1/4	1/16	1/32	431-1601	431-1602	431-1603
222	1/4	1/8	1/32	431-1605	431-1606	431-1607
322	3/8	1/8	1/32	431-1611	431-1612	431-1613
323	3/8	1/8	3/64	431-1615	431-1616	431-1617
432	1/2	3/16	1/32	431-1621	431-1622	431-1623
433	1/2	3/16	3/64	431-1625	431-1626	431-1627
434	1/2	3/16	1/16	431-1631	431-1632	431-1633
544	5/8	1/4	1/16	431-1635	431-1636	431-1637

Carbide Insert Tool Holders

硬质合金切刀

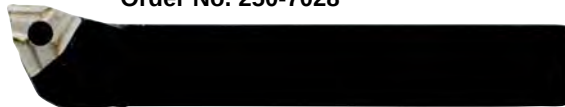
Lathe Toolholders

For turning or facing with trigon chip breaker inserts



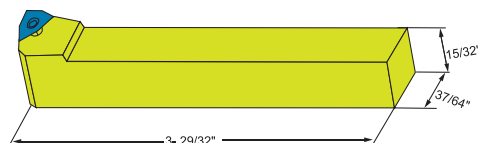
Right Hand

Order No. 250-7028



Left Hand

Order No. 250-7029



Inserts



Description	Inserts of Right Hand Order No.	Inserts of Left Hand Order No.
For Steel	250-7039	250-7040
For Cast Iron	250-7047	250-7048

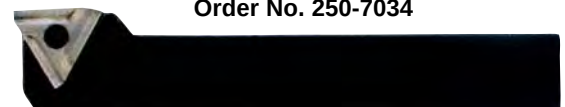
Turning Toolholders

For turning or facing with triangle chip breaker inserts



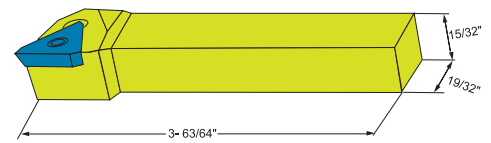
Right Hand

Order No. 250-7034



Left Hand

Order No. 250-7035



Inserts



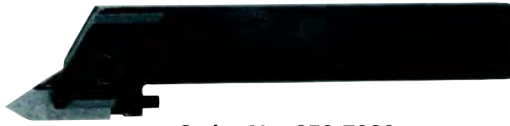
Description	Inserts of Right Hand Order No.	Inserts of Left Hand Order No.
For Steel	250-7043	250-7044
For Cast Iron	250-7051	250-7052

Carbide Insert Tool Holders continued

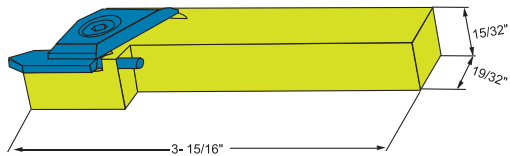
硬质合金切刀

Threading Toolholders

For all external threading, with adjustable insert



Order No. 250-7030



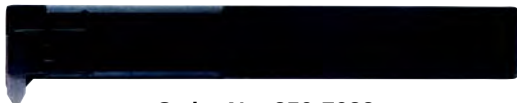
Inserts



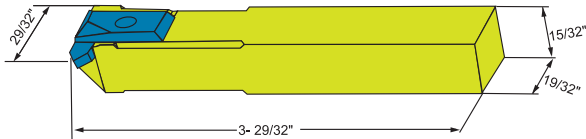
Description	Inserts Order No.
For Steel	250-7041
For Cast Iron	250-7049

Internal Threading Toolholders

For internal threading, with adjustable insert



Order No. 250-7033



Inserts



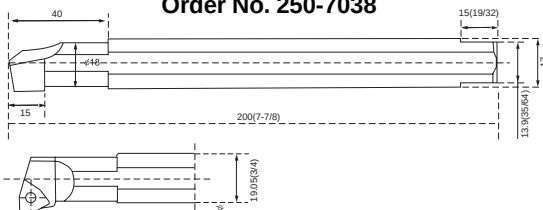
Description	Inserts Order No.
For Steel	250-7042
For Cast Iron	250-7050

Boring Bar

For all your boring bar works, with triangle inserts



Order No. 250-7038



Inserts



Description	Inserts Order No.
For Steel	250-7055
For Cast Iron	250-7056

Turning Toolholders

For facing end of tubing and front and back flanges, with square inserts



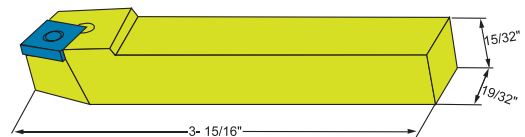
Right Hand

Order No. 250-7036



Left Hand

Order No. 250-7037



Inserts



Description	Inserts of Right Hand Order No.	Inserts of Left Hand Order No.
For Steel	250-7045	250-7046
For Cast Iron	250-7053	250-7054

Boring Tool Holders

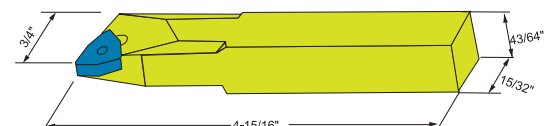
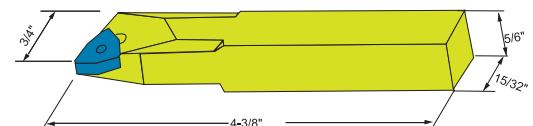
For boring bar works, with trigon chip breaker inserts



Order No. 250-7031



Order No. 250-7032



Inserts



Description	Inserts Order No.
For Steel	250-7040
For Cast Iron	250-7048

Indexable Carbide Turning Tools

可转位切刀

- An inexpensive way to replace carbide tipped tool bits.
- Versatile and economical.
- Available in 5 shank size and styles.
- Each tool cuts right, left or plunges.
- Positive rake cutting and built in chip breaker groove.
- Available with 3 different radio.

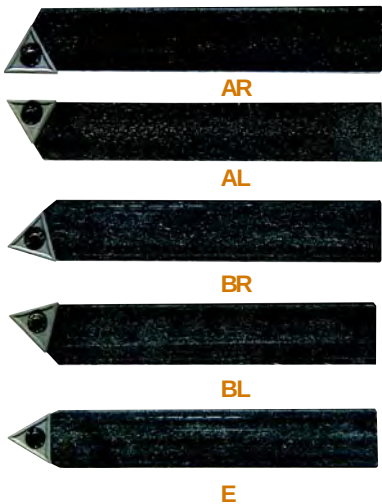
5 Piece Sets

- Set includes: 5 tools in styles-AR, AL, BR, BL and E insert, with 5 extra screws and 2 wrenches, set also comes in 1/4", 3/8", 1/2", 5/8", 3/4" and 1" sets.



No. of Pieces	Shank (Square)	Set No.	Descriptions.	C-2 Order No.	C-6 Order No.
5Pcs/set	1/4"	ST-4	AR-4, AL-4, BR-4, BL-4, E-4	250-1399	251-1399
5Pcs/set	3/8"	ST-6	AR-6, AL-6, BR-6, BL-6, E-6	250-1400	251-1400
5Pcs/set	1/2"	ST-8	AR-8, AL-8, BR-8, BL-8, E-8	250-1401	251-1401
5Pcs/set	5/8"	ST-10	AR-10, AL-10, BR-10, BL-10, E-10	250-1402	251-1402
5Pcs/set	3/4"	ST-12	AR-12, AL-12, BR-12, BL-12, E-12	250-1404	251-1404
5Pcs/set	1"	ST-16	AR-16, AL-16, BR-16, BL-16, E-16	250-1406	251-1406

Individual Indexable Carbide Turning Tools 可转位切刀



1/4" Shank, 3/16" I.C. Insert

Type	Order No.
AR 4	250-1391
AL 4	250-1392
BR 4	250-1393
BL 4	250-1394
E 4	250-1395

3/8" Shank, 1/4" I.C. Insert

Type	Order No.
AR 6	250-1411
AL 6	250-1412
BR 6	250-1413
BL 6	250-1414
E 6	250-1415

1/2" Shank, 3/8" I.C. Insert

Type	Order No.
AR 8	250-1421
AL 8	250-1422
BR 8	250-1423
BL 8	250-1424
E 8	250-1425

5/8" Shank, 3/8" I.C. Insert.

Type	Order No.
AR 10	250-1431
AL 10	250-1432
BR 10	250-1433
BL 10	250-1434
E 10	250-1435

3/4" Shank, 3/8" I.C. Insert

Type	Order No.
AR 12	250-1441
AL 12	250-1442
BR 12	250-1443
BL 12	250-1444
E 12	250-1445

1" Shank, 1/2" I.C. Insert

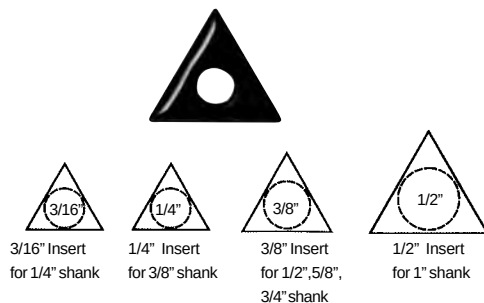
Type	Order No.
AR 16	250-1451
AL 16	250-1452
BR 16	250-1453
BL 16	250-1454
E 16	250-1455

Replacement Screws 可转位刀杆紧固螺钉



Descriptions	Order No.
M2.5 screw for 1/4", 3/8" shank	250-1297
M4 screw for 1/2", 5/8", 3/4" shank	250-1298
M5 screw for 1" shank	250-1299

Carbide Inserts 硬质合金刀片



Insert I.C.	Radius	Insert No.	C2 Order No.	C6 Order No.	Tin Coated Order No.
3/16"			340-0097	340-0098	340-0099
1/4"	.015	TT-221	340-1000	340-1002	340-1003
1/4"	.032	TT-222	340-1004	340-1006	340-1007
3/8"	.015	TT-321	340-1008	340-1010	340-1011
3/8"	.032	TT-322	340-1012	340-1014	340-1015
3/8"	.046	TT-323	340-1016	340-1018	340-1019
1/2"	.015	TT-431	340-1020	340-1022	340-1023
1/2"	.032	TT-432	340-1024	340-1026	340-1027
1/2"	.046	TT-433	340-1028	340-1030	340-1031

Metric Indexable Carbide Turning Tools

公制套装可转位切刀

5 Piece Sets

- Set includes: 5 tools in styles-AR, AL, BR, BL and E insert, with 5 extra screws and 2 wrenches, set also comes in 6mm, 8mm, 10mm, 12mm, 14mm, 16mm, 18mm, 20mm, and 25mm sets.



Shank (Square)	Length	Description	ISO K20 Order No.	ISO P20 Order No.
6mm		AR, AL, BR, BL, E	250-5398	251-5398
8mm		AR, AL, BR, BL, E	250-5399	251-5399
10mm	63	AR, AL, BR, BL, E	250-5400	251-5400
12mm	76	AR, AL, BR, BL, E	250-5401	251-5401
16mm	102	AR, AL, BR, BL, E	250-5402	251-5402
14mm	76	AR, AL, BR, BL, E	250-5403	251-5403
20mm	120	AR, AL, BR, BL, E	250-5404	251-5404
18mm	115	AR, AL, BR, BL, E	250-5405	251-5405
25mm	150	AR, AL, BR, BL, E	250-5406	251-5406

Individual Indexable Carbide Turning Tools

可转位切刀

10mm Shank 6.5mm I.C. Insert

Type	Order No.
AR	250-1591
AL	250-1592
BR	250-1593
BL	250-1594
E	250-1595

12mm Shank 9.5mm I.C. Insert

Type	Order No.
AR	250-1611
AL	250-1612
BR	250-1613
BL	250-1614
E	250-1615

14mm Shank 9.5mm I.C. Insert

Type	Order No.
AR	250-1621
AL	250-1622
BR	250-1623
BL	250-1624
E	250-1625

16mm Shank 9.5mm I.C. Insert

Type	Order No.
AR	250-1631
AL	250-1632
BR	250-1633
BL	250-1634
E	250-1635

20mm Shank 9.5mm I.C. Insert

Type	Order No.
AR	250-1651
AL	250-1652
BR	250-1653
BL	250-1654
E	250-1655

25mm Shank 12.5mm I.C. Insert

Type	Order No.
AR	250-1661
AL	250-1662
BR	250-1663
BL	250-1664
E	250-1665

18mm Shank 9.5mm I.C. Insert

Type	Order No.
AR	250-1641
AL	250-1642
BR	250-1643
BL	250-1644
E	250-1645

Replacement Screws

可转位刀杆紧固螺钉



Descriptions	Order No.
6.5mm I.C. for 10mm shank	250-1287
9.5mm I.C. for 12, 14, 16, 18, 20 mm square shank	250-1288
12.5mm I.C. for 25mm shank only	250-1289

6.5mm Insert
for 10mm shank9.5mm Insert for 12,14,
16,18,20mmshank12.5mm Insert
for 25mm shank

Carbide Inserts

硬质合金刀片

Insert I.C.	Radius	ISO K20 Order No.	ISO P20 Order No.
6.5mm	0.8mm	340-1102	340-1100
9.5mm	0.8mm	340-1108	340-1106
12.5mm	0.8mm	340-1112	340-1110

Turning Tool Holders & Sets

with TCMT Carbide Insert

硬制合金可转位套装车刀



STACR STNCR STECN STDCR STCCR

Sets

Pieces	Shank	Order No.
5 Piece Set	3/8" Square	250-2091
5 Piece Set	1/2" Square	250-2092
5 Piece Set	5/8" Square	250-2093
5 Piece Set	3/4" Square	250-2094
5 Piece Set	1x3/4" Rectangle	250-2095

Individual

Type	Shank Size	Tool Length	Insert No. ISO	Order No.
STACR	3/8 Sq.	2-1/2	110204	250-2007
STACR	1/2 Sq.	3-1/2	110204	250-2010
STACR	5/8 Sq.	4	110204	250-2013
STACR	3/4 Sq.	4-1/2	16T308	250-2016
STACR	1x3/4	6	16T308	250-2019
STNCR	3/8 Sq.	2-1/2	110204	250-2022
STNCR	1/2 Sq.	3-1/2	110204	250-2025
STNCR	5/8 Sq.	4	110204	250-2028
STNCR	3/4 Sq.	4-1/2	16T308	250-2031
STNCR	1x3/4	6	16T308	250-2034
STECN	3/8 Sq.	2-1/2	110204	250-2037
STECN	1/2 Sq.	3-1/2	110204	250-2040
STECN	5/8 Sq.	4	110204	250-2043
STECN	3/4 Sq.	4-1/2	16T308	250-2046
STECN	1x3/4	6	16T308	250-2049
STDCR	3/8 Sq.	2-1/2	110204	250-2052
STDCR	1/2 Sq.	3-1/2	110204	250-2055
STDCR	5/8 Sq.	4	110204	250-2058
STDCR	3/4 Sq.	4-1/2	16T308	250-2061
STDCR	1x3/4	6	16T308	250-2064
STCCR	3/8 Sq.	2-1/2	110204	250-2067
STCCR	1/2 Sq.	3-1/2	110204	250-2070
STCCR	5/8 Sq.	4	110204	250-2073
STCCR	3/4 Sq.	4-1/2	16T308	250-2076
STCCR	1x3/4	6	16T308	250-2079

Inch Multi-Purpose Indexable Tool Sets

with Carbide Insert

硬制合金可转位套装车刀

7 Piece Set

Set Include:

one each of

Right Hand 90°, 95°, 93°, 62.5° External Turning

Left Hand 95° External Turning

External Threading

Cut-Off Tool Holder

Wooden Case



Piece	Shank Size	Order No.
7	1/4"	250-8170
7	5/16"	250-8171
7	3/8"	250-8172
7	1/2"	250-8173
7	5/8"	250-8174
7	3/4"	250-8175

7 Piece Set

Set Include:

one each of

Right Hand 90°, 95°, 93°, 62.5° External Turning

Left Hand 95° External Turning

External Threading

Cut-Off Tool Holder

Wooden Case



Piece	Shank Size	Order No.
7	6mm	250-8070
7	8mm	250-8071
7	10mm	250-8072
7	12mm	250-8073
7	16mm	250-8074
7	20mm	250-8075

9 Piece Set

Set Include:

one each of

Right Hand 45°, 75°, 90° External Turning

45° Facing

75°, 93° Internal Turning(Boring Bar)

External Threading

Internal Threading

Cut-Off Tool Holder

Plastic Case/Wooden Case



Piece	Shank Size	Order No.
9	5/8"	250-8191
9	3/4"	250-8192
9	1"	250-8193
9	1-1/4"	250-8194

9 Piece Set

Set Include:

one each of

Right Hand 45°, 75°, 90° External Turning

45° Facing

75°, 93° Internal Turning(Boring Bar)

External Threading

Internal Threading

Cut-Off Tool Holder

Plastic Case/Wooden Case



Piece	Shank Size	Order No.
9	16mm	250-8091
9	20mm	250-8092
9	25mm	250-8093
9	32mm	250-8094

7 Piece Set

Set Include:

one each of

Right Hand 45°, 75°, 90°, Turning,

Left Hand 90° Turning,

93° Internal Turning(Boring Bar),

External Threading,

Cut-Off Tool Holder

Wooden Case



Piece	Shank Size	Order No.
7	5/8"	250-8177

7 Piece Set

Set Include:

one each of

Right Hand 45°, 75°, 90°, Turning,

Left Hand 90° Turning,

93° Internal Turning(Boring Bar),

External Threading,

Cut-Off Tool Holder

Wooden Case



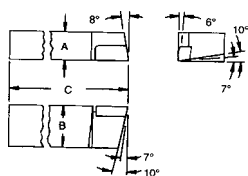
Piece	Shank Size	Order No.
7	16mm	250-8077

Carbide Tipped Tool Bits 硬质合金焊接刀

Grade C-2 for Cast Iron and Non-Ferrous Materials, Grade C-6 for Steel and Steel Alloys Premium Carbide

Style AR & AL

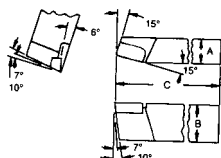
Straight Turning-for general machining applications such as turning, boring, facing and chamfering. Suitable for machining to a 90° shoulder.



Square	Length	Industry Number	Right Hand	Right Hand	Industry Number	Left Hand	Left Hand
			C-2 Order No.	C-6 Order No.		C-2 Order No.	C-6 Order No.
1/4"	2"	AR-4	383-0012	383-0016	AL-4	383-0112	383-0116
5/16	2-1/4	AR-5	383-0022	383-0026	AL-5	383-0122	383-0126
3/8	2-1/2	AR-6	383-0032	383-0036	AL-6	383-0132	383-0136
7/16	3	AR-7	383-0042	383-0046	AL-7	383-0142	383-0146
1/2	3-1/2	AR-8	383-0052	383-0056	AL-8	383-0152	383-0156
5/8	4	AR-10	383-0062	383-0066	AL-10	383-0162	383-0166
3/4	4-1/2	AR-12	383-0072	383-0076	AL-12	383-0172	383-0176
1	6	AR-16	383-0082	383-0086	AL-16	383-0182	383-0186

Style BR & BL

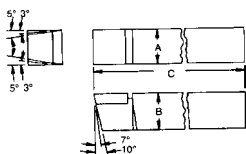
Lead Angle turning - for general applications on turning, boring, and facing where a lead angle is either required or acceptable.



Square	Length	Industry Number	Right Hand	Right Hand	Industry Number	Left Hand	Left Hand
			C-2 Order No.	C-6 Order No.		C-2 Order No.	C-6 Order No.
1/4"	2"	BR-4	383-1012	383-1016	BL-4	383-1112	383-1116
5/16	2-1/4	BR-5	383-1022	383-1026	BL-5	383-1122	383-1126
3/8	2-1/2	BR-6	383-1032	383-1036	BL-6	383-1132	383-1136
7/16	3	BR-7	383-1042	383-1046	BL-7	383-1142	383-1146
1/2	3-1/2	BR-8	383-1052	383-1056	BL-8	383-1152	383-1156
5/8	4	BR-10	383-1062	383-1066	BL-10	383-1162	383-1166
3/4	4-1/2	BR-12	383-1072	383-1076	BL-12	383-1172	383-1176
1	6	BR-16	383-1082	383-1086	BL-16	383-1182	383-1186

Style C

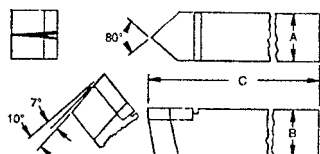
Broad nose - a general purpose tool of great utility for facing, chamfering, and turning. This tool is generally used for making special form tools.



Square	Length	Industry No.	C-2 Order No.	C-6 Order No.
1/4"	2"	C-4	383-2002	383-2006
5/16	2-1/4	C-5	383-2012	383-2016
3/8	2-1/2	C-6	383-2022	383-2026
7/16	3	C-7	383-2032	383-2036
1/2	3-1/2	C-8	383-2042	383-2046
5/8	4	C-10	383-2052	383-2056
3/4	4-1/2	C-12	383-2062	383-2066
1	6	C-16	383-2072	383-2076

Style D

80° Round nose - an 80° included angle round nose tool for turning, boring, facing, chamfering and other miscellaneous machining operations.

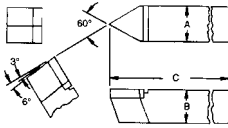


Square	Length	Industry No.	C-2 Order No.	C-6 Order No.
1/4"	2"	D-4	383-3012	383-3016
5/16	2-1/4	D-5	383-3022	383-3026
3/8	2-1/2	D-6	383-3032	383-3036
7/16	3	D-7	383-3042	383-3046
1/2	3-1/2	D-8	383-3052	383-3056
5/8	4	D-10	383-3062	383-3066
3/4	4-1/2	D-12	383-3072	383-3076
1	6	D-16	383-3082	383-3086

Carbide Tipped Tool Bits 硬质合金焊接刀

Style E

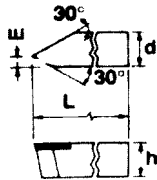
Threading - conforms with the U.S. Standard 60° included angle thread, also used for V-grooving chamfering, turning, boring and facing.



Square	Length	Industry No.	C-2 Order No.	C-6 Order No.
1/4"	2"	E-4	383-4002	383-4006
5/16	2-1/4	E-5	383-4012	383-4016
3/8	2-1/2	E-6	383-4022	383-4026
7/16	3	E-7	383-4032	383-4036
1/2	3-1/2	E-8	383-4042	383-4046
5/8	4	E-10	383-4052	383-4056
3/4	4-1/2	E-12	383-4062	383-4066
1	7	E-16	383-4072	383-4076

Style ER-Right AND EL-Left

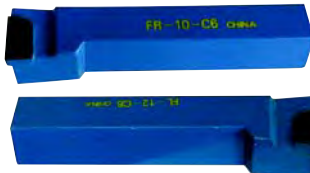
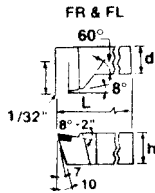
60° Offset Tool, Right hand for facing to square shoulder. Used mainly for turret lathe operations. Right and left hand tools are used together for straddle facing. Left hand for turning.



				R.H. Industry No.	ER.R.H. C-2 Order No.	ER.R.H. C-6 Order No.	L. H. Industry No.	EL.L.H. C-2 Order No.	EL.L.H. C-6 Order No.
E	D	H	L	No.			No.		
1/16"	1/4"	1/4"	2"	ER-4	383-6202	383-6206	EL-4	383-6302	383-6306
1/16	5/16	5/16	2-1/4	ER-5	383-6232	383-6236	EL-5	383-6332	383-6336
1/16	3/8	3/8	2-1/2	ER-6	383-6212	383-6216	EL-6	383-6312	383-6316
3/32	1/2	1/2	3-1/2	ER-8	383-6222	383-6226	EL-8	383-6322	383-6326
3/32	5/8	5/8	4	ER-10	383-6242	383-6246	EL-10	383-6342	383-6346

Style FR-Right and FL-Left

End Cutting Offset Tool, right hand for facing to square shoulder. Used mainly for turret lathe operations. Right and left hand tools are used together for straddle facing. Left hand for turning.



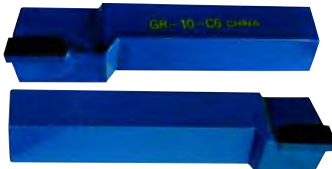
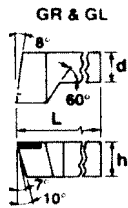
				R. H. Industry No.	FR.R.H. C-2 Order No.	FR.R.H. C-6 Order No.	L. H. Industry No.	FL.L.H. C-2 Order No.	FL.L.H. C-6 Order No.
E	D	H	L	No.			No.		
1/32"	1/2"	1/2"	3-1/2"	FR-8	383-8002	383-8006	FL-8	383-8102	383-8106
1/32	5/8	5/8	4	FR-10	383-8012	383-8016	FL-10	383-8112	383-8116
1/32	3/4	3/4	4-1/2	FR-12	383-8022	383-8026	FL-12	383-8122	383-8126
1/32	1	1	7	FR-16	383-8032	383-8036	FL-16	383-8132	383-8136

Style GR-Right and GL-Left

Right, left hand for facing to square shoulder.

Side cutting offset tools.

Ideal for facing work close to chuck jaws on engine lathes, turret lathes, boring mills and vertical turret lathes.



				R. H. Industry No.	GR.R.H. C-2 OrderNo.	GR.R.H. C-6 Order No.	L. H. Industry No.	GL.L.H. C-2 Order No.	GL.L.H. C-6 Order No.
E	D	H	L	No.			No.		
1/32"	1/2"	1/2"	3-1/2"	GR-8	383-8202	383-8206	GL-8	383-8302	383-8306
1/32	5/8	5/8	4	GR-10	383-8212	383-8216	GL-10	383-8312	383-8316
1/32	3/4	3/4	4-1/2	GR-12	383-8232	383-8236	GL-12	383-8332	383-8336
1/32	1	1	7	GR-16	383-8222	383-8226	GL-16	383-8322	383-8326

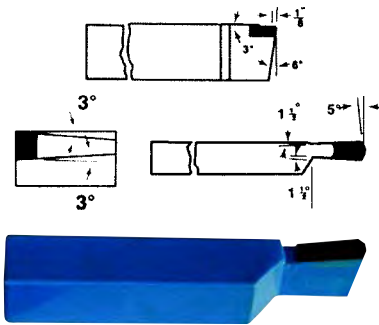
Style TSA

Square Shank Boring Tools for boring to a square shoulder in 90° boring bars.



			Style TSA C-2 Order No.	Style TSA C-6 Order No.
Size	Radius	Industry No.		
5/16"	1/64"	TSA5	383-8402	383-8406
3/8	1/64	TSA6	383-8412	383-8416
1/2	1/32	TSA8	383-8422	383-8426
5/8	1/32	TSA10	383-8432	383-8436
3/4	1/32	TSA12	383-8442	383-8446

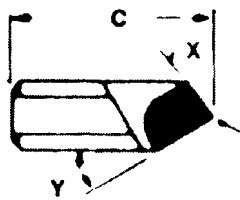
Carbide Tipped Tool Bits 硬质合金焊接刀



Styles CTR & CTL

Cut-off-designed for cut-off or grooving solid bars and tube parting.

Shank Size	Tip Dia.	Overall Length	R. H.		R. H.		L. H.		L. H.	
			R. H.	C-2	C-6	Order No.	L. H.	C-2	C-6	Order No.
1/2 x 1"	1/8"	5"	CTR-111	383-4602	383-4606		CTL-111	383-4702	383-4706	
1/2 x 1	3/16	5	CTR-122	383-4612	383-4616		CTL-122	383-4712	383-4716	
1/2 x 1	5/16	5	CTR-120	383-4622	383-4626		CTL-120	383-4722	383-4726	
1/2 x 1	1/4	5	CTR-121	383-4632	383-4636		CTL-121	383-4732	383-4736	
5/8 x 1-1/4	3/8	5	CTR-130	383-4642	383-4646		CTL-130	383-4742	383-4746	
3/4 x 1-1/2	3/8	6	CTR-140	383-4652	383-4656		CTL-140	383-4752	383-4756	



Style TRC & TRE

Round Boring Tools. For boring to a square shoulder in 45° boring bars or with 15° lead angle in 30° boring bars. For recessing and internal chamfering in 90° boring bar.

Type	Description
TRC	For Boring to Square Shoulder in 30° Bars
TRE	For Boring to a Square Shoulder in 45° Bars or with 15° Lead in 30° Bars.



Size	Radius	Dia.	Length	Industry C - 2		C - 6		Industry C - 2		C - 6	
				Number	Order No.	Order No.	Number	Order No.	Order No.	Number	Order No.
.3120"	1/64"	5/16"	1-1/2"	TRC 5	383-8702	383-8706	TRE 5	383-8802	383-8806		
.3745	1/64	3/8	1-3/4	TRC 6	383-8712	383-8716	TRE 6	383-8812	383-8816		
.4995	1/64	1/2	2-1/2	TRC 8	383-8722	383-8726	TRE 8	383-8822	383-8826		

Style TSC

For boring to a square shoulder in a 30° boring bar, or internal Chamfering (30°) in a 0°.

Size	Radius	Industry No.	Style TSC	
			C-2	C-6
Order No.	Order No.	Order No.	Order No.	Order No.
5/1"	1/64"	TSC5	383-8502	383-8506
3/8	1/64	TSC6	383-8512	383-8516
1/2	1/32	TSC8	383-8522	383-8526
5/8	1/32	TSC10	383-8532	383-8536
3/4	1/32	TSC12	383-8542	383-8546



Style TSE

For boring to square shoulder in a 45° boring bar, or boring with a 15° lead angle in a 30° boring bar.

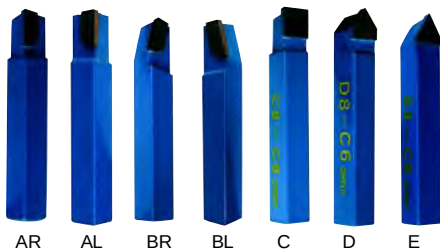
Size	Radius	Industry No.	Style TSE	
			C-2	C-6
Order No.	Order No.	Order No.	Order No.	Order No.
5/16"	1/64"	TSE5	383-8602	383-8606
3/8	1/64	TSE6	383-8612	383-8616
1/2	1/32	TSE8	383-8622	383-8626
5/8	1/32	TSE10	383-8632	383-8636
3/4	1/32	TSE12	383-8642	383-8646



38 Piece Carbide Tipped Tool Bit Sets

C6 Style

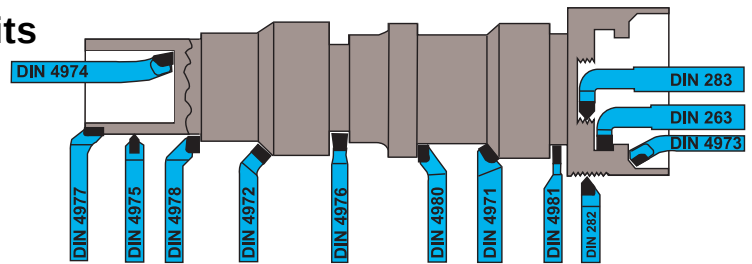
NEW



Description	Shank		Ground Shank
	Size	Order No.	Order No.
8 Piece AR, 8 Piece AL,	1/4"	383-4200	383-4201
4Piece BR, 4Piece BL,	5/16	383-4300	383-4301
4Piece C, 4Piece D , 4Piece E	3/8	383-4400	383-4401
	1/2	383-4500	383-4501

DIN & ISO Carbide Tipped Tool Bits

硬质合金焊接刀



Carbide Tipped Tool Bits, DIN4971-ISO1



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4971-0001	4971-1001	4971-2001	4971-3001
12x12x100mm	4971-0003	4971-1003	4971-2003	4971-3003
16x16x110mm	4971-0005	4971-1005	4971-2005	4971-3005
20x20x125mm	4971-0007	4971-1007	4971-2007	4971-3007
25x25x140mm	4971-0009	4971-1009	4971-2009	4971-3009
32x32x170mm	4971-0011	4971-1011	4971-2011	4971-3011

Carbide Tipped Tool Bits, DIN4972-ISO2



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4972-0001	4972-1001	4972-2001	4972-3001
12x12x100mm	4972-0003	4972-1003	4972-2003	4972-3003
16x16x110mm	4972-0005	4972-1005	4972-2005	4972-3005
20x20x125mm	4972-0007	4972-1007	4972-2007	4972-3007
25x25x140mm	4972-0009	4972-1009	4972-2009	4972-3009
32x32x170mm	4972-0011	4972-1011	4972-2011	4972-3011

Carbide Tipped Tool Bits, DIN4973-ISO8



Size	K10/20 Order No.	P25/30 Order No.
8x8x14x125mm	4973-0001	4973-2001
10x10x18x150mm	4973-0003	4973-2003
12x12x21x180mm	4973-0005	4973-2005
16x16x27x210mm	4973-0007	4973-2007
20x20x34x250mm	4973-0009	4973-2009
25x25x43x300mm	4973-0011	4973-2011
32x32x52x355mm	4973-0013	4973-2013

Carbide Tipped Tool Bits DIN4974-ISO9



Size	K10/20 Order No.	P25/30 Order No.
8x8x14x125mm	4974-0001	4974-2001
10x10x18x150mm	4974-0003	4974-2003
12x12x21x180mm	4974-0005	4974-2005
16x16x27x210mm	4974-0007	4974-2007
20x20x34x250mm	4974-0009	4974-2009
25x25x43x300mm	4974-0011	4974-2011
32x32x52x355mm	4974-0013	4974-2013

Carbide Tipped Tool Bits. DIN 4975-ISO10



Size	K10/20 Order No.	P25/30 Order No.
26x10x110mm	4975-0001	4975-2001
20x12x125mm	4975-0003	4975-2003
25x16x140mm	4975-0005	4975-2005
32x20x170mm	4975-0007	4975-2007

Carbide Tipped Tool Bits. DIN 4976-ISO4



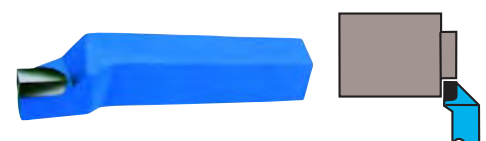
Size	K10/20 Order No.	P25/30 Order No.
10x10x90mm	4976-0001	4976-2001
12x12x100mm	4976-0003	4976-2003
16x16x110mm	4976-0005	4976-2005
20x20x125mm	4976-0007	4976-2007
25x25x140mm	4976-0009	4976-2009
32x32x170mm	4976-0011	4976-2011

Carbide Tipped Tool Bits. DIN 4977-ISO5



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
16x16x110mm	4977-0001	4977-1001	4977-2001	4977-3001
20x20x125mm	4977-0003	4977-1003	4977-2003	4977-3003
25x25x140mm	4977-0005	4977-1005	4977-2005	4977-3005
32x32x170mm	4977-0007	4977-1007	4977-2007	4977-3007

Carbide Tipped Tool Bits. DIN 4978-ISO3



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
16x10x110mm	4978-0001	4978-1001	4978-2001	4978-3001
20x12x125mm	4978-0003	4978-1003	4978-2003	4978-3003
25x16x140mm	4978-0005	4978-1005	4978-2005	4978-3005
32x20x170mm	4978-0007	4978-1007	4978-2007	4978-3007

DIN & ISO Carbide Tipped Tool Bits continued

硬质合金焊接刀

Carbide Tipped Tool Bits. DIN 4980-ISO6



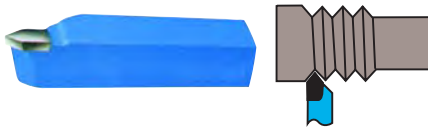
Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4980-0001	4980-1001	4980-2001	4980-3001
12x12x100mm	4980-0003	4980-1003	4980-2003	4980-3003
16x16x110mm	4980-0005	4980-1005	4980-2005	4980-3005
20x20x125mm	4980-0007	4980-1007	4980-2007	4980-3007
25x25x140mm	4980-0009	4980-1009	4980-2009	4980-3009
32x32x170mm	4980-0011	4980-1011	4980-2011	4980-3011

Carbide Tipped Tool Bits. DIN 4981-ISO7



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
12x8x100mm	4981-0001	4981-1001	4981-2001	4981-3001
16x10x110mm	4981-0003	4981-1003	4981-2003	4981-3003
20x12x125mm	4981-0005	4981-1005	4981-2005	4981-3005
25x16x140mm	4981-0007	4981-1007	4981-2007	4981-3007
32x20x170mm	4981-0009	4981-1009	4981-2009	4981-3009

Carbide Tipped Tool Bits. DIN 282-60 Degree



Size	K10/20 Order No.	P25/30 Order No.
10x10x100mm	2820-0001	2820-2001
12x12x110mm	2820-0003	2820-2003
16x16x125mm	2820-0005	2820-2005
20x20x140mm	2820-0007	2820-2007
25x25x160mm	2820-0009	2820-2009
32x32x180mm	2820-0011	2820-2011

Carbide Tipped Tool Bits. DIN 263



Size	K10/20 Order No.	P25/30 Order No.
10x10x25x140mm	2821-0001	2821-2001
12x12x30x160mm	2821-0003	2821-2003
16x16x40x180mm	2821-0005	2821-2005
20x20x50x210mm	2821-0007	2821-2007
25x25x60x250mm	2821-0009	2821-2009
32x32x85x300mm	2821-0011	2821-2011

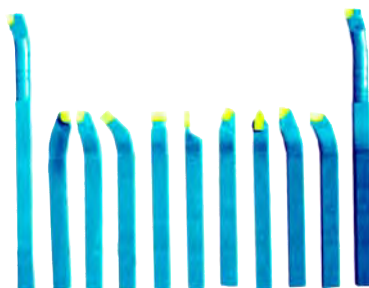
Carbide Tipped Tool Bits. DIN 283-60 degree



Size	K10/20 Order No.	P25/30 Order No.
10x10x24x140mm	2830-0001	2830-2001
12x12x30x160mm	2830-0003	2830-2003
16x16x36x180mm	2830-0005	2830-2005
20x20x45x210mm	2830-0007	2830-2007
25x25x55x250mm	2830-0009	2830-2009
32x32x70x300mm	2830-0011	2830-2011

11 Piece Carbide Tipped
Tool Bit Sets

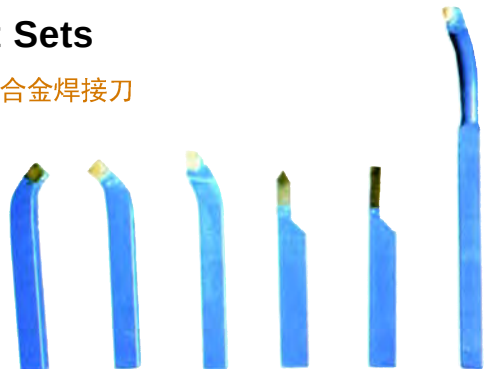
11 件套硬质合金焊接刀



Shank Size	Description	Order No.
8x8mm	one each of DIN4971R, DIN4972R, DIN4973R, DIN4974R, DIN4975, DIN4976, DIN4977R, DIN4978R, DIN4980L, DIN4980R, DIIN4981R	387-1811

6 Piece Carbide Tipped
Tool Bit Sets

6 件套硬质合金焊接刀



3/8" Shank

Description	Shank Size	OAL	Order No.
45° Left Angle	3/8x3/8"	3-1/2"	383-4261
45° Right Angle	3/8x3/8	3-1/2	
30° Angle	3/8x3/8	3-1/2	
3/16 Wide, 60° Point	3/8x3/8	3-3/4	
1/8x5/16 Straight Point	3/8x1/2	4	
15° Angle	3/8x3/8	5-3/4	

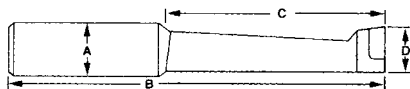
1/2" Shank

Description	Shank Size	OAL	Order No.
45° Left Angle	1/2x1/2"	4"	383-4262
45° Right Angle	1/2x1/2	4	
30° Angle	1/2x1/2	4	
1/4 Wide, 60° Point	1/2x1/2	4-3/8	
5/32x3/8 Straight Point	3/8x5/8	4-1/2	
15° Angle	1/2x1/2	7-1/4	

Carbide Tipped Boring Bars 硬质合金镗刀杆

- Tool life is extended because each bar has far more steel behind the cutting edge for heavier chatter free cut. Deeper bore and more precise work.
- The same bar can bore flat bottom hole or face. Grind bar on cutting end for special tools such as grooving, threading, or automatic operations.

- Up to 100% longer tool life.
- All shanks are ground to ± 0.0005 ".
- All 1/2", 3/4" and 1" shanks fit most boring and facing heads.



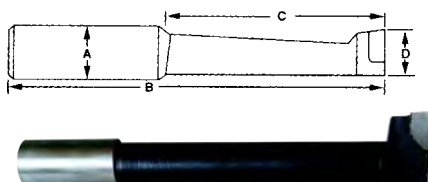
C2-Cast Iron C6-Steel

"A" Shank Dia.	"B" Length	"C" Bore Depth	"D" Min. Bore	Tool No.	C2 Individual Order No.	C6 Individual Order No.		C2 Set Order No.	C6 Set Order No.
3/8"	2"	3/4"	5/16"	A5S	375-1012	375-1016	9Pcs/set, Wooden Stand	375-1002	375-1006
3/8	2-3/8	1-1/8	5/16	A5M	375-1022	375-1026			
3/8	2-3/4	1-1/2	5/16	A5L	375-1032	375-1036			
3/8	2-3/16	15/16	3/8	A3S	375-1042	375-1046	9Pcs/set, Plastic Stand	375-1102	375-1106
3/8	2-21/32	1-13/32	3/8	A3M	375-1052	375-1056			
3/8	3-1/8	1-7/8	3/8	A3L	375-1062	375-1066			
3/8	2-3/8	1-1/8	7/16	A7S	375-1072	375-1076	9Pcs/set, Plastic Stand	375-1102	375-1106
3/8	3-15/16	1-11/16	7/16	A7M	375-1082	375-1086			
3/8	3-1/2	2-1/4	7/16	A7L	375-1092	375-1096			
1/2	2-1/4	3/4	5/16	B5S	375-1212	375-1216	9Pcs/set, Wooden Stand	375-1202	375-1206
1/2	2-5/8	1-1/8	5/16	B5M	375-1222	375-1226			
1/2	3	1-1/2'	5/16	B5L	375-1232	375-1236			
1/2	2-5/8	1-1/8	7/16	B7S	375-1242	375-1246	9Pcs/set, Plastic Stand	375-1202	375-1206
1/2	3-3/16	1-11/16	7/16	B7M	375-1252	375-1256			
1/2	3-3/4	2-1/4	7/16	B7L	375-1262	375-1266			
1/2	3	1-1/2	9/16	B9S	375-1272	375-1276	9Pcs/set, Plastic Stand	375-1302	375-1306
1/2	3-3/4	2-1/4	9/16	B9M	375-1282	375-1286			
1/2	4-1/2	3	9/16	B9L	375-1292	375-1296			
5/8	2-1/4	3/4	5/16	D5S	375-1412	375-1416	12Pcs/set, Wooden Stand	375-1402	375-1406
5/8	2-5/8	1-1/8	5/16	D5M	375-1422	375-1426			
5/8	3	1-1/2	5/16	D5L	375-1432	375-1436			
5/8	2-5/8	1-1/8	7/16	D7S	375-1442	375-1446	12Pcs/set, Plastic Stand	375-1402	375-1406
5/8	3-3/16	1-11/16	7/16	D7M	375-1452	375-1456			
5/8	3-3/4	2-1/4	7/16	D7L	375-1462	375-1466			
5/8	3	1-1/2	9/16	D9S	375-1472	375-1476	12Pcs/set, Plastic Stand	375-1532	375-1536
5/8	3-3/4	2-1/4	9/16	D9M	375-1482	375-1486			
5/8	4-1/2	3	9/16	D9L	375-1492	375-1496			
5/8	3-3/8	1-7/8	11/16	D11S	375-1502	375-1506	12Pcs/set, Plastic Stand	375-1532	375-1536
5/8	4-5/16	2-13/16	11/16	D11M	375-1512	375-1516			
5/8	5-1/4	3-3/4	11/16	D11L	375-1522	375-1526			
3/4	3-1/8	1-1/8	7/16	C7S	375-1612	375-1616	12Pcs/set, Wooden Stand	375-1602	375-1606
3/4	3-11/16	1-11/16	7/16	C7M	375-1622	375-1626			
3/4	4-1/4	2-1/4	7/16	C7L	375-1632	375-1636			
3/4	3-1/2	1-1/2	9/16	C9S	375-1642	375-1646	12Pcs/set, Plastic Stand	375-1602	375-1606
3/4	4-1/4	2-1/4	9/16	C9M	375-1652	375-1656			
3/4	5	3	9/16	C9L	375-1662	375-1666			
3/4	3-7/8	1-7/8	11/16	C11S	375-1672	375-1676	12Pcs/set, Plastic Stand	375-1732	375-1736
3/4	4-13/16	2-13/16	11/16	C11M	375-1682	375-1686			
3/4	5-3/4	3-3/4	11/16	C11L	375-1692	375-1696			
3/4	4-1/4	2-1/4	13/16	C13S	375-1702	375-1706	12Pcs/set, Plastic Stand	375-1732	375-1736
3/4	5-3/8	3-3/8	13/16	C13M	375-1712	375-1716			
3/4	6-1/2	4-1/2	13/16	C13L	375-1722	375-1726			
1	5.0	3.0	9/16	E9L	375-1812	375-1816	7Pcs/set, Wooden Stand	375-1802	375-1806
1	5-3/4	3-3/4	11/16	E11L	375-1822	375-1826			
1	6-1/2	4-1/2	7/8	E14L	375-1832	375-1836			
1	6-1/2	4-1/2	1-1/16	E18L	375-1842	375-1846	7Pcs/set, Wooden Stand	375-1802	375-1806
1	7-3/4	5-3/4	1-1/4	E20L	375-1852	375-1856			
1	8-1/4	6-1/4	1-1/2	E24L	375-1862	375-1866			
1	9-1/2	7-1/2	1-5/8	E26L	375-1872	375-1876	7Pcs/set, Wooden Stand	375-1802	375-1806

Metric Carbide Tipped Boring Bars 公制硬质合金镗刀杆

- Up to 100% longer tool life.
- All shanks are ground to $+0/-0.01\text{mm}$.
- Tool life is extended because each bar has far more steel behind the cutting edge for heavier chatter free cut. Deeper bore and more precise work.
- The same bar can bore flat bottom hole or face. Grind bar on cutting end for special tools such as grooving, threading, or automatic operations.

ISOK20-For Cast iron
ISOP20-For Steel

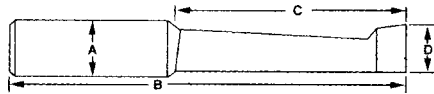


"A" Shank Dia.	"B" Length	"C" Bore Depth	"D" Min. Bore	ISOK20 Order No	ISOP20 Order No	ISOK20 Order No.	ISOP20 Order No.
10mm	50.8	19	7.9	375-3012	375-3016	9Pcs/set, Wooden Stand	375-3002 375-3006
10mm	60.3	28.5	7.9	375-3022	375-3026		
10mm	69.8	38.1	7.9	375-3032	375-3036		
10mm	55.5	23.8	9.5	375-3042	375-3046		
10mm	67.46	35.71	9.5	375-3052	375-3056		
10mm	79.3	47.6	9.5	375-3062	375-3066	9Pcs/set, Plastic Stand	375-3102 375-3106
10mm	60.3	28.5	11.1	375-3072	375-3076		
10mm	100	42.8	11.1	375-3082	375-3086		
10mm	88.9	57.1	11.1	375-3092	375-3096		
12mm	57.1	19	7.9	375-3212	375-3216		
12mm	66.6	28.5	7.9	375-3222	375-3226	9Pcs/set, Wooden Stand	375-3202 375-3206
12mm	76.2	38.1	7.9	375-3232	375-3236		
12mm	66.6	28.5	11.1	375-3242	375-3246		
12mm	80.9	42.8	11.1	375-3252	375-3256		
12mm	95.2	57.15	11.1	375-3262	375-3266		
12mm	76.2	38.1	13	375-3272	375-3276	9Pcs/set, Plastic Stand	375-3302 375-3306
12mm	95.2	57.1	13	375-3282	375-3286		
12mm	114.3	76.2	13	375-3292	375-3296		
16mm	57.1	19	7.9	375-3412	375-3416		
16mm	66.6	28.5	7.9	375-3422	375-3426		
16mm	76.2	38.1	7.9	375-3432	375-3436	12Pcs/set, Wooden Stand	375-3402 375-3406
16mm	66.6	28.5	11.1	375-3442	375-3446		
16mm	80.9	42.8	11.1	375-3452	375-3456		
16mm	95.2	57.1	11.1	375-3462	375-3466		
16mm	76.2	38.1	14.2	375-3472	375-3476		
16mm	95.2	57.1	14.2	375-3482	375-3486	12Pcs/set, Plastic Stand	375-3532 375-3536
16mm	114.3	76.2	14.2	375-3492	375-3496		
16mm	85.7	47.6	17	375-3502	375-3506		
16mm	109.5	71.4	17	375-3512	375-3516		
16mm	133.3	95.2	17	375-3522	375-3526		
20mm	79.3	28.5	11.1	375-3612	375-3616	12Pcs/set, Wooden Stand	375-3602 375-3606
20mm	93.6	42.8	11.1	375-3622	375-3626		
20mm	107.9	57.1	11.1	375-3632	375-3636		
20mm	88.9	38.1	14.2	375-3642	375-3646		
20mm	107.9	57.1	14.2	375-3652	375-3656		
20mm	127	76.2	14.2	375-3662	375-3666	12Pcs/set, Plastic Stand	375-3732 375-3736
20mm	98.4	47.6	17.4	375-3672	375-3676		
20mm	122.2	71.4	17.4	375-3682	375-3686		
20mm	146	95.2	17.4	375-3692	375-3696		
20mm	107.9	57.1	20.6	375-3702	375-3706		
20mm	136.5	85.7	20.6	375-3712	375-3716		
20mm	165.1	114.3	20.6	375-3722	375-3726		

Cobalt HSS Boring Bars

含钴高速钢镗刀杆

- M-35 High Speed Cobalt Steel-PC60.
- The massive head behind the cutting edge promotes rigidity and long life by reducing vibration.
- Supplied in wooden stand.



Metric Sets

Shank Dia.	Order No.
6mm shank, 8pcs/set, Wooden stand	375-1005
8mm shank, 8pcs/set, Wooden stand	375-1105
10mm shank, 8pcs/set, Wooden stand	375-1205
12mm shank, 10pcs/set, Wooden stand	375-1305
16mm shank, 10pcs/set, Wooden stand	375-1405
18mm shank, 14pcs/set, Wooden stand	375-1505
20mm shank, 14pcs/set, Wooden stand	375-1605
25mm shank, 6pcs/set, Wooden stand	375-1805

3/8" Shank

Shank Dia.	Length	Bore Depth	Min. Bore	M35 Cobalt Order No.	M42 Cobalt Order No.
A	B	C	D		
3/8	1-13/16	9/16	3/16	375-5008	375-4008
3/8	2-3/16	15/16	3/16	375-5012	375-4012
3/8	2	3/4	1/4	375-5016	375-4016
3/8	2-1/2	1-1/4	1/4	375-5020	375-4020
3/8	2-3/16	15/16	5/16	375-5024	375-4024
3/8	2-13/16	1-9/16	5/16	375-5028	375-4028
3/8	2-3/8	1-1/8	3/8	375-5032	375-4032
3/8	3-1/8	1-7/8	3/8	375-5036	375-4036
8 Piece Set of Above				375-1007	375-1009

1/2" Shank

Shank Dia.	Length	Bore Depth	Min. Bore	M35 Cobalt Order No.	M42 Cobalt Order No.
A	B	C	D		
1/2	2-1/8	3/4	1/4	375-5040	375-4040
1/2	2-5/8	1-1/4	1/4	375-5044	375-4044
1/2	2-5/16	15/16	5/16	375-5048	375-4048
1/2	2-15/16	1-9/16	5/16	375-5052	375-4052
1/2	2-1/2	1-1/8	3/8	375-5056	375-4056
1/2	3-1/4	1-7/8	3/8	375-5060	375-4060
1/2	2-11/16	1-5/16	7/16	375-5064	375-4064
1/2	3-9/16	2-3/16	7/16	375-5068	375-4068
1/2	2-7/8	1-1/2	1/2	375-5072	375-4072
1/2	3-7/8	2-1/2	1/2	375-5076	375-4076
10 Piece Set of Above				375-1207	375-1209

5/8" Shank

Shank Dia.	Length	Bore Depth	Min. Bore	M35 Cobalt Order No.	M42 Cobalt Order No.
A	B	C	D		
5/8	2-5/8	1-1/8	3/8	375-5080	375-4080
5/8	3-3/8	1-7/8	3/8	375-5084	375-4084
5/8	2-13/16	1-5/16	7/16	375-5088	375-4088
5/8	3-11/16	2-3/16	7/16	375-5092	375-4092
5/8	3	1-1/2	1/2	375-5096	375-4096
5/8	4	2-1/2	1/2	375-5100	375-4100
5/8	3-3/16	1-11/16	9/16	375-5104	375-4104
5/8	4-5/16	2-13/16	9/16	375-5108	375-4108
5/8	3-3/8	1-7/8	5/8	375-5112	375-4112
5/8	4-5/8	3-1/8	5/8	375-5116	375-4116
10 Piece Set of Above				375-1407	375-1409

3/4" Shank

Shank Dia.	Length	Bore Depth	Min. Bore	M35 Cobalt Order No.	M42 Cobalt Order No.
A	B	C	D		
3/4	2-7/8	1-1/8	3/8	375-5120	375-4120
3/4	3-5/8	1-7/8	3/8	375-5124	375-4124
3/4	3-1/16	1-5/16	7/16	375-5128	375-4128
3/4	3-15/16	2-3/16	7/16	375-5132	375-4132
3/4	3-1/4	1-1/2	1/2	375-5136	375-4136
3/4	4-1/4	2-1/2	1/2	375-5140	375-4140
3/4	3-7/16	1-11/16	9/16	375-5144	375-4144
3/4	4-9/16	2-13/16	9/16	375-5148	375-4148
3/4	3-5/8	1-7/8	5/8	375-5152	375-4152
3/4	4-7/8	3-1/8	5/8	375-5156	375-4156
3/4	3-13/16	2-1/16	11/16	375-5160	375-4160
3/4	5-3/16	3-7/16	11/16	375-5164	375-4164
3/4	4	2-1/4	3/4	375-5168	375-4168
3/4	5-1/2	3-3/4	3/4	375-5172	375-4172
14 Piece Set of Above				375-1607	375-1609

Single End Boring Bars

45 & 90°

单头光刀杆



Individual

Diameter of Bar	Overall Length	Bit Size	45 Degree Order No.	90 Degree Order No.
1/4"	2-1/2"	5/32" round tool bits	378-4102	378-4202
5/16	2-1/2	3/16 round tool bits	378-4104	378-4204
3/8	3	3/16 round tool bits	378-4106	378-4206
1/2	3	3/16 square tool bits	378-4108	378-4208
9/16	4-1/2	3/16 square tool bits	378-4110	378-4210
5/8	5	1/4 square tool bits	378-4112	378-4212
3/4	6	1/4 square tool bits	378-4114	378-4214
1	6	5/16 square tool bits	378-4116	378-4216
1	6	3/8 square tool bits	378-4118	378-4218
1-1/8	7	7/16 square tool bits	378-4120	378-4220
1-1/4	8	1/2 square tool bits	378-4122	378-4222
1-1/2	9	1/2 square tool bits	378-4124	378-4224

Sets

No. of Pieces	Angle	Sizes	Order No.
4	45°	1/4, 3/8, 1/2, 5/8"	378-4140
4	90°	1/4, 3/8, 1/2, 5/8"	378-4240

Double End Boring Bars

双头光刀杆



Individual

Size	Tool Bit Size	Order No.
1/4x5"	5/32" round toolbits	378-4002
5/16x5	3/16 round toolbits	378-4004
3/8x6	3/16 round toolbits	378-4006
1/2x6	3/16 square toolbits	378-4008
1/2x6	1/4 square toolbits	378-4009
1/2x9	1/4 square toolbits	378-4010
5/8x10	1/4 square toolbits	378-4012
3/4x12	1/4 square toolbits	378-4014
1x12	1/4 square toolbits	378-4015
1x12	5/16 square toolbits	378-4016
1-1/4x16	1/2 square toolbits	378-4018
1-1/2x18	1/2 square toolbits	378-4020
9/16x6-1/2	1/4 square toolbits	378-4021

Sets

No. of Pieces	Sizes	Order No.
4	1/2, 9/16, 5/8, 3/4"	378-4030
4	1/4, 5/16, 3/8, 1/2"	378-4031
5	1/4, 3/8, 1/2, 5/8, 3/4"	378-4000
5	3/8, 1/2, 5/8, 3/4, 1"	378-4001

Double End Calibrated Boring Bars

双头带刻线光刀杆



Individual

Diameter Of Bar	Overall Length	Tool Bit Size	Order No.
3/8"	6"	3/16" round tool bits	378-4302
1/2	6	3/16" square tool bits	378-4304
1/2	9	3/16" square tool bits	378-4306
5/8	10	3/16" square tool bits	378-4308
3/4	12	1/4" square tool bits	378-4310
1	12	1/4" square tool bits	378-4312
1-1/4	16	3/8" square tool bits	378-4314
1-1/2	18	3/8" square tool bits	378-4316

Fly-Tool Cutter Holders & Sets

Straight Shank 铣刀盘

Counter balanced tap get smoother finished. Hardened steel, machines up to 6" wide surface with stand tool bit. Tool bit replaces end mill and resharpening. Sets come complete with wooden stand.



No. of Piece	Head Diameter	Shank Size	Tool Bit Size	Individuals Order No.	Sets Order No.
3	3/4"	1/2"	3/16"	225-3031	225-3030
	1-1/8	1/2	1/4	225-3032	
	1-1/2	1/2	5/16	225-3033	
3	1-1/2	3/4	5/16	225-3041	225-3040
	2	3/4	5/16	225-3042	
	2-1/2	3/4	5/16	225-3043	
5	7/8	1/2	3/16	225-3044	225-3038
	1-1/4	1/2	1/4	225-3045	
	1-5/8	1/2	5/16	225-3046	
	2	1/2	3/8	225-3035	
	2-1/2	5/8	1/2	225-3036	
5	3/4	1/2	3/16	225-3031	225-3039
	1-1/8	1/2	1/4	225-3032	
	1-3/8	1/2	5/16	225-3034	
	2	1/2	3/8	225-3035	
	2-1/2	5/8	1/2	225-3036	

R8 Individual

Body Size	Tool Bit Size	Order No.
2-1/2"	5/16"	225-3022
2-1/2	3/8	225-3020

Tool Bits 白钢车刀

Hight Speed Steel, Precision Ground



Rectangular

Size	Inch Rectangular Order No.	Size	Metric Rectangular Order No.
1/8x1/2x4"	361-0000	3x13x100mm	361-1000
3/16x1/2x4	361-0001	4x6x80mm	361-1001
1/4x3/8x2-1/2	361-0002	5x8x80mm	361-1002
1/4x3/8x3	361-0003	6x8x100mm	361-1003
1/4x3/8x4	361-0005	6x10x100mm	361-1005
1/4x3/8x6	361-0010	6x10x160mm	361-1010
1/4x1/2x3	361-0015	6x13x75mm	361-1015
1/4x1/2x4	361-0020	6x13x100mm	361-1020
1/4x1/2x6	361-0025	6x13x150mm	361-1025
1/4x5/8x4-1/2	361-0028	6x20x100mm	361-1030
1/4x3/4x4	361-0030	6x20x125mm	361-1035
1/4x3/4x5	361-0035	6x20x150mm	361-1040
1/4x3/4x6	361-0040	6x25x150mm	361-1045
1/4x1x6	361-0045	8x10x100mm	361-1050
5/16x3/8x4	361-0050	8x11x75mm	361-1055
5/16x7/16x3	361-0055	8x13x100mm	361-1060
5/16x1/2x3	361-0057	8x16x160mm	361-1063
5/16x1/2x4	361-0060	8x20x100mm	361-1065
5/16x5/8x4	361-0062	8x25x150mm	361-1070
5/16x3/4x3"	361-0064	10x13x75mm	361-1075
5/16x3/4x4	361-0065	10x13x100mm	361-1080
5/16x3/4x5	361-0066	10x13x150mm	361-1081
5/16x1x6	361-0070	10x16x100mm	361-1085
3/8x1/2x3	361-0075	10x16x125mm	361-1090
3/8x1/2x4	361-0080	10x16x150mm	361-1095
3/8x1/2x6"	361-0082	10x16x175mm	361-1096
3/8x5/8x4	361-0085	10x20x100mm	361-1100
3/8x5/8x4-1/2	361-0087	10x20x150mm	361-1105
3/8x5/8x5	361-0090	10x25x150mm	361-1110
3/8x5/8x6	361-0095	13x20x100mm	361-1115
3/8x3/4x4	361-0100	13x20x150mm	361-1120
3/8x3/4x5	361-0103	13x25x175mm	361-1125
3/8x3/4x6	361-0105	13x32x175mm	361-1130
3/8x1x6	361-0110	13x38x175mm	361-1135
3/8x1-1/4x6-1/2	361-0112	16x20x125mm	361-1140
1/2x3/4x4	361-0115	16x22x150mm	361-1145
1/2x3/4x5	361-0117	16x25x150mm	361-1150
1/2x3/4x6	361-0120	16x25x175mm	361-1155
1/2x1x6	361-0124	16x32x150mm	361-1160
1/2x1x7	361-0125	16x32x175mm	361-1165
1/2x1x8	361-0126	16x38x175mm	361-1170
1/2x1-1/4x7	361-0130	22x25x150mm	361-1175
1/2x1-1/2x7	361-0135	22x25x175mm	361-1180
5/8x3/4x5	361-0140	22x32x150mm	361-1185
5/8x7/8x6	361-0145	22x32x175mm	361-1190
5/8x1x6	361-0150	22x38x175mm	361-1195
5/8x1x7	361-0155	25x32x150mm	361-1200
5/8x1-1/4x6	361-0160	25x32x175mm	361-1205
5/8x1-1/4x7	361-0165	25x38x175mm	361-1210
5/8x1-1/2x7	361-0170		
3/4x1x6	361-0175		
3/4x1x7	361-0180		
3/4x1-1/4x6	361-0185		
3/4x1-1/4x7	361-0190		
3/4x1-1/2x7	361-0195		
1x1-1/4x6	361-0200		
1x1-1/4x7	361-0205		
1x1-1/2x7	361-0210		



Square

Size	Inch Square Order No.	Size	Metric Square Order No.
1/8x2-1/2"	360-0010	3x100mm	360-1014
1/8x4	360-0014	3x150mm	360-1016
1/8x6	360-0016	3x200mm	360-1018
1/8x8	360-0018	4x60mm	360-1020
3/16x2	360-0020	4x63mm	360-1021
3/16x2-1/2	360-0021	4x80mm	360-1022
3/16x3	360-0022	5x100mm	360-1025
3/16x4	360-0023	5x150mm	360-1026
3/16x5	360-0024	5x200mm	360-1028
3/16x6	360-0026	6x60mm	360-1029
3/16x8	360-0028	6x80mm	360-1030
1/4x2-1/2	360-0033	6x100mm	360-1031
1/4x3	360-0034	6x150mm	360-1032
1/4x4	360-0035	6x200mm	360-1033
1/4x6	360-0037	6x63mm	360-1035
1/4x8	360-0039	7x150mm	360-1038
5/16x2-1/2	360-0049	7x120mm	360-1039
5/16x3	360-0050	8x60mm	360-1041
5/16x3-1/2	360-0051	8x100mm	360-1042
5/16x4	360-0052	8x125mm	360-1043
5/16x6	360-0054	8x150mm	360-1044
5/16x8	360-0057	8x200mm	360-1045
3/8x3	360-0067	8x80mm	360-1046
3/8x4	360-0069	8x160mm	360-1047
3/8x6	360-0071	10x100mm	360-1048
3/8x8	360-0073	10x125mm	360-1049
7/16x3-1/2	360-0090	10x150mm	360-1050
7/16x4	360-0091	10x200mm	360-1051
7/16x6	360-0095	10x80mm	360-1052
7/16x8	360-0097	10x160mm	360-1053
1/2x3	360-0109	12x100mm	360-1055
1/2x4	360-0111	12x125mm	360-1056
1/2x6	360-0113	12x150mm	360-1057
1/2x8	360-0115	12x200mm	360-1058
5/8x4	360-0127	14x150mm	360-1061
5/8x4-1/2	360-0128	14x200mm	360-1063
5/8x6	360-0131	15x200mm	360-1068
5/8x8	360-0135	16x100mm	360-1070
3/4x4	360-0147	16x150mm	360-1072
3/4x5	360-0148	16x200mm	360-1073
3/4x6	360-0149	18x150mm	360-1075
3/4x8	360-0163	18x200mm	360-1076
7/8x6	360-0165	20x100mm	360-1078
1x4	360-0175	20x150mm	360-1079
1x6	360-0177	20x200mm	360-1080
1X7	360-0179	20x160mm	360-1081
1x8	360-0180	25x100mm	360-1090
1-1/8X8	360-0185	25x150mm	360-1092
1-1/4x6	360-0200	25x200mm	360-1095
1-1/4x8	360-0202	25x250mm	360-1098
1-1/2x8	360-0204	32x200mm	360-1110
1-1/2x10	360-0208	38x200mm	360-1120
2x8	360-0210	50x200mm	360-1130

Tool Bits 白钢车刀

High Speed Steel, Precision Ground

Round



Size	Inch Round Order No.	Size	Metric Round Order No.
1/8x2-1/2"	362-0030	2x50mm	362-1030
1/8x2-3/4	362-0031	2.5x50mm	362-1040
1/8x4	362-0034	3x60mm	362-1050
1/8x6	362-0036	3x100mm	362-1051
1/8x8	362-0038	3x150mm	362-1052
5/32x2-1/2	362-0040	3x200mm	362-1053
3/16x2	362-0050	3.5x60mm	362-1055
3/16x2-1/2	362-0051	4x80mm	362-1060
3/16x3	362-0052	4x100mm	362-1065
3/16x3-1/2	362-0053	4.5x80mm	362-1070
3/16x4	362-0054	5x80mm	362-1080
3/16x6	362-0056	5x100mm	362-1085
3/16x8	362-0058	5x150mm	362-1086
7/32x3-1/2	362-0064	5x200mm	362-1087
1/4x2-1/2	362-0074	5.5x90mm	362-1095
1/4x3	362-0075	6x80mm	362-1105
1/4x4	362-0077	6x100mm	362-1107
1/4x6	362-0078	6x150mm	362-1109
1/4x8	362-0079	6x200mm	362-1111
9/32x4	362-0090	6.5x100mm	362-1115
5/16x2-1/2	362-0100	7x100mm	362-1120
5/16x3	362-0101	7.5x100mm	362-1130
5/16x4	362-0102	8x60mm	362-1140
5/16x4-1/2	362-0103	8x100mm	362-1142
5/16x6	362-0104	8x150mm	362-1144
5/16x8	362-0107	8x200mm	362-1146
3/8x3	362-0117	9x125mm	362-1152
3/8x4	362-0119	10x100mm	362-1160
3/8x5	362-0121	10x150mm	362-1162
3/8x6	362-0123	10x200mm	362-1164
3/8x8	362-0124	12x100mm	362-1170
7/16x4	362-0133	12x150mm	362-1172
7/16x5-1/2	362-0135	12x200mm	362-1174
1/2x3	362-0143	14x150mm	362-1180
1/2x4	362-0145	14x200mm	362-1182
1/2x6	362-0147	16x100mm	362-1189
1/2x8	362-0149	16x150mm	362-1190
9/16x6	362-0153	16x200mm	362-1192
5/8x4	362-0160	18x200mm	362-1202
5/8x6	362-0163	20x100mm	362-1209
5/8x8	362-0168	20x150mm	362-1210
3/4x4	362-0173	20x200mm	362-1212
3/4x6	362-0175	18x150mm	362-1219
3/4x8	362-0178	25x100mm	362-1220
1x4	362-0191	25x150mm	362-1221
1x6	362-0193	25x200mm	362-1222
1x8	362-0198		

Cobalt Tool Bits 5% 钴 (M35) 高速钢白钢刀

- Can be used on forgings, castings and heavy materials cuts.
- Suitable in applications of heat environment.



M35 5% Rectangular

Size	5% Cobalt Order No.	Size	5% Cobalt Order No.	Size	5% Cobalt Order No.
3/16x5/16x4"	461-0000	5/16x1/2x6	461-0060	1/2x1x8	461-0127
1/8x1/2x4	461-0001	5/16x3/4x4	461-0063	1/2x1-1/4x7	461-0130
1/4x3/8x2-1/2	461-0002	5/16x3/4x5	461-0065	1/2x1-1/2x7	461-0135
1/4x3/8x4	461-0005	5/16x1x6	461-0070	5/8x3/4x5	461-0140
1/4x3/8x6	461-0007	3/8x1/2x4	461-0080	5/8x7/8x6	461-0145
1/4x1/2x3	461-0015	3/8x5/8x4	461-0088	5/8x1x6	461-0148
1/4x1/2x4	461-0020	3/8x5/8x5	461-0090	5/8x1x7	461-0150
1/4x1/2x6	461-0021	3/8x5/8x6	461-0092	5/8x1-1/4x6	461-0151
1/4x3/4x4	461-0033	3/8x3/4x4"	461-0100	5/8x1-1/4x7	461-0152
1/4x3/4x5	461-0035	3/8x3/4x5	461-0103	5/8x1-1/2x7	461-0153
1/4x3/4x6	461-0037	3/8x3/4x6	461-0105	3/4x1x7	461-0155
1/4x1x6	461-0040	3/8x1x6	461-0110	3/4x1-1/4x7	461-0157
5/16x3/8x4	461-0045	1/2x3/4x4	461-0115	3/4x1-1/2x7	461-0159
5/16x7/16x3	461-0048	1/2x3/4x5	461-0117	1x1-1/4x7	461-0162
5/16x7/16x4	461-0050	1/2x3/4x6	461-0120	1x1/1/2x7	461-0166
5/16x1/2x4	461-0055	1/2x1x7	461-0125		

Extra Length Square

Size (Square x L)	M35 5% Order No.
1/4x4"	460-2158
1/4x6	460-2160
1/4x8	460-2200
5/16x4	460-2228
5/16x6	460-2230
5/16x8	460-2260
3/8x4	460-2298
3/8x6	460-2300
3/8x8	460-2330
7/16x6	460-2335
1/2x6	460-2400
1/2x8	460-2500
5/8x6	460-2600
5/8x8	460-2602
3/4x6	460-2606
3/4x8	460-2608

Square

Size (Square x L)	M35 5% Order No.	10% Order No.
1/8x2-1/2"	460-0010	460-1010
3/16x2-1/2	460-0021	460-1021
1/4x2-1/2	460-0033	460-1033
5/16x2-1/2	460-0049	460-1049
3/8x3	460-0067	460-1067
7/16x3-1/2	460-0090	460-1090
1/2x4	460-0111	460-1111
5/8x4-1/2	460-0128	460-1128
3/4x5	460-0148	460-1148
7/8x6	460-0165	460-1152
1x7	460-0179	460-1155
1-1/8x8	460-0185	460-1160
1-1/4x7	460-0201	
1-1/4x9	460-0205	460-1165
1-1/2x10	460-0220	

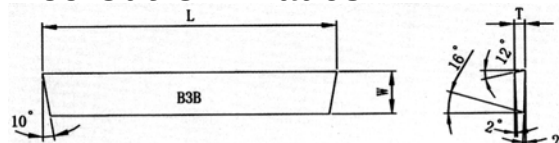
M35 5% Round Tool Bits



Size	Order No.	Size	Order No.	Size	Order No.
1/8x2-3/4"	461-1031	3/8x3	461-1117	9/16x6	461-1153
3/16x3-1/2	461-1053	3/8x4	461-1119	5/8x3	461-1156
1/4x2-1/2	461-1074	3/8x5	461-1121	5/8x6	461-1163
1/4x2	461-1077	7/16x3-1/2	461-1132	3/4x6	461-1175
5/16x2-1/2	461-1100	7/16x4	461-1133	7/8x6	461-1181
5/16x3	461-1101	7/16x5-1/2	461-1135	1x6	461-1193
5/16x4	461-1102	1/2x4	461-1145		
5/16x4-1/2	461-1103	1/2x6	461-1147		

10Deg Double Beveled

M35 Cut-Off Blades



Thick.	Ht.	L	Order No.	Thick.	Ht.	L	Order No.
1/16	1/2	4-1/2	397-7002	1/8	7/8	7	397-7013
1/16	11/16	5	397-7004	3/16	3/4	6	397-7014
3/32	1/2	4-1/2	397-7026	3/16	13/16	6	397-7015
3/32	5/8	5	397-7006	3/16	1	6-1/2	397-7016
3/32	11/16	5	397-7007	3/16	1	8	397-7018
1/8	1/2	4-1/2	397-7008	3/16	1-1/8	7	397-7020
1/8	3/4	5	397-7010	1/4	1-1/4	7	397-7022
1/8	3/4	6	397-7011	1/4	1-1/8	7	397-7024
1/8	7/8	6	397-7012	1/4	1-1/8	9	397-7025

M42 Cobalt Square Tool Bits

8% 钴 (M42) 高速钢方型白钢刀



Inch

Size	Order No.	Size	Order No.
1/8x2-1/2"	460-6010	3/4x5"	460-6148
3/16x2-1/2"	460-6021	7/8x6"	460-6165
1/4x2-1/2"	460-6033	1x7"	460-6179
5/16x2-1/2"	460-6049	1x8"	460-6180
3/8x3"	460-6067	1-1/8x8"	460-6185
7/16x3-1/2"	460-6090	1-1/4x7"	460-6201
1/2x4"	460-6111	1-1/4x9"	460-6205
5/8x4-1/2"	460-6128	1-1/2x10"	460-6220

M42 Cobalt Square Tool Bits-Long Length

8% 钴 (M42) 方型加长白钢刀



Inch

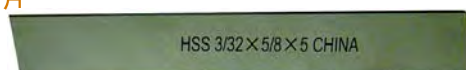
Size	Order No.	Size	Order No.
3/16x8"	460-6123	3/8x8"	460-6330
1/4x4"	460-6158	7/16x6"	460-6335
1/4x6"	460-6160	1/2x6"	460-6400
1/4x8"	460-6200	1/2x8"	460-6500
5/16x4"	460-6228	5/8x6"	460-6600
5/16x6"	460-6230	5/8x8"	460-6602
5/16x8"	460-6260	3/4x6"	460-6606
3/8x4"	460-6298	3/4x8"	460-6608
3/8x6"	460-6300		

Metric

Size	Order No.	Size	Order No.
6x63mm	460-6715	10x100	460-6735
6x100	460-6720	10x200	460-6740
8x100	460-6725	12x100	460-6745
8x150	460-6730	20x200	460-6755

M2 & M35 Cut Off Blades

M2 & M35 割刀片

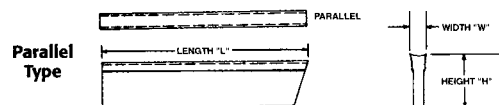


			M2 HSS	M35 Cobalt
Wide	Height	Length	Order No.	Order No.
1/16"	1/2"	4-1/2"	363-0016	461-2016
1/16	11/16	5	363-0001	461-2000
5/64	1/2	4-1/2	363-0017	461-2017
3/32	1/2	4-1/2	363-0002	461-2002
3/32	5/8	5	363-0003	461-2003
3/32	11/16	5	363-0014	461-2001
1/8	11/16	5	363-0015	461-2015
1/8	3/4	5	363-0004	461-2004
1/8	3/4	6	363-0011	461-2008
1/8	7/8	6	363-0005	461-2005
1/8	7/8	7	363-0012	461-2014
3/16	3/4	6	363-0018	461-2018
3/16	1	6-1/2	363-0006	461-2006
3/16	1	8	363-0013	461-2013
3/16	1-1/8	7	363-0007	461-2007
1/4	1-1/8	7	363-0008	461-2011
1/4	1-1/4	7	363-0009	461-2009
1/4	1-3/8	7	363-0010	461-2010

T-Type Cut Off Blades

Parallel Type

平行割刀片



Tool No.	W	H	L	HSS Order No.	Cobalt Order No.
P1N	.040"	1/2"	3-1/2"	363-6005	363-7005
P1	1/16	1/2	4-1/2	363-6010	363-7010
P2N	5/64	1/2	4-1/2	363-6015	363-7015
P2	3/32	1/2	4-1/2	363-6020	363-7020
P3S	1/8	1/2	4-1/2	363-6025	363-7025
P3N	3/32	11/16	5	363-6030	363-7030
P3	1/8	11/16	5	363-6035	363-7035
P4	5/32	11/16	5	363-6040	363-7040
P5S	3/16	11/16	5	363-6045	363-7045
P3W	1/8	3/4	5	363-6050	363-7050
P4W	5/32	3/4	5	363-6055	363-7055
P5W	3/16	3/4	5	363-6060	363-7060
P5X	1/8	7/8	6	363-6065	363-7065
P5N	5/32	7/8	6	363-6070	363-7070
P5	3/16	7/8	6	363-6075	363-7075
P6	1/4	7/8	6	363-6080	363-7080
P8x	1/8	1-1/8	6-1/2	363-6085	363-7085
P8N	5/32	1-1/8	6-1/2	363-6090	363-7090
P8	3/16	1-1/8	6-1/2	363-6095	363-7095
P9	1/4	1-1/8	6-1/2	363-6100	363-7100
P10	5/16	1-1/8	6-1/2	363-6105	

Tapered Type

锥度割刀片



Tool No.	W	H	L	HSS Order No.	Cobalt Order No.
T1-N	.040"	1/2"	3-1/2"	363-5005	363-5205
T-1	1/16	1/2	4-1/4	363-5010	363-5210
T-2-N	5/64	1/2	4-1/4	363-5015	363-5215
T-2	3/32	1/2	4-1/4	363-5020	363-5220
T3-S	1/8	1/2	4-1/4	363-5025	363-5225
T3-N	3/32	11/16	4-1/4	363-5030	363-5230
T3	1/8	11/16	4-1/4	363-5035	363-5235
T4	5/32	11/16	4-1/4	363-5040	363-5240
T5-S	3/16	11/16	5	363-5045	363-5245
T3-W	1/8	3/4	5	363-5050	363-5250
T4-W	5/32	3/4	5	363-5055	363-5255
T5-W	3/16	3/4	5	363-5060	363-5260
T5-X	1/8	7/8	5	363-5065	363-5265
T5-N	5/32	7/8	5	363-5070	363-5270
T5	3/16	7/8	5	363-5075	363-5275
T6	1/4	7/8	5	363-5080	363-5280
T8-X	1/8	1-1/8	5-1/2	363-5085	363-5285
T8-N	5/32	1-1/8	5-1/2	363-5090	363-5290
T8	3/16	1-1/8	5-1/2	363-5095	363-5295
T9	1/4	1-1/8	5-1/2	363-5100	363-5300
T10	5/16	1-1/8	5-1/2	363-5105	363-5305

Carbide Tipped Router Bit Sets

套装硬质合金木工铣刀

6 Piece Set	12 Piece Set	12 Piece Set	12 Piece Set
			
6pcs,1/4"Shank 1 Each: 1/4,1/2 Straight Bit 1/2x90° V Grooving Bit 1/2Core Box Bit 1xR5/32 Roman Ogee Bit 1-1/4xR3/8 Rounding Over Bit	12pcs,1/4"Shank Round Nose Bit R1/8x1/2" 90° V Grooving Bit 3/8x7/16" Straight Bit 1/4"x3/4" Mortising Bit 1/2x1/2" Straight Bit 1/2x1" Straight Bit 3/4"x3/4" Dovetail Bit 1/2x1/2" Slot Cutter Bit 1-1/4x3/8" 45°Chamfer Bit 1-5/8x3/4" Rounding Over Bit R3/8x5/8" Cove Bit R1/2x5/8" Roman ogee Bit R1/4x21/32"	12pcs,1/4"Shank 1 Each: Cove Box Bit R6.3x9.5mm Cove Bit R6.3x10mm Dovetail Bit 12.7x13mm 45° Chamfer Bit 32.0x13mm Flush Trim Bit 12.7x13mm Straight Bit 16.0x20mm Rounding Over Bit R6.3x11mm Straight Bit 12.0x20mm Straight Bit 6.0x19mm Rounding Over Bit R9.5x16 90° V Grooving Bit 12.7x10mm Roman ogee Bit R4.0x12mm	12pcs,1/2"Shank 1 Each: Cove Box Bit R6.3x9.5mm Cove Bit R6.3x10mm Dovetail Bit 12.7x13mm 45° Chamfer Bit 32.0x13mm Flush Trim Bit 12.7x13mm Straight Bit 16.0x20mm Rounding Over Bit R6.3x11mm Straight Bit 12.0x20mm Straight Bit 6.0x19mm Rounding Over Bit R9.5x16 90° V Grooving Bit 12.7x10mm Roman ogee Bit R4.0x12mm
Order No.738-0613	Order No. 738-1203	Order No. 738-1210	Order No. 738-1219

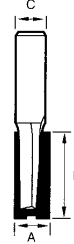
15 Piece Set	24 Piece Set	24 Piece Set
		
15pcs,1/4"Shank 1 Each: Straight Bit(1F) 3/16x3/8" Cove Box Bit R1/8x1/4" Panel Pilot Bit 1/4x3/4" 90°V Grooving Bit 3/8x7/16" Straight Bit 1/4x3/4" Mortising Bit 1/2x1/2" Straight Bit 1/2x1" Straight Bit 3/4x3/4" Dovetail Bit 1/2x1/2" Flush Trim Bit 1/2x1/2" Slot Cutter Bit 1-1/4x3/8" 45° Chamfer Bit 1-3/16x1/2" Rounding Over Bit R3/8"x5/8" Cove Bit R1/2x15/32" Roman Ogee Bit R5/32x15/32	24pcs,1/4"Shank 1 Each: (1) 1/2"x1/2" Mortising Bit (1) 1/2"x5/8" Combination Bevel Bit (1)Each of 3/8"x14°, 1/2"x8"Dovetail Bit (1) 1/2"x1/2" x90°VGrooving Bit (1) Each of R3/16", R1/4" Round Nose Bit (1) 3/8"x5/8" Trimming Bit (1) 1/4x3/4" Panel Pilot Bit (1) Each of 1/4",3/8",1/2",3/4x3/4" Straight Bit (1) 1/2x1" Flush Trim Bit (1) Each of R1/8x1/4",R3/16x3/8",R1/4x7/16", R3/8x5/8" Rounding Over Bit (1) Each of R3/8x1/2",R1/4x3/8" Cove Bit (1) 1-3/16"x1/2"x45° Chamfer Bit (1) R5/32x15/32" Roman Ogee Bit (1) 1-1/4"x1/4" Slot Cutter Bit (1) 1-1/4"x1/2" Rabbeting Bit	24pcs,1/2"Shank 1 Each: (1) 1/2"x1/2" Mortising Bit (1) 1/2"x5/8" Combination Bevel Bit (1) Each of 3/8"x3/8"x14°, 1/2"x1/2"x8"Dovetail Bit (1) 1/2"x1/2" x90°VGrooving Bit (1) Each of R3/16", R1/4" Round Nose Bit (1) 3/8"x5/8" Trimming Bit (1) 1/4x3/4" Panel Pilot Bit (1) Each of 1/4",3/8",1/2",3/4" Straight Bit (1) 1/2x1" Flush Trim Bit (1) Each of R1/8x1/4",R3/16x3/8",R1/4x7/16", R3/8x5/8" Rounding Over Bit (1) Each of R3/8x1/2",R1/4x3/8" Cove Bit (1) 1-3/16"x1/2"x45° Chamfer Bit (1) R5/32x15/32" Roman Ogee Bit (1) 1-1/4"x1/4" Slot Cutter Bit (1) 1-1/4"x1/2" Rabbeting Bit
Order No. 738-1502	OrderNo. 738-2401	OrderNo. 738-2402

Carbide Tipped Router Bits 硬质合金木工铣刀



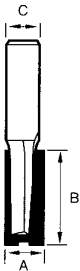
Straight Bits, 1/4" Shank

Cutter Dia. Cutter Length		Shank Dia.	
A	B	C	Order No.
1/4"	3/4"	1/4"	730-0163
	1	1/4	730-0165
	1	1/4	730-0205
1/4	1	1/4	730-0245
	1	1/4	730-0285
5/16	1	1/4	730-0325
3/8	1	1/4	730-0365
	1	1/4	730-0405
	3/4	1/4	730-0445
7/16	3/4	1/4	730-0485
1/2	3/4	1/4	730-0525
	3/4	1/4	730-0565
	3/4	1/4	730-0605
9/16	3/4	1/4	730-0645



Straight Cutters, 1/2" Shank

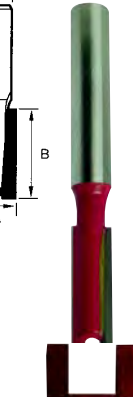
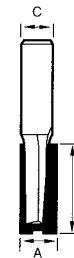
Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
1/4"	3/4"	1/2"		730-2165
5/16	1	1/2		730-2205
3/8	1	1/2		730-2245
7/16	1	1/2		730-2285
1/2	1-1/4	1/2		730-2325
9/16	1	1/2		730-2365
5/8	1-1/4	1/2		730-2405
11/16	1-1/4	1/2		730-2445
3/4	1-1/4	1/2		730-2485
13/16	1-1/4	1/2		730-2525
7/8	1-1/4	1/2		730-2565
15/16	1-1/4	1/2		730-2605
1	1-1/4	1/2		730-2645
1-1/4	1-1/4	1/2		730-2805
1-1/2	1-1/4	1/2		730-2965



Metric Straight Bits, 1/4" Shank

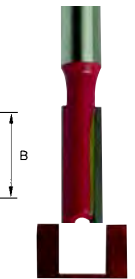
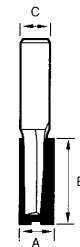
Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
6mm	3/4	1/4		730-4006
8mm	3/4	1/4		730-4008
11mm	3/4	1/4		730-4011
14mm	3/4	1/4		730-4014
16mm	3/4	1/4		730-4016
17mm	3/4	1/4		730-4017
18mm	3/4	1/4		730-4018
19mm	3/4	1/4		730-4019

Cutter Dia.	Cutter Length	Shank	Order No.
6mm	45	6mm	730-0802
8mm	45	6mm	730-0804
10mm	50	6mm	730-0806
13mm	50	6mm	730-0808
16mm	50	6mm	730-0810
19mm	50	6mm	730-0812
22mm	55	12mm	730-0814
25mm	55	12mm	730-0816



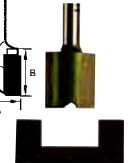
Straight Plunge Bits, 1/4" Shank

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
1/4"	3/4"	1/4"		734-0163
1/4	1	1/4		734-0165
5/16	1	1/4		734-0205
3/8	1	1/4		734-0245
7/16	1	1/4		734-0285
1/2	1	1/4		734-0325
9/16	1	1/4		734-0365
5/8	1	1/4		734-0405
11/16	3/4	1/4		734-0445
3/4	3/4	1/4		734-0485
13/16	3/4	1/4		734-0525
7/8	3/4	1/4		734-0565
15/16	3/4	1/4		734-0605
1	3/4	1/4		734-0645



Straight Plunge Bits, 1/2" Shank

Cutter Dia. Cutter Length Shank Dia.			
A	B	C	Order No.
3/8"	1-1/4"	1/2"	730-6324
1/2	1-1/2	1/2	730-6332
3/4	1-1/2	1/2	730-6348
1	1-1/2	1/2	730-6364



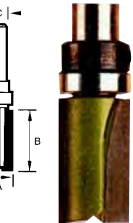
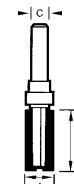
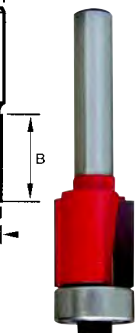
Hinge Mortising Bits, Double Flute

- For Making mortise pockets to accept hinges, stringers and edge boards.

Cutter Dia.	Cutter Length	Shank Dia.	Order No.
A	B	C	
1/2"	1/2"	1/4"	730-6632
3/4	3/4	1/4	730-6648

Flush Trimming Bits with Bearing

Cutter Dia. Cutter Length		Shank Dia.	
A	B	C	Order No.
1/4"	3/4"	1/4"	730-7165
3/8	7/16	1/4	730-7242
3/8	1/2	1/4	730-7243
3/8	1	1/4	730-7244
3/8	1-3/16	1/4	730-7246
1/2	1/2	1/4	730-7320
1/2	1	1/4	730-7322
1/2	1-1/4	1/4	730-7324
5/8	1-3/16	1/4	730-7405
1/2	1/2	1/2	730-7325
1/2	1	1/2	730-7326
1/2	1-1/2	1/2	730-7327
1/2	2	1/2	730-7328
5/8	1-3/16	1/2	730-7406

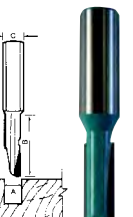
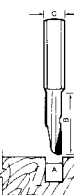


Template Bits, Double Flute

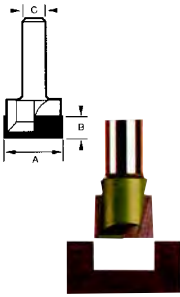
Cutter Dia. Cutter Length		Shank Dia.	OrderNo.
A	B	C	
5/16"	3/4"	1/4"	731-0205
1/2	1	1/4	731-0325
5/8	1	1/4	731-0405
3/4	1	1/4	731-0485
3/4	1-1/4	1/2	731-0486
1-1/8	1-1/2	1/2	731-0725

Staggered Tooth Plunge Cutting with Drill Point

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
3/8"	1/2"	1/2"		733-8224
1/2	3/4	1/2		733-8232



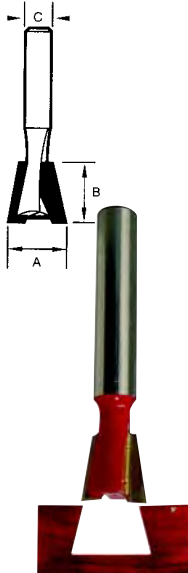
Carbide Tipped Router Bits 硬质合金木工铣刀



Bottom Cleaning Bits

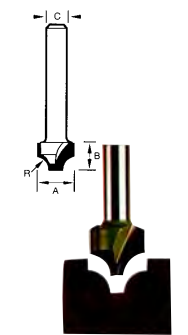
- Used to clean out and smooth pre-cut dados, inlays and shallow mortises.

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
3/4"	15/32"	1/4"		731-9148
3/4"	15/32"	1/2"		731-9248
1"	15/32"	1/2"		731-9264



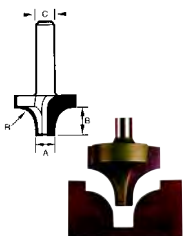
Dovetail Bits, Double Flute

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C	Angle	
1/4"	5/16"	1/4"	7-1/2°	731-6165
5/16"	3/8"	1/4"	9	731-6205
3/8"	3/8"	1/4"	9	731-6245
3/8"	7/16"	1/4"	9	731-6247
1/2"	1/2"	1/4"	14	731-6325
5/8"	7/8"	1/4"	7	731-6400
5/8"	5/8"	1/4"	14	731-6401
3/4"	7/8"	1/4"	7	731-6480
3/4"	3/4"	1/4"	14	731-6481
3/8"	3/8"	1/2"	9	731-6246
1/2"	1/2"	1/2"	14	731-6326
17/32"	1/2"	1/2"	14	731-6346
5/8"	7/8"	1/2"	7	731-6406
5/8"	5/8"	1/2"	14	731-6407
3/4"	7/8"	1/2"	7	731-6486
3/4"	3/4"	1/2"	14	731-6487
7/8"	7/8"	1/2"	14	731-6566
1"	7/8"	1/2"	14	731-6646



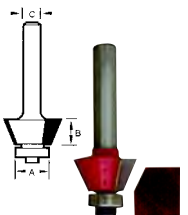
Plunge Beading/Roundover Bits

Cutter Dia.		Cutter Length	Shank Dia.	Radius	Order No.
A	B	C		R	
3/8"	7/16"	1/4"		1/8"	731-9424
1/2"	7/16"	1/4"		3/16"	731-9432
5/8"	1/2"	1/4"		1/8"	731-9440
7/8"	9/16"	1/4"		3/16"	731-9456
1"	5/8"	1/4"		1/4"	731-9464
1-1/4"	5/8"	1/4"		3/8"	731-9466
1-1/2"	3/4"	1/4"		1/2"	731-9468
3/8"	7/16"	1/2"		1/8"	731-9524
5/8"	7/16"	1/2"		1/8"	731-9540
7/8"	1/2"	1/2"		3/16"	731-9556



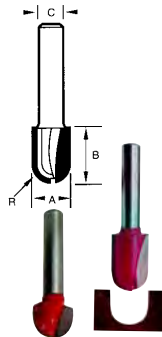
Plunge Round Bits

Cutter Dia.		Cutter Length	Shank Dia.	Radius	Order No.
A	B	C		R	
1/4"	1/2"	1/4"		1/4"	732-1160
1/4"	5/8"	1/4"		3/8"	732-1162
1/4"	1/2"	1/2"		1/4"	732-1164
1/4"	5/8"	1/2"		3/8"	732-1166



Chamfer Bits, Double Flute

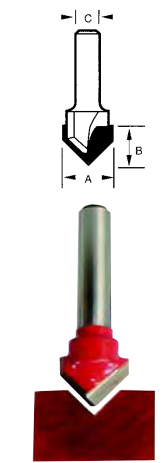
Cutter Dia.		Cutter Length	Shank Dia.	Chamfer Angle	Order No.
A	B	C			
1/2"	3/8"	1/4"		15°	731-2322
1/2"	3/8"	1/4"		25°	731-2324



Cove/Core Box Bits

- For veining or fluting with upshear angle lifts chips up to give a smooth cut with no burning.

Cutter Dia.		Cutter Length	Shank Dia.	Radius	Order No.
A	B	C		R	
1/4"	1/4"	1/4"		1/8"	732-8416
3/8"	3/8"	1/4"		3/16"	732-8424
1/2"	1/2"	1/4"		1/4"	732-8432
5/8"	5/8"	1/4"		5/16"	732-8440
3/4"	5/8"	1/4"		3/8"	732-8448
3/4"	5/8"	1/2"		3/8"	732-8648
1"	3/4"	1/2"		1/2"	732-8664



90° Groove Bits

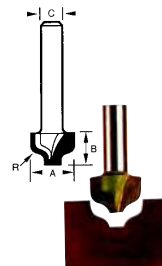
- For grooving in various widths and depths.

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
3/8"	7/16"	1/4"		731-8224
1/2"	1/2"	1/4"		731-8232
3/4"	5/8"	1/4"		731-8248
1"	3/4"	1/4"		731-8264
3/4"	5/8"	1/2"		731-8348
1"	3/4"	1/2"		731-8364
1-1/4"	5/16"	1/2"		731-8380



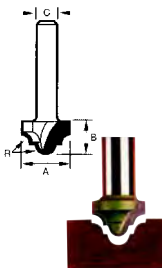
60° Groove Bits

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
1/2"	5/8"	1/4"		731-8532



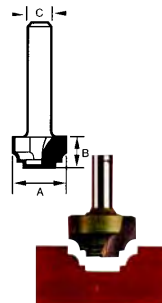
Plunge Ogee Bits, Double Flute

Cutter Dia.		Cutter Length	Shank Dia.	Radius	Order No.
A	B	C		R	
3/8"	3/8"	1/4"		1/8"	731-9624
1/2"	3/8"	1/4"		1/8"	731-9632
3/8"	3/8"	1/2"		1/8"	731-9724
1/2"	3/8"	1/2"		1/8"	731-9732



Plunge Classic Bits, Double Flute

Cutter Dia.		Cutter Length	Shank Dia.	Radius	Order No.
A	B	C		R	
1/2"	3/8"	1/4"		3/32"	732-0032
3/4"	1/2"	1/4"		5/32"	732-0048
1/2"	3/8"	1/2"		3/32"	732-0132
3/4"	1/2"	1/2"		5/32"	732-0148

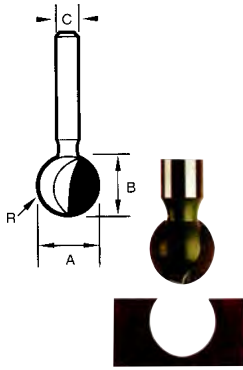


Plunge Traditional Bits, Double Flute

- Use to profile the face of a workpiece where a decorative look is needed.

Cutter Dia.		Cutter Length	Shank Dia.	Order No.
A	B	C		
1/2"	3/8"	1/4"		732-0332
3/4"	7/16"	1/4"		732-0348

Carbide Tipped Router Bits 硬质合金木工铣刀



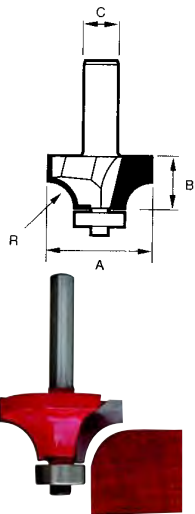
Plunge Ball/Radius Bits, Double Flute

Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
3/8"	3/8"	1/4"	3/16"	731-9824
1/2	1/2	1/4	1/4	731-9832
5/8	5/8	1/4	5/16	731-9840
3/4	3/4	1/4	3/8	731-9848
3/8	3/8	1/2	3/16	731-9924
1/2	1/2	1/2	1/4	731-9932
3/4	3/4	1/2	3/8	731-9948
1	1	1/2	1/2	731-9964



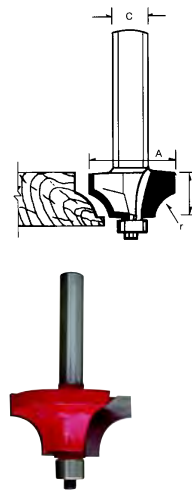
"V" Grooving 45°

Cutter Dia. A	Cutter Length B	Shank Dia. C	Order No.
3/8"	1/2"	1/4"	731-8624
3/4	5/8	1/2	731-8648



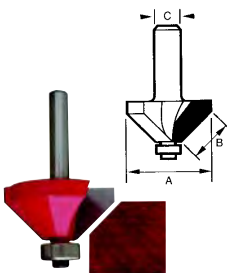
Radius Round Over Bits, Double Flute

Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
5/8"	3/8"	1/4"	1/16"	732-0540
3/4	3/8	1/4	1/8	732-0548
7/8	3/8	1/4	3/16	732-0556
1	7/16	1/4	1/4	732-0564
1-1/8	1/2	1/4	5/16	732-0572
1-1/4	5/8	1/4	3/8	732-0580
1-1/2	3/4	1/4	1/2	732-0596
1	7/16	1/2	1/4	732-0764
1-1/8	1/2	1/2	5/16	732-0772
1-1/4	5/8	1/2	3/8	732-0780
1-1/2	3/4	1/2	1/2	732-0796
2	1	1/2	3/4	732-0828
2-1/2	1-1/4	1/2	1	732-0860
3	1-1/2	1/2	1-1/4	732-0892



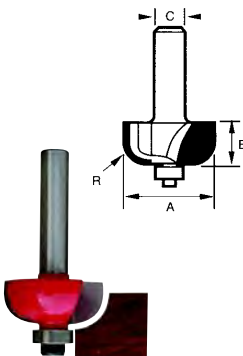
Radius Beading Bits with Bearing

Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
3/4"	7/16"	1/4"	1/16"	732-7048
7/8	3/8	1/4	1/8	732-7056
1	3/8	1/4	3/16	732-7064
1-1/8	7/16	1/4	1/4	732-7072
1-1/4	5/8	1/4	3/8	732-7080
1-3/8	5/8	1/4	5/16	732-7088
1-1/2	3/4	1/4	1/2	732-7096
1-5/8	3/4	1/4	1/2	732-7104
3/4	3/8	1/2	1/8	732-7348
7/8	3/8	1/2	3/16	732-7356
1	7/16	1/2	1/4	732-7364
1-1/8	1/2	1/2	1/4	732-7372
1-1/4	1/2	1/2	5/16	732-7380
1-3/8	5/8	1/2	3/8	732-7388
1-1/2	3/4	1/2	1/2	732-7396
1-5/8	3/4	1/2	1/2	732-7404
1-3/4	7/8	1/2	5/8	732-7412
2	1	1/2	3/4	732-7428
2-1/2	1-1/4	1/2	1	732-7460
2-3/4	1-3/8	1/2	1-1/8	732-7476
3	1-1/2	1/2	1-1/4	732-7492



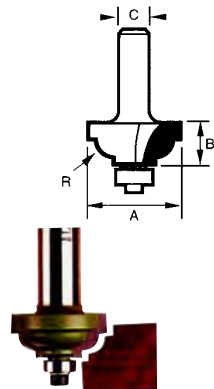
45° Chamfer Bits

Cutter Dia. A	Bevel Length B	Shank Dia. C	Order No.
1-3/16"	1/2"	1/4"	731-5112
1-3/16	1/2	1/2	731-5312
1-5/8	3/4	1/2	731-5340
2-1/4	1-1/4	1/2	731-5416



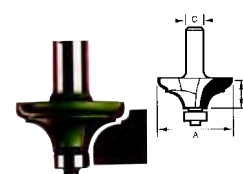
Cover Bits, Double Flute

Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
5/8"	3/8"	1/4"	1/8"	732-2340
7/8	3/8	1/4	1/4	732-2356
1-1/8	1/2	1/4	3/8	732-2372
1-3/8	5/8	1/4	1/2	732-2388
5/8	3/8	1/2	1/8	732-2640
7/8	3/8	1/2	1/4	732-2656
1-1/8	1/2	1/2	3/8	732-2672
1-3/8	5/8	1/2	1/2	732-2688
1-7/8	7/8	1/2	3/4	732-2720



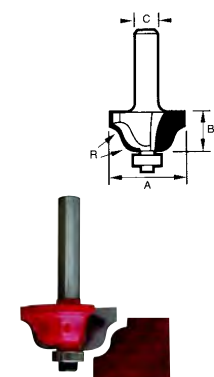
Classic Cover Bits, Double Flute

Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
1-1/16"	1/2"	1/4"	3/16"	732-2004
1-5/16	5/8	1/4	5/16	732-2020
1-1/16	1/2	1/2	3/16	732-2104
1-5/16	5/8	1/2	5/16	732-2120



French Table Bits, Double Flute

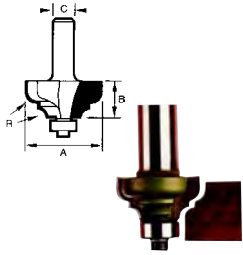
Cutter Dia. A	Cutter Length B	Shank Dia. C	Order No.
1-1/2"	5/8"	1/4"	732-3496
1-1/2	5/8	1/2	732-3596



Roman Ogee Bits, Double Flute

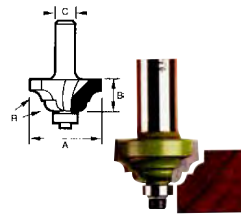
Cutter Dia. A	Cutter Length B	Shank Dia. C	Radius R	Order No.
1-1/16"	15/32"	1/4"	5/32"	732-2868
1-3/8	21/32	1/4	1/4	732-2888
1-1/16	15/32	1/2	5/32	732-2968
1-3/8	21/32	1/2	1/4	732-2988

Carbide Tipped Router Bits 硬质合金木工铣刀



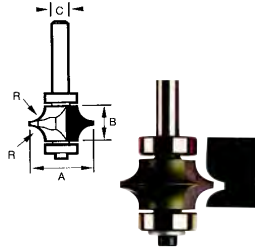
Classic Panel Bits, Double Flute

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
1"	1/2"	1/4"	1/8"	732-3264
1-1/4	9/16	1/4	3/16	732-3280
1	1/2	1/2	1/8	732-3364
1-1/4	9/16	1/2	3/16	732-3380



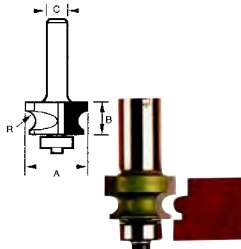
Classic Roman Ogee Bits, Double Flute

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
1"	1/2"	1/4"	1/8"	732-3064
1-1/4	5/8	1/4	3/16	732-3080
1	1/2	1/2	1/8	732-3164
1-1/4	5/8	1/2	3/16	732-3180



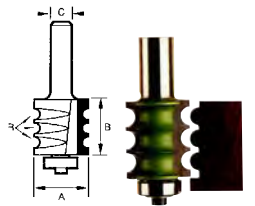
Beading Bits

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
7/8"	3/8"	1/4"	1/8"	732-3656
1	1/2	1/4	3/16	732-3664
1-1/8	5/8	1/4	1/4	732-3672



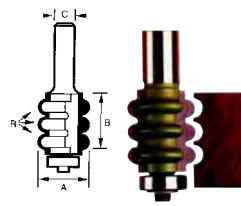
Edge Beading Bits

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
13/16"	1/2"	1/4"	3/32"	732-3752
7/8	9/16	1/4	1/8	732-3756
13/16	1/2	1/2	3/32	732-3852
7/8	9/16	1/2	1/8	732-3856



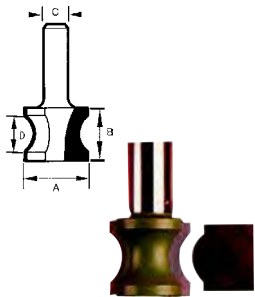
Triple Bead Bits

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
7/8"	1-3/32"	1/4"	1/8"	732-4156
7/8	1-3/32	1/2	1/8	732-4256



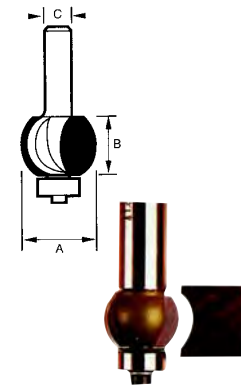
Triple Flute Bits

Cutter Dia.	Cutter Length	Shank Dia.	Radius	Order No.
A	B	C	R	
7/8"	1"	1/4"	1/8"	732-4356
7/8	1	1/2	1/8	732-4456



External Bull Nose Bits-Half Radius

Cutter Dia.	Cutter Length	Shank Dia.	Distance	Order No.
A	B	C	D	
3/4"	5/8"	1/4"	3/8"	732-4548
3/4	3/4	1/4	1/2	732-4549
7/8	1	1/4	3/4	732-4556
7/8	9/16	1/2	3/8	732-4656
7/8	3/4	1/2	1/2	732-4657
1	1	1/2	3/4	732-4664
1	1-3/8	1/2	1	732-4665
1-1/8	1-3/4	1/2	1-1/2	732-4672



Internal Bull Nose Bits-Half Radius

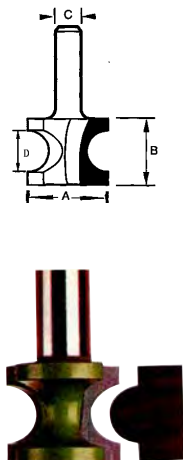
- Used for fluting, grooving and irregular pieces.

Cutter Dia.	Cutter Length	Shank Dia.	Order No.
A	B	C	
3/4"	3/8"	1/4"	732-4748
3/4	1/2	1/4	732-4749
13/16	5/8	1/4	732-4752
7/8	3/4	1/4	732-4756
3/4	1/2	1/2	732-4848
13/16	5/8	1/2	732-4852
7/8	3/4	1/2	732-4856
7/8	1	1/2	732-4857
1	1-1/4	1/2	732-4864

External Bull Nose Bits-Full Radius

- For Making mortise pockets to accept hinges, stringers and edge boards.

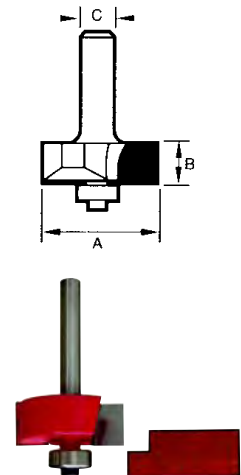
Cutter Dia.	Cutter Length	Shank Dia.	Diameter	Order No.
A	B	C	D	
3/4"	1/2"	1/4"	1/4"	732-5048
7/8	11/16	1/4	3/8	732-5056
1	13/16	1/4	1/2	732-5064
1-1/8	13/16	1/4	5/8	732-5072
1-1/4	1-1/16	1/4	3/4	732-5080
7/8	1/2	1/2	1/4	732-5156
1	5/8	1/2	3/8	732-5164
1-1/8	13/16	1/2	1/2	732-5172
1-1/4	13/16	1/2	5/8	732-5180
1-3/8	1-1/16	1/2	3/4	732-5190
1-5/8	1-3/8	1/2	1	732-5204
1-3/4	1-3/8	1/2	1-1/8	732-5212
1-7/8	1-5/8	1/2	1-1/4	732-5220
2	1-3/4	1/2	1-3/8	732-5228
2-1/8	1-3/4	1/2	1-1/2	732-5236



Rabbeting Bits, With Bearing

- Used for rabbeting and slotting and grooving.

Cutter Dia.	Cutter Length	Shank Dia.	Order No.
A	B	C	
1-1/4"	1/16"	1/4"	732-8004
1-1/4	1/8	1/4	732-8008
1-1/4	5/32	1/4	732-8010
1-1/4	3/16	1/4	732-8012
1-1/4	1/4	1/4	732-8016
1-1/4	3/8	1/4	732-8024
1-1/4	1/2	1/4	732-8032
1-1/4	1/8	1/2	732-8208
1-1/4	1/4	1/2	732-8216
1-1/4	3/8	1/2	732-8224
1-1/4	1/2	1/2	732-8232
1-1/4	5/8	1/2	732-8240
1-1/4	3/4	1/2	732-8248



Abrasives, Files & Deburring Tools

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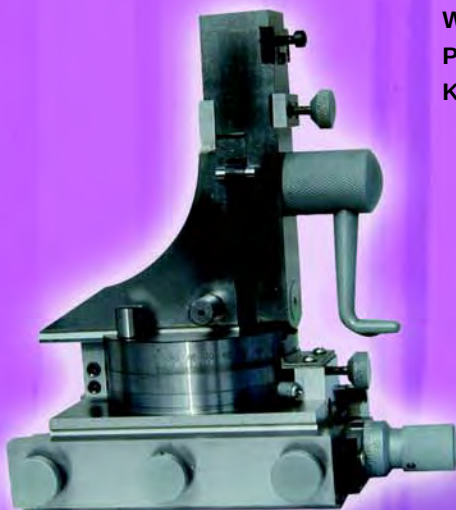
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倒角器刀片

Specification	Applications									Materials								Blade	Picture	Order No.
	Straight Edge	Hole Edge	Cross -Hole Both Edge	Hole Back-Edge	Hole Inner Surface	Flat Surface	Slot Keyway	Inner Straight	Sheet	Steel	Aluminium	Copper	Brass	Cast Iron	Stainless Steel	Polycrystal & Poliam	Plastics			
The mostly used blade for inner and outer Deburring	●	●								■	■	■					●	B10		380-0012
HSS blade for brass and cast iron, can be used on both directions	●	●											■	■			●	B20		380-0014
HSS blade for deburring thin gauge materials inner and outer.			●							■	■	■					■	B30		380-0015
Heavy-duty HSS. Deburrs materials with spiral chips	●	●								■	■	■					●	E100		380-0026
HSS for materials with powdery chips. Rotates clockwise & counterclockwise	●	●											■	■			●	E200		380-0027
HSS for materials with spiral chips. Simultaneously deburrs the inside and outside of holes up to 6mm/.24" thick			●							■	■	■					●	E300		380-0028
HSS Blades for deburring holes as small as 7/64" Diameter	●	●													●	■	●	E101		380-0033
HSS Blades for deburring small holes in brass and cast	●	●														■	■	E102		380-0032
iron For straight edge on all materials	●	●											■	■			●	E350		380-0035
Countersink for hole-edges with up to 12mm/0.47" Diameter, M7		●								■	■	■	●	●	●		●	C12		380-0045
Countersink for hole-edges with up to 20mm/0.79" Diameter, M7		●								■	■	■	●	●	●		●	C20		380-0046
Countersink for hole-edges with up to 30mm/1.18" Diameter, M7		●								■	■	■	●	●	●		●	C30		380-0049
Ø .6x20mm, triangular HSS scraper for precision work, M5				●	●	●				■	■	■	●	●	●		■	D20		380-0070
Ø 4.0x25mm, triangular HSS scraper for precision work, M5				●	●	●				■	■	■	●	●	●		■	D25		380-0071
Ø 5.6x30mm, triangular HSS scraper for precision work, M5				●	●	●				■	■	■	●	●	●		■	D30		380-0072
Ø 6.5x33mm, triangular HSS scraper for precision work, M5				●	●	●				■	■	■	●	●	●		■	D40		380-0073
Ø 3.2x50mm,D1 Bladeholder with UN handle				●	●	●				■	■	■	●	●	●		■	D50		380-0047
Ø 3.2x48mm,D1 Bladeholder with UN handle			●	●						■	■	■	●	●	●		■	D66		380-0075
For sheet metal. Range 1-8 mm. Hand-Guard available upon request.									●	■	●	●	●	●	●		■	L3		380-0076
Used for deburring small ridges in difficult to reach places. Range of 0-2.5 mm.	●								●	■	●	●	●	●	●		■	L4		380-0077
To relieve corners of narrow slots from 3.5 mm. Double ended blade L7 for cutting in two directions also available.								●	●	■	■	■	●	●	●		■	L5		380-0078
Effective corner relief. Wide range of applications.								●	●	■	■	■	●	●	●		■	L6		380-0079
Double-edged, round HSS blade for massive deburring tasks on materials with spiral chips.	●								●	■	■	■	■	■	■		■	N80	 (Used in pairs)	380-0061
Standard blade for keyways							●			■	■	■			■		●	N80K		380-0062

■ Excellent ● Good

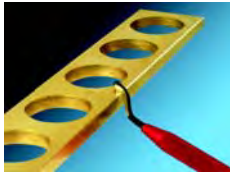
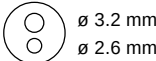
倒角器刀杆

Specification	Holder	Picture	Order No.
Holds all B blades, M5 thread	Holder B		380-0011
Holds D20,D25,D30,D40 blades	Holder C		380-0019
Made to hold the Mini Scraper and Internal Scraper. An M3 setscrew is holding the Blades. Allen key included.	Holder D		380-0022
Holds all E blades.	Holder E		380-0025
Holds all F blades, M7 thread	Holder F		380-0031
Made to hold the Mini scraper and D50, D66 internal scraper. An M3 setscrew is holding the Blades. Allen key included.	Holder D1		380-0013
Has an hexagonal cross section and M3 internal threads at both ends. Holds N80K Blade. Marked point should always point upwards during operation.	Holder K		380-0017
Blades are held in a 3mm square hole and tightened with 4mm set screw. Holds L,L4,L5 & L6 blades.	Holder LD		380-0018
Holds all B blades	Holder BH		380-0020
Holds all E blades.	Holder EH		380-0021
Has an hexagonal cross section to prevent rotating inside Handle. External M7 thread to accept the countersinks:C12,C20,C30	Holder F7		380-0023
Has an hexagonal cross section to prevent rotating inside Handle. External M5 thread to accept the Adapter:E,B,C & L.	Holder F5		380-0024
Has an hexagonal cross section to prevent rotating inside Handle. Inner M5 thread to accept D20,D25,D30,D40 blades.	Holder DH		380-0034
A double headed telescoping blade holder, External M5 thread on one end, and M7 thread on the other end.	Holder BEC		380-0042
Inner M5 thread to holds all B blades	Adapter B		380-0037
Inner M5 thread to holds all E blades	Adapter E		380-0038
Inner M5 thread to holds Holds D20, D25,D30 & D40 blades	Adapter D		380-0063
Inner M5 thread to holds Holds L3, L4,L5 & L6 blades	Adapter L		380-0064

倒角器手把

Specification	Handle	Picture	Order No.
Ergonomically held handle with soft grip. Accepts both heavy and light duty "B" & "E" blades due to 2 holes.	Handle SG	 	380-0043
Plastic Replacement Handle Fit all E blades	Handle NE		380-0016
A unique handle with large storage space for spare blades. Better grip. Safety button for quick change of blades.	Handle NB		380-0044
A unique Handle which can hold the total range of Blade holders: hexagonal cross section.	Handle UNI		380-0090
Hexagonal aluminium painted Handle. Accept all E blades	Handle RB		380-0091
Rapid deburring tool Handle. Accept 100 E blade. Which is replaceable.	Handle B		380-0092
Hexagonal plastic handle. Holds all "E" (ø 3.2 mm) Blades.	Handle EO		380-0093
Classic universal handle. Accepts all Shaviv blade holders. To store spare blades inside handle, simply unscrew the back cap.	Handle UN		380-0010
Non-telescopic handle, excellent for heavy-duty deburring tasks. All E-series blades fit directly into handle. To store spare blades inside handle, simply unscrew the back cap	Handle 1		380-0009

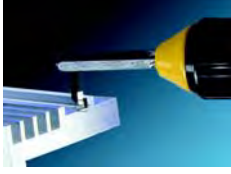
整体倒角器

Specification		Picture	Order No.
EDGE OFF Includes: E100 Blade mounted in an 8 mm Hexagonal painted Aluminium Handle. The blade is not replaceable. Handy pocket clip.			380-0052
PLASTIC EDGE OFF Includes: E100 Blade, Plastic Handle. Holds all "E" (ø 3.2 mm) Blades. The Blade is replaceable.			380-0050
PUSH SLEEVE Includes: E100 Blade, 12 mm Hexagonal painted Aluminium Handle. Holds all "E" (ø 3.2 mm) Blades. To replace blades, push black sleeve back into handle and pull blade out.			380-0039
PUSH BUTTON Rapid deburring tool Handle. Accept 100 E blade. Which is replaceable.			380-0054
NE BURR 1, 3, 5 Blades can be stored in plastic handle. Accepts "E" series Blade. Blades can be easily changed by depressing locking button. 1: E100. 3: E100, E200, E350. 5: E100, E200, E350, E101, E102			380-0074 380-0095 380-0055
NB BURR 1, 3, 5 Includes: NB-handle and "E" series Blade. 1: E100. 3: E100, E200, E350. 5: E100, E200, E350, E101, E102			380-0051 380-0096 380-0097
SOFT GRIP Includes: SG handle, E100 and B10 Blades. Ergonomically held handle. Accepts both heavy and light duty "E" & "B" Blades due to 2 holes.		 	380-0053

整体倒角器

Specification		Picture	Order No.
SLOTEGE CLEANER The original deburring set with the non-telescopic blade holder. Great for heavy duty deburring of holes edges. Features a strong, built-in steel blade holder that holds the blade close to the handle. Takes all E-series blade			380-0029
B UN BURR Includes: Un-handle, B-holder, one B10 Blade. Includes: Un-handle, B-holder, one B20 Blade.			380-0057 380-0098
E UN BURR Includes: Un-handle, E-holder, one E100 blade Includes: Un-handle, E-holder, one E200 blade Includes: Un-handle, E-holder, one E300 blade			380-0058 380-0099 380-0100
B UNI BURR Includes: Uni-handle, B-holder, one B10 Blade. Includes: Uni-handle, B-holder, one B20 Blade.			380-0059 380-0105
E UNI BURR Includes: Uni-handle, E-holder, one E100 blade Includes: Uni-handle, E-holder, one E200 blade Includes: Uni-handle, E-holder, one E300 blade			380-0065 380-0106 380-0107
MINI-SCRAPER Includes: UN-handle, D1-holder, Triangular Mini-Scraper D50. Hollow ground.			380-0066
INTERNAL SCRAPER Includes: UN-handle, D1-holder, Internal Scraper D66. For deburring of cross holes.			380-0067
SCRAPER Designed for high quality finishing & scraping. Includes: UNI-handle, telescoping blade holder, D20 blade & key			380-0068
Includes: UNI-handle, DH-holder, D25 blade & key			380-0069
Includes: UNI-handle, DH-holder, D30 blade & key			380-0080
Includes: UNI-handle, tDH-holder, D40 blade & key			380-0081

整体倒角器

Specification		Picture	Order No.
COUNTERSINK Can be locked in any position. Most useful for chamfering deep holes. Includes: Uni-handle, F7-holder, 12 mm Countersink.			380-0082
Includes: Uni-handle, F7-holder, 20 mm Countersink.			380-0083
Includes: Uni-handle, F7-holder, 30 mm Countersink.			380-0084
"V" CUT Includes: UNI-handle, LD Blade-holder, L3 Blade. For sheet metal. Range 1-8 mm. Hand-Guard available upon request.			380-0085
MINI-CUT Includes: UNI-handle, LD Blade-holder, L4 Blade. Used for deburring small ridges in difficult to reach places. Range of 0-2.5 mm.			380-0086
SLOT CLEANER Includes: UNI-handle, LD Blade-holder, L5 Blade. To relieve corners of narrow slots from 3.5 mm. Double ended blade L7 for cutting in two directions also available.			380-0087
CORNER CLEANER Includes: UNI-handle, LD blade-holder, L6 blade. Effective corner relief. Wide range of applications.			380-0088
KEYWAY BURR Includes: UNI-handle, K blade-holder, N80K blade. Effectively removes burrs from internal and external keyways. Range 2.4-11mm.			380-0089
DOUBLE-BURR Includes: Double burr, hand guard, 2 x N80 Blades. Simultaneously removes burrs from both sides of sheet metal.			380-0060

Universal Deburring Set

套装倒角器



Each set features the UNI handle, engineered for unparalleled comfort, safety and high performance. This tool is extremely powerful yet lightweight. Comes with the special adapter for an extra-close grip.

Includes:
UNI handle,
M5 holder, Adapter B, Adapter E,
Baldes: B10, B20, B30, E100, E200, E300,
Wrench

Order No. 380-0271

Countersink Set



Each set with 3 powerful countersink tools, most useful for chamfering and countersinking.

Includes:
UNI handle,
M7 holder,
Countersink: C12, C20, C30,
Wrench

Order No. 380-0272

Scraper Set



Features triangular blades with 3 cutting edges and a telescopic blade holder that lets you reach hard to access areas. Provides maximum grip comfort when used with UNI handle. Suggestion: Use the key supplied to safely release and remove blades.

Includes:
UNI handle,
Hex inner thread Holder,
Scrapers: D20, D25, D30, D40,
D Wrench

Order No. 380-0273

Edge Cleaner and Scraper Set



Features blades with Adapters and a telescopic blade holder that lets you reach hard to access areas. Provides maximum grip comfort when used with UNI handle. Suggestion: Use the key supplied to safely release and remove blades.

Includes:
UNI handle,
M5 holder,
Adapter D, Adapter L, Scraper D30,
Cleaner: L3, L4, L5, L6,
Hex Wrench,
D Wrench

Order No. 380-0274

Universal Extra Set 1



The complete uni kit for professional machinists.

Includes:
UNI handle, M5 & M7 holder,
Adapter L, Adapter E,
Cleaners: L3, L4, L5, L6,
Baldes: E100, E200,
Countersink: C12, C20,
Hex Wrench, D Wrench

Order No. 380-0275

Universal Extra Set 2



The most complete uni kit for professional machinists. With extra scraper.

Includes:
UNI handle,
M5 & M7 holder,
Adapter: B, D, E, L,
Cleaners: L3, L4, L5, L6,
Baldes: B10, B20, E100, E200,
Countersink: C12, C20,
Scraper: D30,
Hex Wrench,
D Wrench

Order No. 380-0276

3 Pc. Rapid Deburring Tool Set 套装倒角器

Rapid deburring tool with blade E100,
Which is not replaceable.



Includes: 3 Pcs 380-0052

Order No. 380-0352

4 Pc. Deburring Tool Set



4 Pcs/Set "B" includes:
one plastic handle, one B holder
one each of B10, B20 blades

Order No. 380-0003

5 Pc. Deburring Tool Set



5 Pcs/Set "E" includes:
one plastic handle, one E holder
one each of E100, E200, E300 blades

Order No. 380-0006

9 Pc. Deburring Tool Set

- Blades can be stored in plastic handle.
- Blades can be easily changed by pressing collar of holder.
- Packed in fitted case.



9 Pcs/Set includes:
one plastic handle
one each of E100, E200, E300, B10,
B20, B30 blades
one each of E holder and B holder

Order No. 380-0007

Scraper Set

Includes:
Uni-handle,
D1 Blade-holder + D50 Scraper
D1 Blade-holder + D66 Scraper,
Wrench

Order No. 380-0103

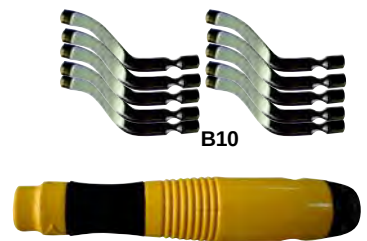


Soft Grip Set



Includes:
SG handle.
B10 Blade (1 Pcs)
E100 Blade (20 Pcs)

Order No. 380-0102



Includes:
SG handle.
B10 Blade (10 Pcs)
E100 Blade (10 Pcs)

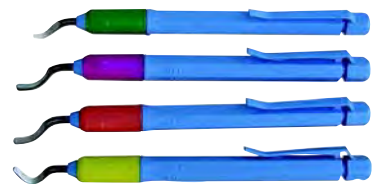
Order No. 380-0101

Universal Set

The Plastic EDGE OFF Set

Includes:
EO handle + E100
EO handle + E102
EO handle + E200
EO handle + E300

Order No. 380-0104



18 Pc. Deburring Tool set

High Speed Steel Blades, Plastic Case



Set include:

one double burr
one zip/burr handle
one zip/burr "B" holder
one B-10 blade
one B-20 blade
one zip/burr "E" holder
one E-100 blade
one E-200 blade
one E-300 blade

one zip/burr "K" holder
one keyway blade for 1/8-1/4" wide slots
one zip/burr "C" holder
one C-12 1/2" countersink
one C-20 3/4" countersink
two zip/burr "D" holders
one D-50 HSS mini scraper
one D-66 HSS internal scraper

Order No. 380-0156

6 Pc. Deburring Tool Set 套装倒角器

Set Includes:

Flat diamond coated file, triangular scraper, flat Scraper, round scraper,
swivel blade tool, rotational deburring tool with minimum hole diameter 0.08".

6 Pcs/set

Order No. 380-0160



Swiss Pattern Files 瑞士锉刀

Industrial grade



00



0



2

Pillar Files 平锉

- Similar in shape to hand files but only two-thirds as wide.
- Double cut on two sides only.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	3/8 x 7/64"	511-0004	511-0104	511-0204
6"	1/2 x 9/64"	511-0006	511-0106	511-0206
8"	39/64 x 13/64"	511-0008	511-0108	511-0208

Pillar Narrow & Extra Narrow Files 窄平锉

- Similar in shape to hand files but only two-thirds as wide.
- Double cut on two sides only.
- Edges are safe.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
6"	23/64 x 9/64"	511-1006	511-1106	511-1206
8"	29/64 x 13/64"	511-1008	511-1108	511-1208
8"	1/4 x 5/32"	511-1018	511-1118	511-1218

Half Round Files 半圆锉

- Taper in thickness and width to a point.
- Double cut on both flat and half round sides



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	11/32 x 1/8"	511-2004	511-2104	511-2204
6"	17/32 x 9/64"	511-2006	511-2106	511-2206
8"	45/64 x 3/16"	511-2008	511-2108	511-2208

Round Files 圆锉

- Taper throughout length to a fine point.
- Double cut .



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	1/8"	511-3004	511-3104	511-3204
6"	3/16"	511-3006	511-3106	511-3206
8"	1/4"	511-3008	511-3108	511-3208

Hand Files 平板锉

- Parallel in width but taper in thickness
- Sides are double cut.
- Single cut on one edge, safe cut on other edge.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	17/32 x 1/8"	511-4004	511-4104	511-4204
6"	3/4 x 5/32"	511-4006	511-4106	511-4206

Warding Files 尖头平锉

- Rectangular in cross section.
- Taper slightly in thickness and to a point in width.
- Double cut on flat sides & single on edges.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	17/32 x 3/64"	511-5004	511-5104	511-5204
6"	5/16 x 5/64"	511-5006	511-5106	511-5206

Three square Files 三角锉

- A triangular section with 60° angles.
- Gradually tapered on all sides to fine point.
- Ideal for filing corners and edges in extrusion dies where sharp edges must be held.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	9/32"	511-6004	511-6104	511-6204
6"	3/8"	511-6006	511-6106	511-6206

Knife Files 刀锉

- Tapered in width and thickness .
- Same thickness from point to shoulder at the knife edge.
- Approx 10° included angle of sharp edge.
- Ideal for filing in a slot, wedge shape opening, or restricted area.



Length	Approx. Width	Cut No. 00 Order No.	Cut No. 0 Order No.	Cut No. 2 Order No.
4"	15/32x1/8"	511-7004	511-7104	511-7204
6"	23/32x5/32"	511-7006	511-7106	511-7206

American Pattern Files

Industrial Grade 美式锉刀



BASTARD



SECOND CUT



SMOOTH

Three square files 三角锉

- Machinist's files.
- Triangular in cross-section, double-cut, have fairly sharp corners.
- For filing internal angles.
- More acute than the right angle for clearing out square corners.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	11/32"	510-6004	510-6104	510-6204
6"	15/32"	510-6006	510-6106	510-6206
8"	5/8"	510-6008	510-6108	510-6208
10"	3/4"	510-6010	510-6110	510-6210
12"	27/32"	510-6012	510-6112	510-6212
14"	15/16"	510-6014	510-6114	510-6214
16"		510-6016		

Mill files 铣平锉

- For sharpening mill or circular Saws, and finishing metals.
- All sizes tapered slightly in width.
- 12", 14" and 16" tapered slightly in thickness for about one-third of length.
- Two square edges.
- Single cut on sides and edges.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	7/16 x 5/64"	510-7004	510-7104	510-7204
6"	19/32 x 7/64"	510-7006	510-7106	510-7206
8"	25/32 x 9/64"	510-7008	510-7108	510-7208
10"	31/32 x 11/64"	510-7010	510-7110	510-7210
12"	1-5/32 x 7/32"	510-7012	510-7112	510-7212
14"	1-5/16 x 1/4"	510-7014	510-7114	510-7214
16"	1-1/2 x 9/32"	510-7016	510-7116	510-7216

Warding files 齐头平锉

- Rectangular in section and used principally by locksmiths in repairing or in filing ward notches in keys.
- Also suitable for use in narrow spaces where other files will not fit. All double cut on sides, single cut on edges.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	15/32 x 3/64"	510-8004	510-8104	510-8204
5"		510-8005	510-8105	510-8205
6"	5/8 x 5/64"	510-8006	510-8106	510-8206
8"	25/32 x 3/32"	510-8008	510-8108	510-8208
10"	15/16 x 1/8"	510-8010	510-8110	510-8210
12"	1-3/32 x 5/32"	510-8012	510-8112	510-8212
14"	1-1/4 x 3/16"	510-8014	510-8114	510-8214

Knife files 刀口锉

- Double cut.
- Used in getting through very small.
- Crevices, slots, keyways, etc.
- Generally used by tool and die makers on work having acute angles



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	15/32 x 7/64"	510-0004	510-0104	510-0204
6"	21/32 x 5/32"	510-0006	510-0106	510-0206
8"	27/32 x 3/16"	510-0008	510-0108	510-0208
10"	1-1/32 x 1/4"	510-0010	510-0110	510-0210
12"		510-0012		

Flat files 平锉

- Rectangular cross-section.
- Double cut teeth.
- Slight taper.
- Cut on both sides.
- Used wherever metal must be removed rapidly.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	7/16 x 1/8"	510-1004	510-1104	510-1204
6"	19/32 x 5/32"	510-1006	510-1106	510-1206
8"	3/4 x 7/32"	510-1008	510-1108	510-1208
10"	15/16 x 9/32"	510-1010	510-1110	510-1210
12"	1-1/8 x 11/32"	510-1012	510-1112	510-1212
14"	1-9/32 x 13/32"	510-1014	510-1114	510-1214
16"	1-15/32 x 15/32"	510-1016	510-1116	510-1216

Half round files 半圆锉

- The cross-section is rounded on one side and flat on the other.
- Allows the file to be used effectively on convex and concave surfaces.
- Tapered towards the points in width and thickness.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	7/16 x 1/8"	510-2004	510-2104	510-2204
6"	19/32 x 5/32"	510-2006	510-2106	510-2206
8"	3/4 x 7/32"	510-2008	510-2108	510-2208
10"	15/16 x 9/32"	510-2010	510-2110	510-2210
12"	1-1/8 x 11/32"	510-2012	510-2112	510-2212
14"	1-9/32 x 13/32"	510-2014	510-2114	510-2214
16"	1-15/32 x 15/32"	510-2016	510-2116	510-2216

American Pattern Files continued

Industrial Grade 美式锉刀



Round files 圆锉

- Machinist's file.
- Circular in cross-section.
- Use to file circular openings or concave surfaces.
- Bastard cut 6" and longer, second cut files 12" and longer are double cut. All others are single cut.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	5/32"	510-4004	510-4104	510-4204
6"	1/4"	510-4006	510-4106	510-4206
8"	5/16"	510-4008	510-4108	510-4208
10"	3/8"	510-4010	510-4110	510-4210
12"	1/2"	510-4012	510-4112	510-4212
14"	5/8"	510-4014	510-4114	510-4214

Square files 方锉

- Square in cross-section.
- Used principally for filing slots, keyways.
- General surface filing.
- Double cut.



Length	Approx. Width	Bastard Cut Order No.	Second Cut Order No.	Smooth Cut Order No.
4"	5/32"	510-5004	510-5104	510-5204
6"	1/4"	510-5006	510-5106	510-5206
8"	5/16"	510-5008	510-5108	510-5208
10"	3/8"	510-5010	510-5110	510-5210
12"	1/2"	510-5012	510-5112	510-5212
14"	5/8"	510-5014	510-5114	510-5214

Swiss Pattern Knurled Round Handle Needle Files & Sets 瑞士圆柄什锦锉



Barrette



Round Edge Joint



Slitting



Crossing



Knife



Square



Equalling



Marking



Three Square



Half Round



Round



Warding

Individual Files

Type	Overall Length	Length Of Cut	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
Round	4"	2"	382-0401	382-0421	382-0431
Round	5-1/2"	2-1/2"	382-0501	382-0521	382-0531
Round	6-1/4"	3"	382-0601	382-0621	382-0631
Half Round	4"	2"	382-0402	382-0422	382-0432
Half Round	5-1/2"	2-1/2"	382-0502	382-0522	382-0532
Half Round	6-1/4"	3"	382-0602	382-0622	382-0632
Square	4"	2"	382-0403	382-0423	382-0433
Square	5-1/2"	2-1/2"	382-0503	382-0523	382-0533
Square	6-1/4"	3"	382-0603	382-0623	382-0633
Three Square	4"	2"	382-0404	382-0424	382-0434
Three Square	5-1/2"	2-1/2"	382-0504	382-0524	382-0534
Three Square	6-1/4"	3"	382-0604	382-0624	382-0634
Knife	4"	2"	382-0405	382-0425	382-0435
Knife	5-1/2"	2-1/2"	382-0505	382-0525	382-0535
Knife	6-1/4"	3"	382-0605	382-0625	382-0635
Flat	4"	2"	382-0406	382-0426	382-0436
Flat	5-1/2"	2-1/2"	382-0506	382-0526	382-0536
Flat	6-1/4"	3"	382-0606	382-0626	382-0636

Type	Overall Length	Length Of Cut	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
Equaling	4"	2"	382-0407	382-0427	382-0437
Equaling	5-1/2"	2-1/2"	382-0507	382-0527	382-0537
Equaling	6-1/4"	3"	382-0607	382-0627	382-0637
Barrette	4"	2"	382-0408	382-0428	382-0438
Barrette	5-1/2"	2-1/2"	382-0508	382-0528	382-0538
Barrette	6-1/4"	3"	382-0608	382-0628	382-0638
Crossing	4"	2"	382-0409	382-0429	382-0439
Crossing	5-1/2"	2-1/2"	382-0509	382-0529	382-0539
Crossing	6-1/4"	3"	382-0609	382-0629	382-0639
Joint	4"	2"	382-0410	382-0420	382-0430
Joint	5-1/2"	2-1/2"	382-0510	382-0520	382-0530
Joint	6-1/4"	3"	382-0610	382-0620	382-0630
Marking	4"	2"	382-1411	382-1421	382-1431
Marking	5-1/2"	2-1/2"	382-1511	382-1521	382-1531
Marking	6-1/4"	3"	382-1611	382-1621	382-1631
Slitting	4"	2"	382-1412	382-1422	382-1432
Slitting	5-1/2"	2-1/2"	382-1512	382-1522	382-1532
Slitting	6-1/4"	3"	382-1612	382-1622	382-1632

No. of Piece	Size	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
5	4"	382-0840	382-0842	382-0843
5	5-1/2"	382-0850	382-0852	382-0853
5	6-1/4"	382-0860	382-0862	382-0863
5	7"	382-0870	382-0872	382-0873

No. of Piece	Size	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
6	4"	382-0640	382-0642	382-0643
6	5-1/2"	382-0650	382-0652	382-0653
6	6-1/4"	382-0660	382-0662	382-0663
6	7"	382-0740	382-0742	382-0743

No. of Piece	Size	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
10	4"	382-0140	382-0142	382-0143
10	5-1/2"	382-0150	382-0152	382-0153
10	6-1/4"	382-0160	382-0162	382-0163
10	7"	382-0170	382-0172	382-0173

No. of Piece	Size	Cut No. 0 Order No.	Cut No. 2 Order No.	Cut No. 3 Order No.
12	4"	382-0040	382-0042	382-0043
12	5-1/2"	382-0050	382-0052	382-0053
12	6-1/4"	382-0060	382-0062	382-0063
12	7"	382-0064	382-0065	382-0066

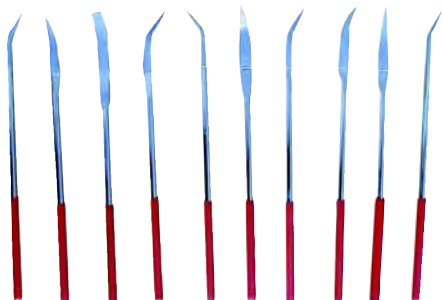


Diamond Die Maker's Riffler File Sets

套装金刚石异形锉

Single Head

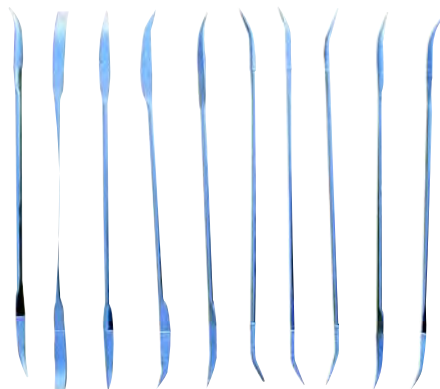
- Can be used on cleaning odd and difficult places.
- Total file length is 140mm/5-1/2".
- Diamond cutting length is 30mm/1-1/5".
- Completes with soft plastic handle provide enough friction.
- Supplied in fitted pouch.



No.of Piece	Grit	Order No.
10Pcs/set	Fine	382-1010
10Pcs/set	Coarse	382-1011

Double Head

- Can be used on cleaning odd and difficult places.
- Total file length is 180mm/7".
- Diamond cutting length is 30mm/1-1/5".
- Supplied in fitted pouch.



No.of Piece	Grit	Order No.
10Pcs/set	Fine	382-1012
10Pcs/set	Coarse	382-1013

Die Makers Riffler File Sets

套装异形锉

Riffler files are used by tool and die makers to clean odd and difficult places. A hobbyist's dream. Available in 6-3/4". No.0 and No.2 cut.



No.of Piece	Cut No.	Order No.
12Pcs/set	No.0	382-0032
12Pcs/set	No.2	382-0034

8 Pc. Die Maker Riffler File Set

Extra Rough Cut, Heavy Duty

套装异形锉

8" Long, 3/16" square handle, 16 different file shapes. Complete with plastic pouch.



No.of Piece	Long	Handle	Order No.
8Pcs/set	8"	3/16"	382-0039

Die Sinker Riffler File Sets

套装异形锉

5 & 10 Pcs/set

5 Pcs/set
Double end No. 2 Cut
Complete with plastic wallet



No.of Piece	Type	Body Dia.	OAL	Order No.
5Pcs/set	Heavy duty	3/16"	7"	382-0035
5Pcs/set	Standard	1/8	7	382-0038
10Pcs/set	Heavy duty	3/16	6-1/2	382-0044
10Pcs/set	Standard	1/8	6-1/2	382-0041

Diamond Files & Sets

金剛石銼刀

Individuals



File Shape	Diamond Length	Overall length	Coarse/D181 Order No.	Medium/D126 Order No.	Fine/D19 Order No.
Flat	4-3/8	8-11/16"	399-6731	399-6741	399-6751
Triangle	4-3/8	8-11/16"	399-6732	399-6742	399-6752
Round	4-3/8	8-11/16"	399-6733	399-6743	399-6753
Half Round	4-3/8	8-11/16"	399-6734	399-6744	399-6754
Square	4-3/8	8-11/16"	399-6735	399-6745	399-6755
5 Piece Set			399-6781	399-6782	399-6783

Can be used on carbide, hardened steel, and ceramics, made with a hard chrome bond that gives a long life and wears extremely well.

Sets

Pieces	Description	Size	Order No.
5	Medium/D126	2-7/8x7"	399-6784



Diamond Pieces	Diamond Length	Overall length	Coarse/D181 Order No.	Medium/D126 Order No.	Fine/D19 Order No.
5	4-3/8	8-11/16"	399-6781	399-6782	399-6783

5 Pc. General Purpose File Sets

With rectangular plastic handle

5 件套通用什錦銼刀 - 帶方塑料柄

- Overall length: 6-1/2".
- For home or professional use.
- Supplied in fitted pouch.

5Pcs/set, includes 1 each:
Round, flat, square, triangle, half round.

No. of Piece	OAL	Dial Dia.	Order No.
5	6-1/2"	Coarse	382-0736
5	6-1/2"	Medium	382-0737
5	6-1/2"	Fine	382-0738



Diamond Needle File Sets

With round plastic handle

金剛石什錦銼

5 Pcs/set

Set include one each of:
Round, Half Round, Square,
Equaling, Triangle



No. of Pieces	Length	Approx. Width	Coarse Order No.	Medium Order No.	Fine Order No.
5	7-1/4"	2"	382-0707	382-0708	382-0709
5	5-1/2"	2-3/4"	382-0711	382-0715	382-0720
5	5-3/4"	1-5/8"	382-0701	382-0705	382-0710

10 Pcs/set

Sets include one each of:
Round, Half Round, Square, Three Square, Flat, Crossing, Equaling,
Barrette, Marking, Slitting.

Medium Type

No. of Pieces	OAL	Length of Cut	Order No.
10	5-1/2"	2-3/4"	382-0724
10	6-1/4"	3"	382-0725

Wood Handle Diamond Flat Files

木柄金剛石銼刀



Size	Description	Handle	Order No.
6x3/4"	Fine/Coarse	Wood	399-6770
8x1"	Fine/Coarse	Wood	399-6771

Flexible Thin Equalling Diamond Files

弹性薄型平锉

- Completes with soft plastic handle providing enough friction.
- Diamond cutting length is 30mm/1-1/5".
- Supplied in fitted pouch.



Total Length	Cutting Length	Approx. Thickness	Fine Order No.	Coarse Order No.
140mm/5-1/2"	50mm/2"	0.85mm/0.033"	382-1081	382-1091
160mm/6-1/3"	50mm/2"	0.92mm/0.036"	382-1083	382-1093
180mm/7"	70mm/2-4/5"	0.92mm/0.036"	382-1085	382-1095

Diamond Mounted Point Sets

套装金刚石磨头



No. of Pieces	Shank Size	Overall Length	Order No.
10	3/32"	1-3/4"	389-9100
20	3/32"	1-3/4"	389-9200
25	3/32"	1-3/4"	389-9250
10	1/8"	1-3/4"	389-9101
20	1/8"	1-3/4"	389-9201
25	1/8"	1-3/4"	389-9251
30	1/8"	1-3/4"	389-9300
10	1/4"	2-3/8"	389-9102
20	1/4"	2-3/8"	389-9202

No. of Pieces	Shank Size	Overall Length	Order No.
20	3mm	45mm	389-9204
25	3mm	45mm	389-9254
30	3mm	45mm	389-9304
10	6mm	45mm	389-9104
10	6mm	60mm	389-9106
20	6mm	60mm	389-9206

Single Cut Carbide Bur Sets Turn to Page 215



Knife Hone and Holder

磨刀器

Durable wooden body holds two square hones and provides a guide for perfect edges. After a few light. Short strikes your jointer or planer will be up and running. 180 and 400 grit.



Order No. 318-0006

Rubber Sanding Block

橡胶磨砂塞

NEW

- 4-3/4x2-5/8 Rubber

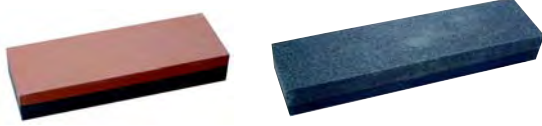


Order No. 810-6220

Sharpening Stones

磨刀石

Coarse and fine grit vitrified into one stone.



	Aluminum Oxide 120/240 Grit	Aluminum Oxide 120/320 Grit	Silicon Carbide 100/180Grit	Silicon Carbide 120/240 Grit	Silicon Carbide 120/320Grit
Size	Order No.	Order No.	Order No.	Order No.	Order No.
1 x 2 x 6"	399-6790	399-6798	399-6792	399-6796	399-6794
1 x 2 x 8"	399-6791	399-6799	399-6793	399-6797	399-6795

Single Grit Bench Stones

氧化铝长方形油石

NEW



Aluminum Oxide

Size	Medium Grit Order No.	Fine Grit Order No.
4x1x1/4"	399-6842	399-6843
4x1x1/2"	399-6845	399-6846
6x2x1"	399-6862	399-6863
8x2x1"	399-6865	399-6866

Round Edge Slip Stones

氧化铝双圆形油石

NEW



Aluminum Oxide

Size	Coarse Order No.	Medium Order No.	Fine Order No.
4-1/2x1-3/4x1/2&3/16"	399-3101	399-3102	399-3103
4-1/2x1-3/4x3/8&1/8"	399-3104	399-3105	399-3106

Silicon Carbide

Size	Coarse Order No.	Medium Order No.	Fine Order No.
4-1/2x1-3/4x1/2&3/16"	399-3001	399-3002	399-3003
4-1/2x1-3/4x3/8&1/8"	399-3004	399-3005	399-3006

Machine Knife Stone

碳化硅机械磨刀石

NEW

4"dia.x1-1/2", silicon carbide

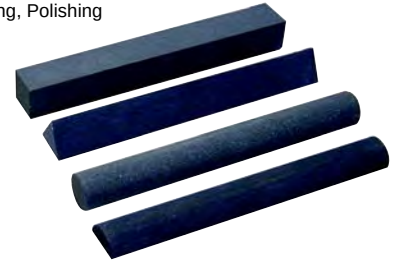
Order No.399-6821



Toolroom Finishing Sticks

氧化铝磨石棒，灰色

- 4" Length, for Lapping, Honing, Polishing



Aluminum Oxide

Size	Shape	Coarse Grit Order No.	Medium Grit Order No.	Fine Grit Order No.
1/4"	Square	399-0003	399-0103	399-0203
3/8"	Square	399-0006	399-0106	399-0206
1/2"	Square	399-0009	399-0109	399-0209
1/4"	Half Round	399-0013	399-0113	399-0213
3/8"	Half Round	399-0016	399-0116	399-0216
1/2"	Half Round	399-0019	399-0119	399-0219
1/4"	Round	399-0023	399-0123	399-0223
3/8"	Round	399-0026	399-0126	399-0226
1/2"	Round	399-0029	399-0129	399-0229
1/4"	Three Square	399-0033	399-0133	399-0233
3/8"	Three Square	399-0036	399-0136	399-0236
1/2"	Three Square	399-0039	399-0139	399-0239

Silicon Carbide

Size	Shape	Coarse Grit Order No.	Medium Grit Order No.	Fine Grit Order No.
1/4"	Square	399-1003	399-1103	399-1203
3/8"	Square	399-1006	399-1106	399-1206
1/2"	Square	399-1009	399-1109	399-1209
1/4"	Half Round	399-1013	399-1113	399-1213
3/8"	Half Round	399-1016	399-1116	399-1216
1/2"	Half Round	399-1019	399-1119	399-1219
1/4"	Round	399-1023	399-1123	399-1223
3/8"	Round	399-1026	399-1126	399-1226
1/2"	Round	399-1029	399-1129	399-1229
1/4"	Three Square	399-1033	399-1133	399-1233
3/8"	Three Square	399-1036	399-1136	399-1236
1/2"	Three Square	399-1039	399-1139	399-1239

Green Silicon Carbide Slip Tools

绿碳化硅长方油石

3-pc set 4-1/2x3/4x3/8", each of Coarse ,Medium & Fine Grit

Order No.399-6890

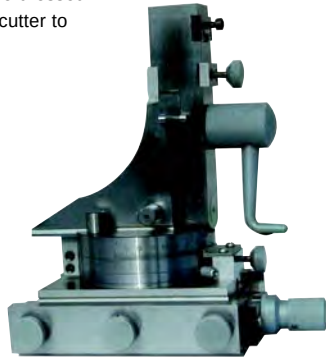
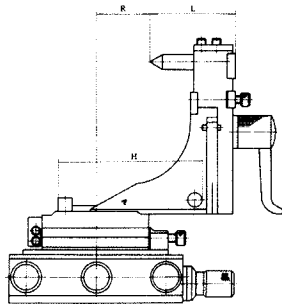


Size	Coarse Grit Order No.	Medium Grit Order No.	Fine Grit Order No.
4-1/2x3/4x3/8"	399-6891	399-6892	399-6893

Universal Wheel Dresser

万能砂轮修整器

- Universal Wheel Dresser Adaptable on surface grinder and universal tool grinder for dressing grinding wheels into various cross sections of flat or curved shapes.
- To dress convex arc surface: $H = L + R$
- To dress concave arc surface: $H = L - R$
- **H.**—Distance between outer generation lines of two location pins.
- **R.**— Radius of the arc surface to be dressed.
- **L.** —Distance from tip of diamond cutter to base plate.



Specifications	Order No.287-6070
Center Height	165mm (6-2/5")
Measuring quasi-pin dia	10mm (0.4")
Max. Swing Distance of diamond cutter	+/-20mm (+/-0.8")
Max. Wheel Diameter	200mm (8")
Reading Accuracy or Turret Index	5"
Max. Translation of Feed	20mm (0.8")
Feed per division of handle scale	0.02mm
Weight	5kg

Radius and Angle Dresser

砂轮修整器(带联接轴)

- No height gage or set-up aids required.
- Radius is set on the grinder by measuring over the two pins or by inserting a gage block, for direct reading.
- Inside or outside radius is determined by using either the left hand or right hand pins.
- Uses 3/8" shank diamond.



Rat Tail Adapter Only

Order No. 225-1030

Order No. 225-1020

Accuracy:

Squareness of Face Plate to Dresser Arm, per 2"	.0005"
Squareness of Face Plate to Base	.0006"
Center Run out of Dovetail Groove to Wheel Center	.0006"

Specifications	Order No. 225-1020
Maximum Diameter of Wheel	12"
Convex Radii	0-1-5/8"
Concave Radii	0-4"
Tangent Travel Either Side of Center	2"
Center Line of Tool	3.4"
Over Length	16.61"30lbs
Weight	
Rat Tail Adapter	

Punch Former & Radius Dresser

冲子成型器

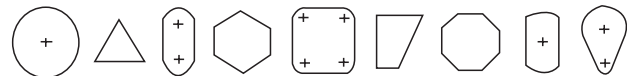
A precision Grinding Machine Accessory for dressing grinding wheel, also adaptable to Grinding Machine and Electrical Discharge Machine (EDM) for precision punch forming.

- Use for concave and convex radius.
- Hardened tool steel construction.
- Radius dresser standard with both models.
- With oscillating Vee Block for tangent dressing.
- Compare to units costing 2 or 3 times as much.
- Complete with fitted case.



Order No.287-6801

Punch Forming

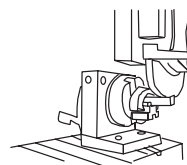


Order No.287-6803

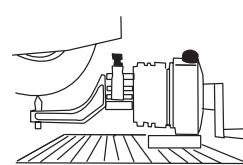
Wheel Dresser



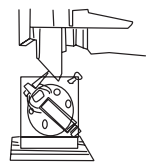
Punch Forming



Radius Dressing



Angle Dressing



Specifications

Center height.....	3-1/2"(80mm)
Indexing Div.....	24 every 15 degree +/- 10 seconds
Tangential travel either side of center.....	.25/32"(19.8mm)
Dia. Workpiece of V-block.....	0.16"-1.18"(4-30mm)
V-block adjusting system.....	Rack and Pinon
Max. Size Grinding Wheel.....	7.87"(200mm)
Max. Outside Radius (on wheel).....	1.89"(48mm)
Max.inside Radius(on wheel).....	3.9"(100mm)
Dimension.....	14.2x4.6x5.7"(360x116x145mm)

Descriptions	Order No.
Standard(two way)	287-6801
With Thru Hole(one way)	287-6803
(for Long Working Piece)	

3-Jaws Punch Former

三爪冲子成型器

This Punch Former is attached with 3 jaws which can hold workpieces quickly and conveniently. It can also adjust center of 3 jaws.

Main Parameters:

3 jaws hole diameter 16mm
Min clamping diameter 2mm
Max clamping diameter 70mm

Order No.287-6807



Big Type Punch Former

Two-Way

大型单向冲子成型器

- This Punch Former is applicable on surface grinder or universal grinder to clamp puncher within $\phi 70$ mm for grinding various shapes.
- It can shape quickly and precisely, with the moving function and fixing block for oval grinding.
- The fine tuning function can adjust center accurately. Using the fixing block and folding down the screw when mouse much, can grind oval workpiece conveniently.

Main Parameters:

Center height: 150mm
Clamping diameter in V-slot: 70mm
Travel of V-block: 35mm
Transverse travel of slide: ± 35 mm
Quantity of teeth: 24

Order No.287-6813



Motor Punch Grinder

电动冲子研磨机

Put the work on the rollers to realize non-centering grinding by motor, no need to set center before working. Available for long pin or punch. Equipped with magnetic sine plate, it can grinding various angle. With profile wheel to grind punch in different shapes.

Main Parameters:

Length of workpiece: 20-120mm
Outside grinding length :5-35mm
Grinding diameter: 1.5-25mm
Accuracy: 0.005mm
Roller driving motor:
110V/60Hz 129rpm or 220V/50Hz 108rpm

Order No.287-6806



Punch Grinder

冲子研磨机

Punch grinder is a precision product which installed on a plane plate, and grind the top surface of round punch simply and accurately. The operation can be stable handled due to use the depressed roller to fix the handle. Heavy grinding can be done also. Ascertain the surface of the turning roller and depressed bearing without scratch and rust to keep its accuracy before using.

Accuracy of roller is within 0.005mm. It can grind punches of outside diameter from 1.5~30mm, extended grinding length is within 5~35mm.



Order No. 287-6802

Collet Punch Former

ER夹头冲子成型器

- Clamping diameter: $\phi 2-\phi 20$ mm
- Supply ER32 collete size: 4, 6, 8, 10, 12, 16, 20, 7Pcs in total
- For workpiece diameter smaller than 4mm, use shank 20mm/ER16 collet chuck
- It clamps workpiece quickly and steadily when processing without checking the center

Order No.287-6808



Big Type Punch Former

One-Way

大型单向冲子成型器

- This Punch Former is applicable on surface grinder or universal grinder to clamp puncher within $\phi 70$ mm for grinding various shapes.

Main Parameters:

Center height: 150mm
Clamping diameter in V-slot: 70mm
Travel of V-block: 25mm
Quantity of teeth: 24

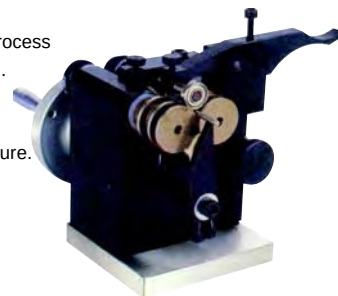
Order No.287-6812



Punch Grinder 冲子研磨机

- The small punch grinder can process from diameter 0.5mm to10mm.
- Grinding diameter: 0.5-6mm
- Right pressure must be put on the screw to avoid over pressure.

Order No.287-6804



"Geiger" Wheel Dresser

盖氏修整器

- Features a shank 3/8" diamond.
- Restores your grinding wheels back to perfection.
- Complete with an extremely hard 1/2 carat industrial diamond tip.
- Accurate and simple to use tool that accommodates most any bench or pedestal type grinder.

Order No. 225-6812



Adjustable Dresser

可调修整器

- Use on all grinding machines.
- Dress OD and face of wheels.
- Adjustable to 7" height.
- Dress any width.

Order No. 225-2016



Hi-Lo Wheel Dresser HI-LO 修整器

- Minimum Height.....2"
- Maximum Height.....9"
- Cast iron construction.
- 1/4 Carat and 3/8" shank diamond included.



Order No. 225-1213

Brake Truing Unit 制动修整器

- Used for dressing diamond and CBN wheels.
- Surface is treated with blaze-dried lacquer.
- Axis part is fixed with shaft bearing and can be rotated at high speed and with great precision.



Order No. 225-3000

Sine Dresser 正弦砂轮修整器

- Range of angles: 0-60°.
- Cross feed up to 50mm, center distance 0.01mm.
- Combination sine system and crossfeed for dressing grinding wheel precise angles.



Order No. 225-1009

Optical Radius & Angle Dresser

光学万能砂轮修整器

Magnification through the lens in the spindle, makes it possible for the operator to see how to dress the form on the grinding wheel.

Overall Height.....4"
Length.....8-1/4"
Swing Arm.....180°
Max. Size Grinding Wheel.....8"
Max. Outside Radius(on Wheel)...5/8" approx.
Max. Inside Radius(on Wheel)....1" approx.
Spindle.....1"OD

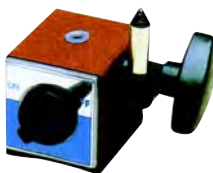


Order No. 287-6060

Magnetic Diamond Dressers Holder

磁性底座砂轮修整器

- Magnetic Base with On/Off switch.
- Magnetic Power: 60kgs(130lbs)
- Hold 3/8" or 10mm shank Diamond Dresser.
- Working angle adjustable.



Descriptions	Order No.
without Diamond Dresser	225-1300
with 10mm shank Diamond Dresser	225-1301

Cut-Off Wheel Mandrels

切割砂轮夹持杆

- 2 Piece safety tested
- No washer needed
- Head is slotted on locking screw for fast change



Arbor Size	Shank Size	Wheel Thickness	OAL	Order No.
1/8"	1/8"	.025-1/8"	1-13/16"	262-0161
1/4	1/4	.035-1/4	2-13/16	262-0162
3/8	1/4	.035-1/4	2-13/16	262-0163

Angle Dresser 角度修整器

- Features a shank 3/8" diamond.
- Heavy precision ground base plate.
- All 6 sides square to .0002"
- Side block pivots on shoulder hardened screws.



Order No. 225-2017

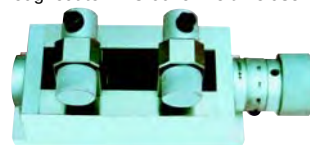
Precision Duplex Dresser

Dress any custom width up to 1-9/16"

精密复合修整器

- Designed to simultaneously dress both sides of a grinding wheel, precisely and without deformation.
- Useful for thinning grinding wheels or dressing thin wheels.
- Tool steel construction and hardened throughout to HRC 60 for life time use.

Max. Width of Wheel.....1-9/16"
Max. Dressing Depth.....1-9/16"
Min. Dressing Width.....0.0079"
Graduation.....0.001"
Weight.....71lbs



Order No. 225-1005

Grinding Wheel Dresser & Cutters

手动砂轮修整器

- Fulfill most general dressing needs where fast dressing is the primary requirement.
- Hunting on type cutters will quickly remove the load form grinding wheels and present a new and fast grinding surface.



No. size	For (Dia)	Dresser with one cutter Order No.	Replacement Cutters Order No.
#0	UP to 10"	287-6300	287-6350
#1	10" to 16"	287-6301	287-6351
#2	16" to 26"	287-6302	287-6352



Dresser with one cutter

No. size	For (Dia)	Face	Order No.
#0	UP to 10"	2"	287-6310
#1	10" to 16"	3"	287-6311
#2	16" to 26"	3-1/2"	287-6312

Knurling Tools

滚花刀

Single Knurling Tool

- Complete with medium cut high speed steel knurl best suited for shorter work
- Holder size: 4" x 1/2 x 1/2
- Diameter: 3/4"
- Width: 1/4"
- Hole size: 1/4"
- 2 Knurls



Order No. 250-1740

Self-Adjusting Pivot Head

- For precise alignment to the working part.
- Holder size: 4" x 1/2 x 1/2
- Diameter: 3/4"
- Width: 3/8"
- Hole size: 1/4"
- 2 Knurls



Order No. 250-1732

Carbide Burrs

硬质合金旋转锉

Shape A- Cylindrical



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SA-41	1/16"	1/2"	1/8"	389-0002	389-0102
SA-42	3/32	7/16	1/8	389-0004	389-0104
SA-43	1/8	9/16	1/8	389-0006	389-0106
SA-13	5/32	5/8	1/4	389-0010	389-0110
SA-14	3/16	5/8	1/4	389-0012	389-0112
SA-51	1/4	1/2	1/8	389-0011	389-0111
SA-1	1/4	5/8	1/4	389-0014	389-0114
SA-2	5/16	3/4	1/4	389-0016	389-0116
SA-3	3/8	3/4	1/4	389-0018	389-0118
SA-4	7/16	1	1/4	389-0020	389-0120
SA-5	1/2	1	1/4	389-0022	389-0122
SA-7	3/4	1	1/4	389-0024	389-0124
SA-9	1	1	1/4	389-0026	389-0126

Shape B- Cylindrical End Cut



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SB-42	3/32"	7/16"	1/8"	389-0504	389-0604
SB-43	1/8	9/16	1/8	389-0506	389-0606
SB-41	1/16	1/4	1/8	389-0510	389-0610
SB-13	5/32	5/8	1/4	389-0512	389-0612
SB-14	3/16	5/8	1/4	389-0514	389-0614
SB-1	1/4	5/8	1/4	389-0516	389-0616
SB-2	5/16	3/4	1/4	389-0518	389-0618
SB-3	3/8	3/4	1/4	389-0520	389-0620
SB-4	7/16	1	1/4	389-0522	389-0622
SB-5	1/2	1	1/4	389-0524	389-0624
SB-7	3/4	1	1/4	389-0526	389-0626
SB-9	1	1	1/4	389-0528	389-0628

Shape C- Cylindrical Radius End



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SC-41	3/32"	7/16"	1/8"	389-1004	389-1104
SC-42	1/8	9/16	1/8	389-1006	389-1106
SC-11	1/8	1/2	1/4	389-1010	389-1110
SC-13	5/32	5/8	1/4	389-1012	389-1112
SC-14	3/16	5/8	1/4	389-1014	389-1114
SC1L6	1/4	5/8	1/4	389-1015	389-1115
SC-1	1/4	5/8	1/4	389-1016	389-1116
SC-2	5/16	3/4	1/4	389-1018	389-1118
SC-3	3/8	3/4	1/4	389-1020	389-1120
SC3L6	3/8	3/4	1/4	389-1019	389-1119
SC-4	7/16	1	1/4	389-1022	389-1122
SC-5	1/2	1	1/4	389-1024	389-1124
SC-7	3/4	1	1/4	389-1026	389-1126
SC-9	1	1	1/4	389-1028	389-1128

Shape D- Ball



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SD-41	3/32"	3/32"	1/8"	389-1504	389-1604
SD-42	1/8	1/8	1/8	389-1506	389-1606
SD-14	3/16	1/8	1/4	389-1510	389-1610
SD-53	3/16	5/32	1/8	389-1509	389-1609
SD-51	1/4	7/32	1/8	389-1513	389-1613
SD-11	1/8	1/8	1/4	389-1512	389-1612
SD-1	1/4	7/32	1/4	389-1514	389-1614
SD-2	5/16	1/4	1/4	389-1516	389-1616
SD-3	3/8	5/16	1/4	389-1518	389-1618
SD-5	1/2	7/16	1/4	389-1520	389-1620
SD5L6	1/2	7/16	1/4	389-1519	389-1619
SD-6	5/8	9/16	1/4	389-1522	389-1622
SD-7	3/4	11/16	1/4	389-1524	389-1624
SD-9	1	15/16	1/4	389-1526	389-1626

Shape E- Oval



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SE-53	3/16"	9/32"	1/8"	389-2004	389-2104
SE-41	1/8	7/32	1/8	389-2006	389-2106
SE-51	1/4	3/8	1/8	389-2007	389-2107
SE-1	1/4	3/8	1/4	389-2010	389-2110
SE1L6	1/4	3/8	1/4	389-2009	389-2109
SE-3	3/8	5/8	1/4	389-2012	389-2112
SE3L6	3/8	5/8	1/4	389-2011	389-2111
SE-5	1/2	7/8	1/4	389-2014	389-2114
SE-6	5/8	1	1/4	389-2016	389-2116
SE-7	3/4	1	1/4	389-2018	389-2118

Shape F- Tree Radius End



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SF-53	3/16"	1/2"	1/8"	389-3002	389-3102
SF-41	1/8	1/4	1/8	389-3004	389-3104
SF-42	1/8	1/2	1/8	389-3006	389-3106
SF-11	1/8	1/2	1/4	389-3010	389-3110
SF-1	1/4	5/8	1/4	389-3012	389-3112
SF-3	3/8	3/4	1/4	389-3014	389-3114
SF-5	1/2	1	1/4	389-3016	389-3116
SF-6	5/8	1	1/4	389-3018	389-3118
SF-7	3/4	1	1/4	389-3020	389-3120

Carbide Burrs

硬质合金旋转锉

Shape G- Tree Pointed End



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SG-43	1/8"	3/8"	1/8"	389-3502	389-3602
SG-44	1/8	1/2	1/8	389-3501	389-3601
SG-42	1/8	5/16	1/8	389-3504	389-3604
SG-41	1/8	1/4	1/8	389-3506	389-3606
SG-1	1/4	5/8	1/4	389-3510	389-3610
SG-3	3/8	3/4	1/4	389-3512	389-3612
SG-13	1/2	3/4	1/4	389-3514	389-3614
SG-5	1/2	1	1/4	389-3516	389-3616
SG-6	5/8	1	1/4	389-3518	389-3618
SG-7	3/4	1	1/4	389-3520	389-3620

Shape H- Flame



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SH-53	3/16"	3/8"	1/8"	389-2504	389-2604
SH41	1/8	1/4	1/8	389-2506	389-2606
SH-1	1/4	5/8	1/4	389-2510	389-2610
SH-2	5/16	3/4	1/4	389-2512	389-2612
SH-5	1/2	1-1/4	1/4	389-2514	389-2614
SH-6	5/8	1-7/16	1/4	389-2516	389-2616
SH-7	3/4	1-5/8	1/4	389-2518	389-2618

Shape J- 60° Cone



Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SJ-42	1/8"	3/32"	1/8"	389-4006	389-4106
SJ-1	1/4	3/16	1/4	389-4010	389-4110
SJ-2	5/16	3/16	1/4	389-4012	389-4112
SJ-3	3/8	5/16	1/4	389-4014	389-4114
SJ-5	1/2	7/16	1/4	389-4016	389-4116
SJ-6	5/8	9/16	1/4	389-4018	389-4118
SJ-7	3/4	11/16	1/4	389-4020	389-4120
SJ-9	1	15/16	1/4	389-4022	389-4122

Shape K- 90° Cone



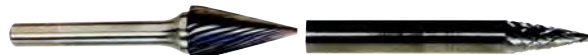
Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
SK-42	1/8"	1/16"	1/8"	389-4506	389-4606
SK-1	1/4	1/8	1/4	389-4510	389-4610
SK-2	5/16	3/16	1/4	389-4512	389-4612
SK-3	3/8	3/16	1/4	389-4514	389-4614
SK-5	1/2	1/4	1/4	389-4516	389-4616
SK-6	5/8	5/16	1/4	389-4518	389-4618
SK-7	3/4	3/8	1/4	389-4520	389-4620
SK-9	1	1/2	1/4	389-4522	389-4622

Shape L- Taper or Cone Radius End



Shape	Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
8° Taper	SL-53	3/16"	1/2"	1/8"	389-5002	389-5102
8° Taper	SL-42	1/8	1/2	1/8	389-5004	389-5104
8° Taper	SL-41	1/8	3/8	1/8	389-5006	389-5106
14° Taper	SL-1	1/4	5/8	1/4	389-5010	389-5110
14° Taper	SL-2	5/16	7/8	1/4	389-5012	389-5112
14° Taper	SL-3	3/8	1-1/16	1/4	389-5014	389-5114
14° Taper	SL-4	1/2	1-1/8	1/4	389-5016	389-5116
14° Taper	SL-5	5/8	1-3/16	1/4	389-5018	389-5118
14° Taper	SL-6	5/8	1-5/16	1/4	389-5020	389-5120
14° Taper	SL-7	3/4	1-1/2	1/4	389-5022	389-5122

Shape M- Taper or Cone Flat End



Shape	Style	Cutting Dia.	Cutting Length	Shank Diameter	Single Cut Order No.	Double Cut Order No.
16° Taper	SM-53	3/16"	1/2"	1/8"	389-5502	389-5602
7° Taper	SM-43	1/8	5/8	1/8	389-5504	389-5604
14° Taper	SM-42	1/8	7/16	1/8	389-5506	389-5606
12° Taper	SM-41	1/8	11/32	1/8	389-5508	389-5608
22° Taper	SM-51	1/4	1/2	1/8	389-5509	389-5609
22° Taper	SM-1	1/4	1/2	1/4	389-5510	389-5610
14° Taper	SM-2	1/4	3/4	1/4	389-5512	389-5612
10° Taper	SM-3	1/4	1	1/4	389-5514	389-5614
28° Taper	SM-4	3/8	5/8	1/4	389-5516	389-5616
28° Taper	SM-5	1/2	7/8	1/4	389-5518	389-5618
30° Taper	SM-6	5/8	1	1/4	389-5520	389-5620

Shape N- Inverted Cone

Shape	Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
10° Taper	SN-41	3/32"	1/8"	1/8"	389-6002	389-6102
10° Taper	SN-42	1/8	3/16	1/8	389-6004	389-6104
10° Taper	SN-53	3/16	1/4	1/8	389-6006	389-6106
10° Taper	SN-51	1/4	1/4	1/8	389-6009	389-6109
10° Taper	SN-1	1/4	5/16	1/4	389-6010	389-6110



Shape	Style	Cutting Dia.	Cutting Length	Shank Dia.	Single Cut Order No.	Double Cut Order No.
13° Taper	SN-2	3/8"	3/8"	1/4"	389-6012	389-6112
28° Taper	SN-4	1/2	1/2	1/4	389-6014	389-6114
18° Taper	SN-6	5/8	3/4	1/4	389-6016	389-6116
30° Taper	SN-7	3/4	5/8	1/4	389-6018	389-6118

Single Cut Carbide Bur Sets

单刃硬质合金旋转锉(木盒套装)

NEW

5 pc set, 1/8" Shank Diameter

Order No. 389-0972

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-51	1/8"	1/4"	1/2"	1-29/32"	Cylindrical
SC-51	1/8"	1/4"	1/2"	1-29/32"	Cylindrical Radius End
SF-51	1/8"	1/4"	1/2"	1-29/32"	Tree
SD-51	1/8"	1/4"	7/32"	1-29/32"	Ball
SM-51	1/8"	1/4"	1/2"	1-29/32"	Cone,22deg



5 pc set, 1/4" Shank Diameter

Order No. 389-0971

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SD-1	1/4"	1/4"	3/16"	1-9/16"	Ball
SM-1	1/4"	1/4"	1/2"	1-9/16"	Cone,22deg



12 pc set, 1/4" Shank Diameter

Order No. 389-0974

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SD-1	1/4"	1/4"	1/4"	1-9/16"	Ball
SE-1	1/4"	1/4"	3/8"	1-9/16"	Oval
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SG-1	1/4"	1/4"	5/8"	1-9/16"	Tree Point End
SH-1	1/4"	1/4"	5/8"	1-9/16"	Flame
SJ-1	1/4"	1/4"	3/16"	1-11/64"	Cone,60Deg
SK-1	1/4"	1/4"	1/8"	1-11/64"	Cone,60Deg
SL-1	1/4"	1/4"	5/8"	1-9/16"	Taper radius End,14deg
SM-1	1/4"	1/4"	1/2"	1-9/16"	Cone,22deg
SN-1	1/4"	1/4"	5/16"	1-9/16"	Inverted Cone,10deg



9 pc set, 1/8" Shank Diameter

Order No. 389-0951

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-51	1/8"	1/4"	1/2"	1-29/32"	Cylindrical
SB-51	1/8"	1/4"	1/2"	1-29/32"	Cylindrical End Cut
SC-51	1/8"	1/4"	1/2"	1-29/32"	Cylindrical Radius End
SD-51	1/8"	1/4"	7/32"	1-29/32"	Ball
SE-51	1/8"	1/4"	3/8"	1-29/32"	Oval
SF-51	1/8"	1/4"	1/2"	1-29/32"	Tree
SG-51	1/8"	1/4"	1/2"	1-29/32"	Tree Point End
SM-51	1/8"	1/4"	1/2"	1-29/32"	Cone,22deg
SN-51	1/8"	1/4"	1/4"	1-29/32"	Inverted Cone,10deg



12 pc set, 1/8" Shank Diameter

Order No. 389-0976

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-42	1/8"	3/32"	7/16"	1-1/2"	Cylindrical
SA-43	1/8"	1/8"	9/16"	1-1/2"	Cylindrical Radius End
SC-41	1/8"	3/32"	7/16"	1-1/2"	Ball
SC-42	1/8"	1/8"	9/16"	1-1/2"	Oval
SD-42	1/8"	1/8"	1-1/2"	1-1/2"	Tree
SE-41	1/8"	1/8"	7/32"	1-1/2"	Tree Point End
SF-42	1/8"	1/8"	1/2"	1-1/2"	Flame
SG-43	1/8"	1/8"	3/8"	1-1/2"	Cone,60Deg
SH-41	1/8"	1/8"	1/4"	1-1/2"	Cone,60Deg
SL-42	1/8"	1/8"	1/2"	1-1/2"	Taper radius End,14deg
SM-42	1/8"	1/8"	7/16"	1-1/2"	Cone,22deg
SN-42	1/8"	1/8"	3/16"	1-1/2"	Inverted Cone,10deg



Order No. 389-0978

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SA-3	1/4"	3/8"	3/4"	1-9/16"	Cylindrical
SA-5	1/4"	1/2"	1"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SC-3	1/4"	3/8"	3/4"	1-9/16"	Cylindrical Radius End
SC-5	1/4"	1/2"	1"	1-9/16"	Cylindrical Radius End
SD-3	1/4"	3/8"	5/16"	1-9/16"	Ball
SD-5	1/4"	1/2"	7/16"	1-9/16"	Ball
SE-3	1/4"	3/8"	5/8"	1-9/16"	Oval
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SF-3	1/4"	3/8"	3/4"	1-9/16"	Tree
SF-5	1/4"	1/2"	1"	1-9/16"	Tree
SG-1	1/4"	1/4"	5/8"	1-9/16"	Tree Point End
SG-3	1/4"	3/8"	3/4"	1-9/16"	Tree Point End
SL-3	1/4"	3/8"	1-1/16"	1-9/16"	Taper radius End,14deg
SL-4	1/4"	1/2"	1-1/8"	1-9/16"	Taper radius End,14deg



Double Cut Carbide Bur Sets

双刃硬质合金旋转锉(木盒套装)

NEW

5 pc set, 1/8" Shank Diameter



Order No. 389-0982

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-51	1/8"	1/4"	1/2"	2"	Cylindrical
SC-51	1/8"	1/4"	1/2"	2"	Cylindrical Radius End
SF-51	1/8"	1/4"	1/2"	2"	Tree
SD-51	1/8"	1/4"	7/32"	2"	Ball
SM-51	1/8"	1/4"	1/2"	2"	Cone,22deg

5 pc set, 1/4" Shank Diameter



Order No. 389-0981

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SD-1	1/4"	1/4"	3/16"	1-9/16"	Ball
SM-1	1/4"	1/4"	1/2"	1-9/16"	Cone,22deg

12 pc set, 1/4" Shank Diameter



Order No. 389-0984

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SD-1	1/4"	1/4"	1/4"	1-9/16"	Ball
SE-1	1/4"	1/4"	3/8"	1-9/16"	Oval
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SG-1	1/4"	1/4"	5/8"	1-9/16"	Tree Point End
SH-1	1/4"	1/4"	5/8"	1-9/16"	Flame
SJ-1	1/4"	1/4"	3/16"	1-11/64"	Cone,60Deg
SK-1	1/4"	1/4"	1/8"	1-11/64"	Cone,60Deg
SL-1	1/4"	1/4"	5/8"	1-9/16"	Taper radius End,14deg
SM-1	1/4"	1/4"	1/2"	1-9/16"	Cone,22deg
SN-1	1/4"	1/4"	5/16"	1-9/16"	Inverted Cone,10deg

9 pc set, 1/8" Shank Diameter



Order No. 389-0961

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-51	1/8"	1/4"	1/2"	1-9/16"	Cylindrical
SB-51	1/8"	1/4"	1/2"	1-9/16"	Cylindrical End Cut
SC-51	1/8"	1/4"	1/2"	1-9/16"	Cylindrical Radius End
SD-51	1/8"	1/4"	7/32"	1-9/16"	Ball
SE-51	1/8"	1/4"	3/8"	1-9/16"	Oval
SF-51	1/8"	1/4"	1/2"	1-9/16"	Tree
SG-51	1/8"	1/4"	1/2"	1-9/16"	Tree Point End
SM-51	1/8"	1/4"	1/2"	1-9/16"	Cone,22deg
SN-51	1/8"	1/4"	1/4"	1-9/16"	Inverted Cone,10deg

12 pc set, 1/8" Shank Diameter



Order No. 389-0986

Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-42	1/8"	3/32"	7/16"	1-1/2"	Cylindrical
SA-43	1/8"	1/8"	9/16"	1-1/2"	Cylindrical Radius End
SC-41	1/8"	3/32"	7/16"	1-1/2"	Ball
SC-42	1/8"	1/8"	9/16"	1-1/2"	Oval
SD-42	1/8"	1/8"	1/8"	1-1/2"	Tree
SE-41	1/8"	1/8"	7/32"	1-1/2"	Tree Point End
SF-42	1/8"	1/8"	1/2"	1-1/2"	Flame
SG-43	1/8"	1/8"	3/8"	1-1/2"	Cone,60Deg
SH-41	1/8"	1/8"	1/4"	1-1/2"	Cone,60Deg
SL-42	1/8"	1/8"	1/2"	1-1/2"	Taper radius End,14deg
SM-42	1/8"	1/8"	7/16"	1-1/2"	Cone,22deg
SN-42	1/8"	1/8"	3/16"	1-1/2"	Inverted Cone,10deg

Order No. 389-0988



Specifications

Style	Shank Dia.	Cutting Dia.	Cutting Length	OAL	Sharp
SA-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical
SA-3	1/4"	3/8"	3/4"	1-9/16"	Cylindrical
SA-5	1/4"	1/2"	1"	1-9/16"	Cylindrical
SC-1	1/4"	1/4"	5/8"	1-9/16"	Cylindrical Radius End
SC-3	1/4"	3/8"	3/4"	1-9/16"	Cylindrical Radius End
SC-5	1/4"	1/2"	1"	1-9/16"	Cylindrical Radius End
SD-3	1/4"	3/8"	5/16"	1-9/16"	Ball
SD-5	1/4"	1/2"	7/16"	1-9/16"	Ball
SE-3	1/4"	3/8"	5/8"	1-9/16"	Oval
SF-1	1/4"	1/4"	5/8"	1-9/16"	Tree
SF-3	1/4"	3/8"	3/4"	1-9/16"	Tree
SF-5	1/4"	1/2"	1"	1-9/16"	Tree
SG-1	1/4"	1/4"	5/8"	1-9/16"	Tree Point End
SG-3	1/4"	3/8"	3/4"	1-9/16"	Tree Point End
SL-3	1/4"	3/8"	1-1/16"	1-9/16"	Taper radius End,14deg
SL-4	1/4"	1/2"	1-1/8"	1-9/16"	Taper radius End,14deg

DIN8032 Carbide Burrs 德标硬质合金旋转锉

6mm Shank Dia.

Carbide burs feature a chisel type cutting edge. Machine ground and tool built to exacting tolerances of concentricity, size, and shape. Results in smooth running, fast metal removal and fine finishes when used with precision grinders.

Carbide Burrs-ZYA (Cylindrical)



Style	Cutting Dia.	Cutting Length	Order No.
ZYA0414	4mm	13	489-0004
ZYA0616	6mm	16	489-0006
ZYA0820	8mm	20	489-0008
ZYA1013	10mm	13	489-0010
ZYA1020	10mm	20	489-0011
ZYA1225	12mm	25	489-0012
ZYA1625	16mm	25	489-0016

Carbide Burrs-ZYAS (Cylindrical End Cut)



Style	Cutting Dia.	Cutting Length	Order No.
ZYAS 0414	4mm	13	489-0104
ZYAS 0616	6mm	16	489-0106
ZYAS 0820	8mm	20	489-0108
ZYAS 1013	10mm	13	489-0110
ZYAS 1020	10mm	20	489-0111
ZYAS 1225	12mm	25	489-0112
ZYAS 1625	16mm	25	489-0116

Carbide Burrs-WRC (Cylindrical Radius End)



Style	Cutting Dia.	Cutting Length	Order No.
WRC0413	4mm	13	489-0204
WRC0616	6mm	16	489-0206
WRC0820	8mm	20	489-0208
WRC1020	10mm	20	489-0210
WRC1225	12mm	25	489-0212
WRC1625	16mm	25	489-0216

Carbide Burrs-KUD (Ball)



Style	Cutting Dia.	Cutting Length	Order No.
KUD 0403	4mm	3.6	489-0304
KUD 0605	6mm	5.4	489-0306
KUD 0807	8mm	7.0	489-0308
KUD 1009	10mm	9.0	489-0310
KUD 1210	12mm	10.8	489-0312
KUD 1614	16mm	14.3	489-0316
KUD 2018	20mm	18.0	489-0320

Carbide Burrs-SPG (Three Pointed End)



Style	Cutting Dia.	Cutting Length	Order No.
SPG 0618	6mm	18	489-0406
SPG 1020	10mm	20	489-0410
SPG 1225	12mm	25	489-0412
SPG 1230	12mm	30	489-0413
SPG 1625	16mm	30	489-0416

Carbide Burrs-Tre (Oval)



Style	Cutting Dia.	Cutting Length	Order No.
TRE0610	6mm	10	489-0506
TRE0813	8mm	13	489-0508
TRE1016	10mm	16	489-0510
TRE1220	12mm	20	489-0512
TRE1625	16mm	25	489-0516

Carbide Burrs-SKM (Taper or Cone Flat End)



Style	Shape	Cutting Dia.	Cutting Length	Order No.
SKM0618	18°	6mm	18	489-0606
SKM1020	28°	10mm	20	489-0610
SKM1225	26°	12mm	25	489-0612

Carbide Burrs-KEL (Taper or Cone Radius End)



Style	Shape	Cutting Dia.	Cutting Length	Order No.
KEL1020	14°	10mm	20	489-0710
KEL1225	14°	12mm	25	489-0712
KEL1230	14°	12mm	30	489-0713
KEL1630	14°	16mm	30	489-0716

Carbide Burrs-RBF (Three Radius End)



Style	Cutting Dia.	Cutting Length	Order No.
RBF0618	6mm	18	489-0806
RBF0820	8mm	20	489-0808
RBF1020	10mm	20	489-0810
RBF1225	12mm	25	489-0812
RBF1625	16mm	30	489-0816

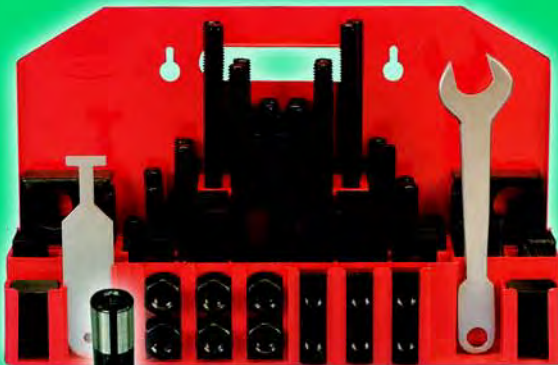
Carbide Burrs-B (Flame)



Style	Cutting Dia.	Cutting Length	Order No.
B 0820	8mm	20	489-0908
B 1232	12mm	30	489-0912
B 1636	16mm	35	489-0916

Toolholding/Workholding

Angle Plates.....	276-277
Boring Heads/Lathe Centers.....	263-367
Collet Fixture.....	270-271
Drill Chucks & Arbors.....	268-270
Collets.....	225-242
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Quick Change Tool Posts & Tool Holders

美式快换刀架

Piston Type Tool Post Sets

Each set consists of one piston type tool post and one of each of 5 tool holders:

- #1: Boring & Facing.
- #2: Boring, Turning & Facing.
- #4: Boring, Heavy duty.
- #7: Universal Parting Blade.
- #10: Knurling, Facing & Turning.

Tool Post Series	Swing	Set Order No.
100(AXA)	Up To 12"	951-1100
200(BXA)	10-15"	951-1200
300(CXA)	13-18"	951-1300
400(CA)	14-20"	951-1400

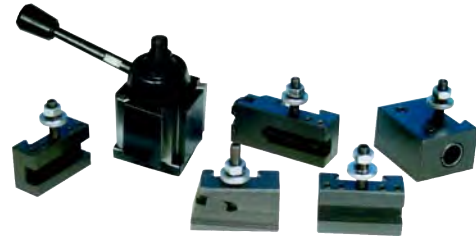


Wedge Type Tool Post Sets

Each set consists of one piston type tool post and one of each of 5 tool holders:

- #1: Boring & Facing.
- #2: Boring, Turning & Facing.
- #4: Boring, Heavy duty.
- #7: Universal Parting Blade.
- #10: Knurling, Facing & Turning.

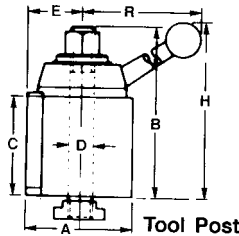
Tool Post Series	Swing	Set Order No.
100(AXA)	Up To 2"	951-1111
200(BXA)	10-15"	951-1222
300(CXA)	13-18"	951-1333
400(CA)	14-20"	951-1444



Quick Change Lathe Tool Posts

Features:

- All working parts hardened & ground.
- Maximum rigidity for chatter-free performance.
- No time wasted with shims.
- Holders fit "ALORRIS" & "YUASA" tool posts.
- Increases productivity of all lathe operations.
- Completely sealed for maintenance free operation.
- Change tools in seconds.



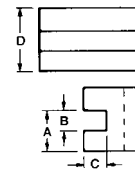
Tool Post Series	Width A	B	C	Overall D	Height E	Fits Lathe H	R	Size	Piston Type Order No.	Wedge Type Order No.
100	2-1/2"	3-7/8"	2-1/4"	9/16"	1-3/8"	4-11/16"	5-3/4"	12"	950-1100	950-1111
200	3	4-5/8	2-3/4	5/8	1-5/8	5-9/16	7-5/16	10-1	950-1200	950-1222
300	3-1/2	5-1/8	3	3/4	1-7/8	6-1/8	7-7/8	13-18	950-1300	950-1333
400	4	6-1/4	3-5/8	7/8	2-1/8	7	9	14-20	950-1400	950-1444

#1, Turning & Facing Holders

Features:

- Takes various sizes of bits.
- Turning and facing tools can be locked in together.
- Save time and labor when changing operations.

Series	A	B	C	D	Tool Bit	Order No.
100(AXA)	15/16"	1/2"	7/16"	1-1/2"	3/16-1/2"	950-1101
200(BXA)	1-1/8	5/8	1/2	1-3/4	1/4-5/8	950-1201
300(CXA)	1-7/16	3/4	5/8	2-1/8	1/2-3/4	950-1301
400(CA)	1-11/16	1	3/4	2-1/2	1/2-1	950-1401

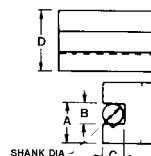


#2, Boring, Turning & Facing Holders

Features:

- "V" groove holds round shank boring bars and tools as well as square tool bits.

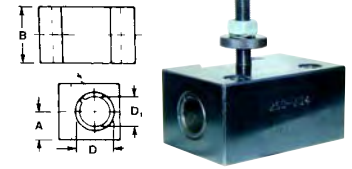
Series	A	B	C	D	Tool Bit	Shank	Order No.
100(AXA)	15/16"	1/2"	7/16"	1-1/2"	3/16-1/2"	7/16"	950-1102
200(BXA)	1-1/8	5/8	1/2	1-3/4	1/4-5/8	1/2	950-1202
300(CXA)	1-7/16	3/4	5/8	2-1/8	1/2-3/4	3/4	950-1302
400(CA)	1-11/16	1	3/4	2-1/2	1/2-1	13/16	950-1402



#4, Heavy Duty Boring Holders**Features:**

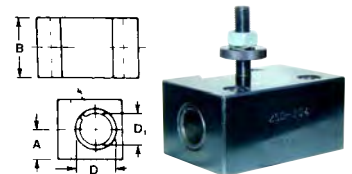
- Equipped with a split bushing to accommodate a boring bar of smaller dia.
- It grips with extreme rigidity, cuts smoothly without chatter.
- Holders supplied with split bushing.

Series	A	B	Inside D	D1	Order No.
100(AXA)	3/4	1-1/2	3/4	5/8	950-1104
200(BXA)	3/4	1-3/4	1	3/4	950-1204
300(CXA)	1	2	1	3/4	950-1304
400(CA)	1-3/8	2-3/4	1-1/4	1	950-1404

**#41, Heavy Duty Boring Holders****Features:**

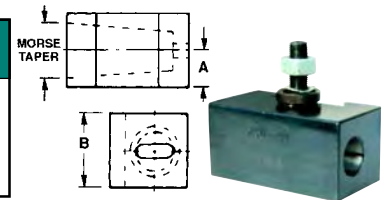
- Equipped with a split bushing to accommodate a boring bar of smaller dia.
- It grips with extreme rigidity, cuts smoothly without chatter.
- Holders supplied with split bushing.

Series	A	B	Inside D	D1	Order No.
100(AXA)	7/8	1-3/4	1	3/4	950-1141
200(BXA)	1	2	1-1/4	1	950-1241
300(CXA)	1-1/8	2-1/4	1-1/4	1	950-1341
400(CA)	1-3/8	2-3/4	1-1/2	1-1/4	950-1441

**#5, Morse Taper Holders****Features:**

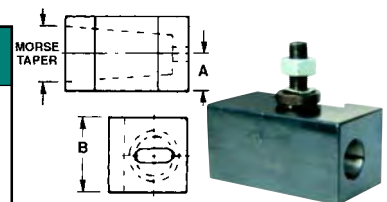
- Drills with carriage by using power feed instead of tail stock
- Easily centered.
- For 2,3 and 4 Morse Taper drills.

Series	A	B	Taper Hole Size	Order No.
100(AXA)	3/4	1-1/2	MT2	950-1105
200(BXA)	7/8	1-3/4	MT2	950-1205
300(CXA)	1	2	MT3	950-1305
400(CA)	1-1/4	2-1/2	MT3	950-1405

**#53, Morse Taper Holders****Features:**

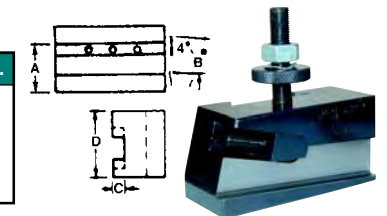
- Drills with carriage by using power feed instead of tail stock
- Easily centered.
- For 2,3 and 4 Morse Taper drills.

Series	A	B	Taper Hole Size	Order No.
100(AXA)	3/4	1-1/2	MT3	950-1153
200(BXA)	7/8	1-3/4	MT3	950-1253
300(CXA)	1-1/16	2-1/8	MT4	950-1353
400(CA)	1-1/4	2-1/2	MT4	950-1453

**#7, Universal Parting Blade Holders****Features:**

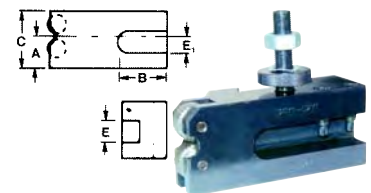
- For bevel as well as T-cut blades.
- Absence of vibration prevents breaking blades.

Series	A	B	C	D	Height	Order No.
100(AXA)	13/16	1/2	13/16	1-1/2	1/2	950-1107
200(BXA)	1	11/16	13/16	1-3/4	11/16	950-1207
300(CXA)	1-3/16	3/4	13/16	2	3/4	950-1307
400(CA)	1-7/16	7/8	1/4	2-1/2	7/8	950-1407

**#10, Knurling, Facing & Turning Holders**

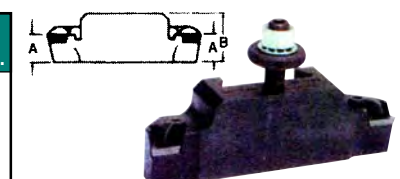
- For turning and facing as knurling.
- Supplied with a set of high speed precision round lapped medium diamond knurls.
- Dimensions 3/4x3/8x1/4"

Series	A	B	C	E	E1	Tool Bit	Order No.
100(AXA)	7/8"	2-1/2"	1-6/19"	1/2"	3/8"	3/16-1/2"	950-1110
200(BXA)	1	2-5/8	1-3/4	5/8	1/2	1/4-5/8	950-1210
300(CXA)	1-3/16	3-1/8	2	3/4	5/8	1/2-3/4	950-1310
400(CA)	1-7/16	3-3/4	2-1/2	1	3/4	1/2-1	950-1410

**#16, Combination Facing & Turning Holders For Carbide Triangular Inserts**

Accommodates standard triangular positive rake inserts. Unique design permits both right hand and left hand turning and facing. Supplied with carbide shims to protect the holder. Inserts not included.

Series	A	B	Inserts		Rake	Order No.
			I.C.	Thick		
100(AXA)	7/8"	1-3/8"	3/8"	1/8	Pos.	950-1116
200(BXA)	1	1-3/4	3/8	1/8	Pos.	950-1216
300(CXA)	1-3/16	2	3/8	1/8	Pos.	950-1316
400(CA)	1-1/2	2-1/4	1/2	3/16	Pos.	950-1416



KDK Quick Change Tool Posts & Holders

KDK 快换刀架

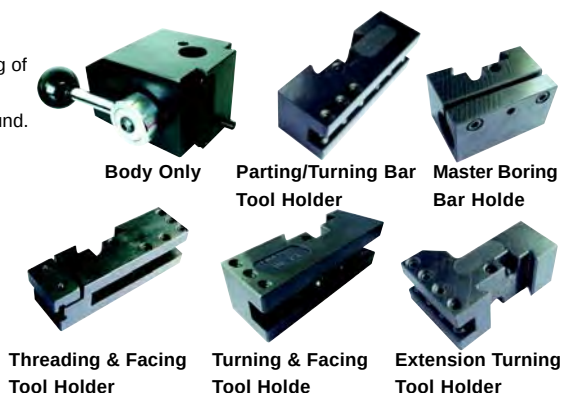
- The rigidity increases the life of your tools.
- Camlock-positive of tool setting.
- One turn of carriage or cross feed dial will permit changing of tools, allowing substantial saving of valuable time.
- Handle is broached for different position on cam-holders are made of steel, hardened and ground.
- Five holders will hold nine tools with 24 combinations allowing operator to handle most any job.
- Has adjustment screw allowing the use of tool bits upside down.

Quick Change Tool Holder Sets

Series	Recommended Lathe Swing(In.)	Center Ht.(In.)	Order No.
100	12 to 16	1.000 & Up	951-3300
150	15 to 18	1.250 & Up	951-3200

Set Include:

- Body
- Parting/Turning Bar Tool Holder
- Threading & Facing Tool Holder
- Turning & Facing Tool Holder
- Extension Turning Tool Holder
- Master Boring Bar Holder



Quick Change Tool Posts & Holders

Part name	1.000" & Up 12 to 16" Swing			1.250" & Up 15 to 18" Swing		
	Mfr's#	Bit Cap. (In.)	Order No.	Mfr's#	Bit Cap. (In.)	Order No.
Body Only	100		950-3300	150		950-3200
Turning & Facing Tool Holder	101	1/2	950-3301	151	5/8	950-3201
Threading & Facing Tool Holder	102	1/2	950-3302	152	5/8	950-3202
Extension Turning Tool Holder	103	1/2	950-3303	153	5/8	950-3203
Parting/Turning Bar Tool Holder	104	1/8W x 11/16H	950-3304	154	1/8W x 7/8H	950-3204
Master Boring Bar Holder	105	1"hole	950-3305	155	1-1/4	950-3205
5C Collet Holder	119	5C	950-3306			



40-Position Quick Change Tool Posts & Holders

40 工位 套装快换刀架

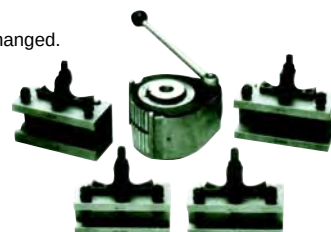
The best designed Quick Change Tool Post & Holder system in the industry for its accuracy, rigidity and productivity now at affordable price!

- Wear-free, tear-free, and maintenance-free.
- Adjust tool to 40 different positions indicated by a marked position dial (index every 9°)
- Fully interchangeable with other brand 40-position quick change tool post & holder.
- Heat-treated and precision-ground for very accurate repeatability.
- Change tools in seconds.
- Adjust height of cutting edge easily and accurately.
- Reground tools without removal from holder-setting unchanged.

40-Position Quick Change Tool Post Sets

Tool Post Series	Lathe Swing	Sets Order No.
A0	Up to 10" (120-220mm)	950-2705
A1	6-13" (150-300mm)	950-2710
E5	10-18" (200-400mm)	950-2715
B2	13-20" (300-500mm)	950-2722
C3	18-30" (400-700mm)	950-2725
D1	30" up (600-1000mm)	950-2730

Each set includes:
1 Tool Post
3 "D" Holders
1 "B" Holder



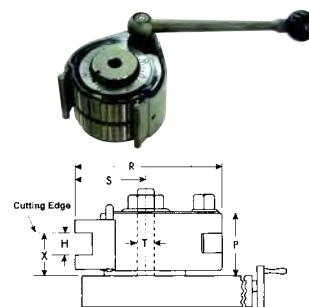
40-Position Quick Change Tool Posts

Size of Tool Post	Lathe Swing	Max. Driving Power (HP)	R Max.	S Max.	P	T	H	XMin.	X Max.	Post Only Order No.
A0	Up to 10" (120-220mm)	1.5"	2.99"	1.36"	1.26"	0.51"	0.51"	0.79"	1.18"	950-2100
A1	6-13" (150-300mm)	3	4.13	2.07	1.83	0.79	0.83	1.18	1.61	950-2200
E5	10-18" (200-400mm)	6	5.14	2.57	2.30	0.79	0.94	1.37	2.04	950-2300
B2	13-20" (300-500mm)	9	6.00	2.95	2.68	1.26	1.00	1.46	2.25	950-2400
C3	18-30" (400-700mm)	18	7.90	3.62	3.90	1.57	1.26	1.86	3.43	950-2500
D1	30" up (600-1000mm)	27	9.49	4.80	4.53	1.57	1.61	2.44	4.56	950-2600

"A" Cut- Off Tool Holder

Series	Blade Width	Holder Length	Order No.
A1	13/32"	3-5/32"	950-2401
E5	5/8"	4"	950-2402
B2	5/8"	4-3/4"	950-2403
D1	3/4"	6"	950-2404

Blade Width Holder Length			Order No.
Series	(mm)	(mm)	
A0	10	50	540-0040
A1	10	75	540-0140
E5	10	100	540-0240
B2	16	120	540-0340
C2	18.5	150	540-0440



"B" Boring, Turning & Facing Holders

Series	Facing Height	Holder Length	Order No.
A0	15/32"	2"	950-2201
A1	3/4"	3-5/32"	950-2202
E5	1-3/16"	4"	950-2203
B2	1-1/4"	5-1/8"	950-2204
C3	1-1/4"	6-5/16"	950-2205
C3	1-5/8"	6-5/16"	950-2206
D1	2"	7-3/32"	950-2207

Series	Facing Height (mm)	Holder Length (mm)	Order No.
A0	12	50	540-0020
A1	18	80	540-0120
A1	16	80	540-0121
A1	20	90	540-0122
E5	30	100	540-0220

Series	Facing Height (mm)	Holder Length (mm)	Order No.
B2	32	130	540-0320
C3	32	160	540-0421
C3	40	160	540-0422
D1	50	180	540-0520
D1	63	180	540-0521

**"D" Turning and Facing Holders**

Series	Facing Height	Holder Length	Order No.
A0	15/32"	2"	950-2101
A1	3/4"	3-5/32"	950-2102
E5	3/4"	4"	950-2103
E5	1"	4"	950-2104
B2	1"	4-3/4"	950-2105

Series	Facing Height	Holder Length	Order No.
B2	1"	5-1/2"	950-2106
B2	1-1/4"	4-3/4"	950-2107
B2	1-1/4"	5-1/2"	950-2108
C3	1-1/4"	6"	950-2109
C3	1-1/4"	6-11/16"	950-2110
C3	1-5/8"	6"	950-2111
C3	1-5/8"	6-11/16"	950-2112
C3	1-3/4"	6-11/16"	950-2113
D1	1-5/8"	7-3/32"	950-2114
D1	2"	7-3/32"	950-2115
D1	2-1/2"	7-3/32"	950-2116

Series	Facing Height (mm)	Holder Length (mm)	Order No.
A0	12	50	540-0010
A1	20	80	540-0110
A1	16	75	540-0111
A1	16	80	540-0112
A1	16	90	540-0113
A1	20	75	540-0114
A1	20	90	540-0115
E5	20	100	540-0211
E5	25	100	540-0212
B2	25	120	540-0311
B2	25	140	540-0312

Series	Facing Height (mm)	Holder Length (mm)	Order No.
B2	32	120	540-0313
B2	32	140	540-0314
C3	32	150	540-0411
C3	32	170	540-0412
C3	40	150	540-0413
C3	40	170	540-0414
C3	45	170	540-0415
D1	40	180	540-0511
D1	50	180	540-0512
D1	63	180	540-0513

"L" Bushings for Drill & Boring Bar Holders

Series	Bushings Hole Diameters	Taper	Order No.
A1	1-3/16"	MT1	950-2501
A1	1-3/16"	MT2	950-2502
E5	1-3/16"	MT2	950-2503
E5	1-5/8"	MT3	950-2504
B2	1-5/8"	MT3	950-2505
B2	1-5/8"	MT4	950-2506
C3	1-5/8"	MT3	950-2507
C3	1-5/8"	MT4	950-2508
C3	2"	MT4	950-2509
D1	2-1/2"	MT5	950-2510

Series	Bushing Dia. (mm)	Hole Taper	Order No.
A1	30	MT1	540-0151
A1	30	MT2	540-0152
E5	30	MT2	540-0251
E5	40	MT3	540-0252
B2	40	MT3	540-0351
B2	40	MT4	540-0352
C3	40	MT3	540-0451
C3	40	MT4	540-0452
C3	50	MT4	540-0453
D1	63	MT5	540-0550

"S" Drill & Boring Bar Holders

Series	Facing Height	Holder Length	Order No.
A0	19/32"	2"	950-2301
A1	1-3/16"	3-5/32"	950-2302
E5	1-3/16"	4"	950-2303
E5	1-5/8"	4"	950-2304
B2	1-5/8"	4-3/4"	950-2305
C3	1-5/8"	6"	950-2306
C3	2"	6"	950-2307
D1	2-1/2"	7-3/32"	950-2308

Series	Facing Holder Height (mm)	Holder Length (mm)	Order No.
A0	15	50	540-0030
A1	30	80	540-0130
A1	20	90	540-0131
E5	30	100	540-0231
E5	40	100	540-0232
B2	40	120	540-0330
C3	40	150	540-0431
C3	50	150	540-0432
D1	63	180	540-0530

Quick Change Tool Posts & Sets**意大利式快换刀架**

It is composed of the cutter-cartridge body and the tool-holder for various cutting tools for processing works like cylindrical facing, end facing, cutting, knurling, drilling, enlarging boring and reaming, etc. The height of tools can be regulated and positioned relative to the centerline of machine spindle. It features external tool-mounting, tool-matching, quick tool-changing, great precision in positing and great hardness etc.

Size	Lathe Swing	Sets Order No.
MK	Up to 7"	951-5100
M	7-10"	951-5200
A	10-14"	951-5300
B	14-18"	951-5400
C	18-24"	951-5500
D	Over	951-5600
E	Over	951-5700
F	Over	951-5800

Quick Change Tool Post Sets**Each set Includes:**

- 1 Tool Post
- 3 Tool-holders of flat section
- 1 Tool-holder with V-seat for round tools
- 2 Standard spanners



Quick Change Tool Posts & Sets continued

意大利式快换刀架

The quick change tool post is a major spare part of the ordinary lathes. It is composed of the cutter-cartridge body and the tool-holder for various cutting tools for processing works like cylindrical facing, end facing, cutting, knurling, drilling, enlarging boring and reaming, etc. The height of tools can be regulated and positioned relative to the centerline of machine spindle. It features external tool-mounting, too-matching, quick tool-changing, great precision in positing and great hardness etc.



Tool Post

502(201) Flat-seat
Tool Holder503(202) V-Shaped
seat Tool Holder504(203) Morse Taper
Tool Holder540(216) Boring Bar
Tool Holder550(217) Parting-Off
Blade Tool Holder

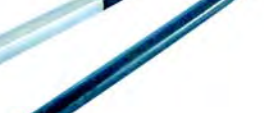
505(204) Eccentric Pin



506(205) Tenon



513(207) Extractor

218 Boring Bar
Locking Screw219 Parting-Off Blade
Locking Prong515(215) Cross-Pin
Spanner512(208)
Long Screw511(209)
Short Screw510(206) Height
Adj. Reel509(210)
Screw Stud211 Extractor
Screw220 Prong
Locking Screw212
Spring508(213)
Pin516(214) Elbowed
Wrench

Quick Change Tool Posts

Post Series	Lathe Swing	Dimensions of Turret Body	Max. Height Square and Rec. Tools	Max. Dia. of Round Tool	Taper Shank	Max. Adjusting Tool Holder	Order No.
M	7-10"	2-3/4x2-3/4x1-3/4	5/8	1/2	1	1/2	950-5200
501-AR-AP	10-12"						950-5250
A	10-14"	3-7/8x3-7/8x2-3/8	3/4	5/8	2	9/16	950-5300
501-BR-BP	12-15"						950-5350
B	14-18"	5x5x3-3/8	1-1/8	13/16	3	15/16	950-5400
C	18-24"	5-5/8x5-5/8x3-3/4	1-1/4	15/16	4	1	950-5500
D	Over	6-7/8x6-7/8x4-3/4	1-1/2	1-1/4	4	1-1/2	950-5600

Quick Change Tool Holders & Accessories

Series	Description	M Order No.	AR-AP Order No.	A Order No.	BR-BP Order No.	B Order No.	C Order No.	D Order No.
502 (201)	Flat-Seat Tool Holder	950-5221	950-5271	950-5321	950-5371	950-5421	950-5521	950-5621
503 (202)	V-Tool Holder	950-5222	950-5272	950-5322	950-5372	950-5422	950-5522	950-5622
504 (203)	Morse Taper Tool Holder	950-5223	950-5273	950-5323	950-5373	950-5423	950-5523	950-5623
550 (217)	Parting-off Blade Holder	950-5217	950-5267	950-5317	950-5367	950-5417	950-5517	950-5617
540 (216)	Boring Bar Tool Holder	950-5216	950-5266	950-5316	950-5366	950-5416	950-5516	950-5616
505 (204)	Eccentric Clamp Pin	950-5224	950-5274	950-5324	950-5374	950-5424	950-5524	950-5624
506 (205)	Tenon	950-5225	950-5275	950-5325	950-5375	950-5425	950-5525	950-5625
(212)	Clamping Block Spring		950-5262	950-5312	950-5362	950-5412	950-5512	
508 (213)	Dowel Pin	950-5213	950-5263	950-5313	950-5363	950-5413	950-5513	950-5613
509 (210)	Screw Stud	950-5210	950-5260	950-5310	950-5360	950-5410	950-5510	950-5610
510 (206)	Height Adj. Screw	950-5206	950-5256	950-5306	950-5356	950-5406	950-5506	950-5606
(218)	Boring Bar Locking Screw	950-5218	950-5268	950-5318	950-5368	950-5418	950-5518	950-5618
(220)	Prong Locking Screw	950-5220	950-5270	950-5320	950-5370	950-5420	950-5520	950-5620
(219)	Parting-off Blade Locking Prong	950-5219	950-5269	950-5319	950-5369	950-5419	950-5519	950-5619
511 (209)	Short Screw	950-5209	950-5259	950-5309	950-5359	950-5409	950-5509	950-5609
515 (215)	T-Key For Set Screws	950-5215	950-5265	950-5315	950-5365	950-5415	950-5515	950-5615
516 (214)	Hexagon Wrench	950-5214	950-5264	950-5314	950-5364	950-5414	950-5514	950-5614
513 (207)	Extractor	950-5207	950-5257	950-5307	950-5357	950-5407	950-5507	950-5607
512 (208)	Long Screw	950-5208	950-5258	950-5308	950-5358	950-5408	950-5508	950-5608
(211)	Extractor Screw	950-5211	950-5261	950-5311	950-5361	950-5411	950-5511	950-5611

5C Collet Stops 5C 卡头可调定位器

Fits any 5C collet. Supplied with threaded rod. Hardened for long life. Black oxide

Order No. 239-9051

Converts standard 1" capacity lathe collets into solid stop or spring ejector stop collets without alteration of the standard collets.

Order No. 239-9052



5C & 16C Collet Stops 5C&16C 卡头定位器

- 5C collet stop include one each of 1/8, 1/2, 3/4 & 1" Stop rod, and one Collet Rod.
- 16C collet stop include one 1" Stop Rod and one Collet Rod.

Description	Order No.
5C Collet Stop	209-2799
16C Collet Stop	209-2807



Collet Wrenches 卡头扳手

- Simplifies installing and removing a collet in your CNC lathe.
- Made with a steel head and fins for strength.



Collet Type	Fins	Order No.
3J	4	239-0003
5C	3	239-0005
R8	3	239-0008
16C	3	239-0016

Sets with Rack

NEW



Specifications	Economy Order No.	Premium Order No.
12pcs 1/8 to 3/4" by 16th plus 7/8"	231-1112	
12pcs 1/16-3/4" by 16th	231-2111	
12pcs 1/8 to 3/4" by 16ths plus 7/8"	231-2112	
13pcs 1/8 to 7/8" by 16ths	231-2113	
14pcs 1/16 to 7/8" by 16ths	231-2114	
19pcs 2mm to 20mm by 1mm	231-2119	
23pcs 1/16-3/4" by 32nd	231-2123	
25pc. 1/8 to 7/8" by 32nds	231-2125	
27pcs 1/16 to 7/8" by 32nds	231-2127	
6pcs collet 1/8 to 3/4" by 8ths		231-2206
14pcs collet 1/16 to 7/8" by 16ths		231-2214
15pcs collet 1/16 to 7/8" by 16ths, and 1"		231-2215
19pcs collet 2.0-20.0mm by 1.0mm		231-2219

R8 Round Collets R8 英制圆卡头

- Made of high grade steel.
- Hardened and precision ground.
- Internal thread 7/16"-20.



Size	Economy Order No.	Premium .0005" T.I.R Order No.	Size	Economy Order No.	Premium 0.015mm T.I.R Order No.
1/16"	231-4704	231-4904	2mm	231-4802	231-4602
3/32"	231-4706	231-4906	3mm	231-4803	231-4603
1/8"	231-4708	231-4908	4mm	231-4804	231-4604
5/32"	231-4710	231-4910	5mm	231-4805	231-4605
3/16"	231-4712	231-4912	6mm	231-4806	231-4606
7/32"	231-4714	231-4914	7mm	231-4807	231-4607
1/4"	231-4716	231-4916	8mm	231-4808	231-4608
9/32"	231-4718	231-4918	9mm	231-4809	231-4609
5/16"	231-4720	231-4920	10mm	231-4810	231-4610
11/32"	231-4722	231-4922	11mm	231-4811	231-4611
3/8"	231-4724	231-4924	12mm	231-4812	231-4612
13/32"	231-4726	231-4926	13mm	231-4813	231-4613
7/16"	231-4728	231-4928	14mm	231-4814	231-4614
15/32"	231-4730	231-4930	15mm	231-4815	231-4615
1/2"	231-4732	231-4932	16mm	231-4816	231-4616
17/32"	231-4734	231-4934	17mm	231-4817	231-4617
9/16"	231-4736	231-4936	18mm	231-4818	231-4618
19/32"	231-4738	231-4938	19mm	231-4819	231-4619
5/8"	231-4740	231-4940	20mm	231-4820	231-4620
21/32"	231-4742	231-4942	21mm	231-4821	231-4621
11/16"	231-4744	231-4944	22mm	231-4822	231-4622
23/32"	231-4746	231-4946	23mm	231-4823	231-4623
3/4"	231-4748	231-4948	24mm	231-4824	231-4624
25/32"	231-4750	231-4950			
13/16"	231-4752	231-4952			
27/32"	231-4754	231-4954			
7/8"	231-4756	231-4956			
1"	231-4764	231-4964			

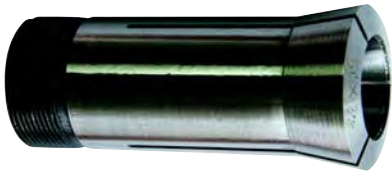
Sets

Range	No. Of Pieces	Economy Order No.	Premium Order No.
1/8-3/4" by 8ths	6	231-0006	231-5006
1/8" to 7/8" by 8ths	7	231-0007	231-5007
1/8-3/4" by 16ths	11	231-0011	231-5011
1/16" to 3/4" by 16ths	12	231-0012	231-5012
1/8" to 7/8" by 16ths	13	231-0013	231-5013
1/16" to 7/8" by 16ths	14	231-0014	231-5014
1/8 to 3/4" by 32nds	21	231-0021	231-5021
1/16-3/4" by 32ths	23	231-0023	231-5023
1/8" to 7/8" by 32nds	25	231-0025	231-5025
1/16" to 7/8" by 32nds	27	231-0027	231-5027
1/8" to 3/4" by 16ths plus 7/8"	12	231-0112	231-5112
1/16" to 1" by 1/32"	28	231-0128	231-5128
2mm to 20mm by 1mm	19	231-0019	231-5019

5C Round Collets

5C 英制圆卡头

- Made of high grade steel.
 - Hardened and precision ground.
 - Internal thread 1.041"-24, external thread 1.242"-20.
- The economy grade collet complies with cardboard case, premium grade complies with plastic case.



Premium			Premium		
.0005" T.I.R			.0005" T.I.R		
Size	Economy Order No.	Order No.	Size	Economy Order No.	Order No.
1/32"	230-4102	230-4902	37/64"	230-4137	230-4937
3/64"	230-4103	230-4903	19/32"	230-4138	230-4938
1/16"	230-4104	230-4904	39/64"	230-4139	230-4939
5/64"	230-4105	230-4905	5/8"	230-4140	230-4940
3/32"	230-4106	230-4906	41/64"	230-4141	230-4941
7/64"	230-4107	230-4907	21/32"	230-4142	230-4942
1/8"	230-4108	230-4908	43/64"	230-4143	230-4943
9/64"	230-4109	230-4909	11/16"	230-4144	230-4944
5/32"	230-4110	230-4910	45/64"	230-4145	230-4945
11/64"	230-4111	230-4911	23/32"	230-4146	230-4946
3/16"	230-4112	230-4912	47/64"	230-4147	230-4947
13/64"	230-4113	230-4913	3/4"	230-4148	230-4948
7/32"	230-4114	230-4914	49/64"	230-4149	230-4949
15/64"	230-4115	230-4915	25/32"	230-4150	230-4950
1/4"	230-4116	230-4916	51/64"	230-4151	230-4951
17/64"	230-4117	230-4917	13/16"	230-4152	230-4952
9/32"	230-4118	230-4918	53/64"	230-4153	230-4953
19/64"	230-4119	230-4919	27/32"	230-4154	230-4954
5/16"	230-4120	230-4920	55/64"	230-4155	230-4955
21/64"	230-4121	230-4921	7/8"	230-4156	230-4956
11/32"	230-4122	230-4922	57/64"	230-4157	230-4957
23/64"	230-4123	230-4923	29/32"	230-4158	230-4958
3/8"	230-4124	230-4924	59/64"	230-4159	230-4959
25/64"	230-4125	230-4925	15/16"	230-4160	230-4960
13/32"	230-4126	230-4926	61/64"	230-4161	230-4961
27/64"	230-4127	230-4927	31/32"	230-4162	230-4962
7/16"	230-4128	230-4928	63/64"	230-4163	230-4963
29/64"	230-4129	230-4929	1"	230-4164	230-4964
15/32"	230-4130	230-4930	1-1/64"	230-4301	230-4971
31/64"	230-4131	230-4931	1-1/32"	230-4302	230-4972
1/2"	230-4132	230-4932	1-3/64"	230-4303	230-4973
33/64"	230-4133	230-4933	1-1/16"	230-4304	230-4974
17/32"	230-4134	230-4934	1-5/64"	230-4305	230-4975
35/64"	230-4135	230-4935	1-3/32"	230-4306	230-4976
9/16"	230-4136	230-4936	1-7/64"	230-4307	230-4977
			1-1/8"	230-4308	230-4978

Premium			Premium		
0.015mm T.I.R.			0.015mm T.I.R		
Size	Economy Order No.	Order No.	Size	Economy Order No.	Order No.
2mm	230-4202	230-9202	1.5mm	230-3015	229-3015
3mm	230-4203	230-9203	2.5mm	230-3025	229-3025
4mm	230-4204	230-9204	3.5mm	230-3035	229-3035
5mm	230-4205	230-9205	4.5mm	230-3045	229-3045
6mm	230-4206	230-9206	5.5mm	230-3055	229-3055
7mm	230-4207	230-9207	6.5mm	230-3065	229-3065
8mm	230-4208	230-9208	7.5mm	230-3075	229-3075
9mm	230-4209	230-9209	8.5mm	230-3085	229-3085
10mm	230-4210	230-9210	9.5mm	230-3095	229-3095
11mm	230-4211	230-9211	10.5mm	230-3105	229-3105
12mm	230-4212	230-9212	11.5mm	230-3115	229-3115
13mm	230-4213	230-9213	12.5mm	230-3125	229-3125
14mm	230-4214	230-9214	13.5mm	230-3135	229-3135
15mm	230-4215	230-9215	14.5mm	230-3145	229-3145
16mm	230-4216	230-9216	15.5mm	230-3155	229-3155
17mm	230-4217	230-9217	16.5mm	230-3165	229-3165
18mm	230-4218	230-9218	17.5mm	230-3175	229-3175
19mm	230-4219	230-9219	18.5mm	230-3185	229-3185
20mm	230-4220	230-9220	19.5mm	230-3195	229-3195
21mm	230-4221	230-9221	20.5mm	230-3205	229-3205
22mm	230-4222	230-9222	21.5mm	230-3215	229-3215
23mm	230-4223	230-9223	22.5mm	230-3225	229-3225
24mm	230-4224	230-9224	23.5mm	230-3235	229-3235
25mm	230-4225	230-9225	24.5mm	230-3245	229-3245
26mm	230-4226	230-9226	25.5mm	230-3255	229-3255
27mm	230-4227	230-9227	26.5mm	230-3265	229-3265
28mm	230-4228	230-9228	27.5mm	230-3275	229-3275
29mm	230-4229	230-9229	28.5mm	230-3285	229-3285
30mm	230-4230	230-9230	29.5mm	230-3295	229-3295

5C Collet Sets

Economy			Premium		
No. of Pieces	Descriptions	Order No.	No. of Pieces	Descriptions	Order No.
6	1/8" to 3/4" by 8ths	230-4006	6	1/8"to 3/4"by 8ths	230-5006
8	1/8" to 1" by 8ths	230-4008	8	1/8" to 1" by 8ths	230-5008
9	4mm to 20mm by 2mm	230-4009	9	4mm to 20mm by 2mm	230-5009
17	3-25mm	230-4013	17	3-25mm	230-5013
14	12mm to 25mm by 1mm	230-4014	14	12mm to 25mm by 1mm	230-5014
15	1/8" to 1" by 16ths	230-4015	15	1/8" to 1" by 16ths	230-5015
16	1/8" to 1-1/16" by 16ths	230-4016	16	1/8" to 1-1/16" by 16ths	230-5016
17	1/16" to 1-1/16" by 16ths	230-4017	17	1/16" to 1-1/16" by 16ths	230-5017
18	1/16" to 1-1/8" by 16ths	230-4018	18	1/16" to 1-1/8" by 16ths	230-5018
29	1/8" to 1" by 32nds	230-4029	29	1/8" to 1" by 32nds	230-5029
30	1/8" to 1-1/32" by 32nds	230-4030	30	1/8" to 1-1/32" by 32nds	230-5030
31	1/8" to 1-1/6" by 32nds	230-4031	31	1/8" to 1-1/6" by 32nds	230-5031
32	2mm to 25mm	230-4032	32	2mm to 25mm	230-5032
33	1/16" to 1-1/16" by 32nds	230-4033	33	1/16" to 1-1/16" by 32nds	230-5033
35	1/16" to 1-1/8" by 32nds	230-4035	35	1/16" to 1-1/8" by 32nds	230-5035
57	1/8" to 1" by 64ths	230-4057	57	1/8" to 1" by 64ths	230-5057
64	1/16" to 1-3/64" by 64ths	230-4064	64	1/16" to 1-3/64" by 64ths	230-5064
65	1/16" to 1-1/16" by 64ths	230-4065	65	1/16" to 1-1/16" by 64ths	230-5065
69	1/16" to 1-1/8" by 64ths	230-4069	69	1/16" to 1-1/8" by 64ths	230-5069

Sets with Rack



Specifications	Economy Order No.	Premium Order No.
14pc (3-25mm)	230-8013	
14pc 12mm to 25mm by 1mm	230-8014	
15pc 1/8"to 1" by 1/16" +A 5C Spin index fixture	230-8015	
18pc 1/16"to 1-1/8" by 16ths	230-8018	230-8218
30pc 1/8" to 1-1/32" by 1/32"	230-8030	
30pc1/8" to 1-1/32" by 1/32" + 5C index fixture	230-8031	
15pc 1/8" to 1" by 1/16"	230-8032	
35pc 1/16"to 1-1/8" by 32nds	230-8035	230-8235
69pcs,1/16" to 1-1/8" by 64ths	230-8069	

R8 Square Collets R8 四方孔卡头

- Internal thread 7/16"-20.



Size	Economy Order No.	Premium Order No.
1/8"	530-7208	530-8208
5/32"	530-7210	530-8210
3/16"	530-7212	530-8212
1/4"	530-7216	530-8216
9/32"	530-7218	530-8218
5/16"	530-7220	530-8220
11/32"	530-7222	530-8222
3/8"	530-7224	530-8224
13/32"	530-7226	530-8226
7/16"	530-7228	530-8228
15/32"	530-7230	530-8230
1/2"	530-7232	530-8232
17/32"	530-7234	530-8234
9/16"	530-7236	530-8236

Size	Economy Order No.	Premium Order No.
3mm	530-7030	530-8030
4mm	530-7040	530-8040
5mm	530-7050	530-8050
5.5mm	530-7055	530-8055
6mm	530-7060	530-8060
7mm	530-7070	530-8070
8mm	530-7080	530-8080
9mm	530-7090	530-8090
9.5mm	530-7095	530-8095
10mm	530-7100	530-8100
11mm	530-7110	530-8110
12mm	530-7120	530-8120
13mm	530-7130	530-8130
13.5mm	530-7135	530-8135
14mm	530-7140	530-8140

R8 Square Collet Set

4pcs 1/8" to 1/2" by 8ths

Order No.530-7004

R8 Emergency Collets R8 强力弹簧卡头

- Can be drilled, bored or machined with a H.S.S Tool Bit.
- Face & Pilot Hole are soft to Permit machining to your requirement.
- Internal thread 7/16"-20.



Type	Order No.
R8 steel	231-4395
R8 brass	231-4396
R8 nylon	231-4397

R8 Hex Collets R8 六方孔卡头

- Internal thread 7/16"-20.



Size	Order No.
1/8"	530-6208
5/32"	530-6210
3/16"	530-6212
1/4"	530-6216
9/32"	530-6218
5/16"	530-6220
11/32"	530-6222
3/8"	530-6224
13/32"	530-6226
7/16"	530-6228
15/32"	530-6230
1/2"	530-6232
17/32"	530-6234
9/16"	530-6236
19/32"	530-6238
5/8"	530-6240
21/32"	530-6242
11/16"	530-6244
23/32"	530-6246
3/4"	530-6248
25/32"	530-6250

Size	Order No.
3mm	530-6030
4mm	530-6040
5mm	530-6050
6mm	530-6060
7mm	530-6070
8mm	530-6080
9mm	530-6090
10mm	530-6100
11mm	530-6110
12mm	530-6120
13mm	530-6130
13.5mm	530-6135
14mm	530-6140
15mm	530-6150
16mm	530-6160
17mm	530-6170
17.5mm	530-6175
18mm	530-6180
19mm	530-6190
20mm	530-6200

R8 Hex Collet Set

6pcs 1/8" to 3/4" by 8ths

Order No.530-6006

5C Emergency Collets 5C 强力弹簧卡头

- Face & pilot hole are soft to permit machining to your requirements.
- Can be drilled, bored or machined with a HSS tool bit.
- Internal thread 1.041"-24, external thread 1.242"-20.



Type	Order No.
5c steel	230-4395
5c brass	230-4396
5c nylon	230-4397

5C Square Collets

5C 四方孔卡头

- Made of high grade steel.
- Hardened and precision ground.
- Internal thread 1.041"-24, external thread 1.242"-20.

6Pcs/set

1/8-3/4" by 8ths

Order No.530-4252

11Pcs/set

1/8-3/4 by 16ths

Order No.530-4256

17Pcs/set

3mm to 19mm by 1mm

Order No.530-4917



Size	Economy	Premium
	Order No.	.0005" T.I.R Order No.
1/8"	530-4208	530-3208
5/32"	530-4210	530-3210
3/16"	530-4212	530-3212
7/32"	530-4214	530-3214
1/4"	530-4216	530-3216
9/32"	530-4218	530-3218
5/16"	530-4220	530-3220
11/32"	530-4222	530-3222
3/8"	530-4224	530-3224
13/32"	530-4226	530-3226
7/16"	530-4228	530-3228
15/32"	530-4230	530-3230
1/2"	530-4232	530-3232
17/32"	530-4234	530-3234
9/16"	530-4236	530-3236
19/32"	530-4238	530-3238
5/8"	530-4240	530-3240
21/32"	530-4242	530-3242
11/16"	530-4244	530-3244
23/32"	530-4246	530-3246
3/4"	530-4248	530-3248

Size	Economy	Premium
	Order No.	0.015mm T.I.R Order No.
3mm	530-4030	530-3030
4mm	530-4040	530-3040
5mm	530-4050	530-3050
5.5mm	530-4055	530-3055
6mm	530-4060	530-3060
7mm	530-4070	530-3070
8mm	530-4080	530-3080
9mm	530-4090	530-3090
9.5mm	530-4095	530-3095
10mm	530-4100	530-3100
11mm	530-4110	530-3110
12mm	530-4120	530-3120
13mm	530-4130	530-3130
13.5mm	530-4135	530-3135
14mm	530-4140	530-3140
15mm	530-4150	530-3150
16mm	530-4160	530-3160
17mm	530-4170	530-3170
17.5mm	530-4175	530-3175
18mm	530-4180	530-3180
19mm	530-4190	530-3190

5C Hex Collets

5C 六方孔卡头

- Made of high grade steel.
- Hardened and precision ground.
- Internal thread 1.041"-24, external thread 1.242"-20.

7 Pcs/set

1/8" to 7/8" by 8ths

Order No.530-4360

13 Pcs/set

1/8" to 7/8" by 16ths

Order No.530-4364

20 Pcs/set

3mm to 22mm by 1mm

Order No.530-5920



Size	Economy	Premium
	Order No.	.0005" T.I.R Order No.
1/8"	530-4308	530-4408
5/32"	530-4310	530-4410
3/16"	530-4312	530-4412
7/32"	530-4314	530-4414
1/4"	530-4316	530-4416
9/32"	530-4318	530-4418
5/16"	530-4320	530-4420
11/32"	530-4322	530-4422
3/8"	530-4324	530-4424
13/32"	530-4326	530-4426
7/16"	530-4328	530-4428
15/32"	530-4330	530-4430
1/2"	530-4332	530-4432
17/32"	530-4334	530-4434
9/16"	530-4336	530-4436
19/32"	530-4338	530-4438
5/8"	530-4340	530-4440
21/32"	530-4342	530-4442
11/16"	530-4344	530-4444
23/32"	530-4346	530-4446
3/4"	530-4348	530-4448
25/32"	530-4350	530-4450
13/16"	530-4352	530-4452
27/32"	530-4354	530-4454
7/8"	530-4356	530-4456

Size	Premium	
	Order No.	0.015mm T.I.R Order No.
3mm	530-5030	530-2030
4mm	530-5040	530-2040
5mm	530-5050	530-2050
6mm	530-5060	530-2060
7mm	530-5070	530-2070
8mm	530-5080	530-2080
9mm	530-5090	530-2090
10mm	530-5100	530-2100
11mm	530-5110	530-2110
12mm	530-5120	530-2120
13mm	530-5130	530-2130
13.5mm	530-5135	530-2135
14mm	530-5140	530-2140
15mm	530-5150	530-2150
16mm	530-5160	530-2160
17mm	530-5170	530-2170
17.5mm	530-5175	530-2175
18mm	530-5180	530-2180
19mm	530-5190	530-2190
20mm	530-5200	530-2200
20.5mm	530-5205	530-2205
21mm	530-5210	530-2210
22mm	530-5220	530-2220

5C Expanding Collets

5C 涨力弹簧夹头

Descriptions	Order No.
.750-1.43", 1.5x1.5(head dia.x thickness)	230-4421
.750-1.437", 1.5x2"(head dia.x thickness)	230-4422
.750-1.437", 1.5x2.5"(head dia.x thickness)	230-4423
.750-1.437", 1.5x3"(head dia.x thickness)	230-4424
.750 to 1.937", 2x1.5"(head dia.x thickness)	230-4426
.750 to 1.937", 2x2.0"(head dia.x thickness)	230-4427
.750 to 1.937", 2x2.5"(head dia.x thickness)	230-4428
.750 to 1.937", 2x3.0"(head dia.x thickness)	230-4429
.750 to 2.437", 2.5x1.0"(head dia.x thickness)	230-4431
.750 to 2.437", 2.5x1.5"(head dia.x thickness)	230-4432
.750 to 2.437", 2.5x2.0"(head dia.x thickness)	230-4433
.750 to 2.437", 2.5x2.5"(head dia.x thickness)	230-4434
.750 to 2.437", 2.5x3.0"(head dia.x thickness)	230-4435
.750 to 2.937", 3X1"(head dia.x thickness)	230-4437
.750 to 2.937", 3X1.5"(head dia.x thickness)	230-4438
.750 to 2.937", 3X2"(head dia.x thickness)	230-4439
.750 to 2.937", 3X2.5"(head dia.x thickness)	230-4440
.750 to 2.937", 3X3"(head dia.x thickness)	230-4441
.750 to 3.937", 4X1"(head dia.x thickness)	230-4444
.750 to 3.937", 4X1.5"(head dia.x thickness)	230-4445
.750 to 3.937", 4X2"(head dia.x thickness)	230-4446
.750 to 3.937", 4X2.5"(head dia.x thickness)	230-4447
.750 to 3.937", 4X3"(head dia.x thickness)	230-4448

- Fit any standard 5C Spindle.
- Precision ground.
- Head Length: 1".
- Overall Length: 114mm.
- Soft head for easy machining.
- Internal thread 1.041"-24, external thread 1.242"-20.



Descriptions	Order No.
.25" to .468"x1" (#1)	230-4451
.437" to .800"x1" (#2)	230-4452
.750 to .1.437"x1" (#3)	230-4453
.750 to .1.935"x1" (#4)	230-4454
4Pcs/set 1/4" to 1-15/16" with wooden stand	230-4450

5C Fixture Mounts 5C 大头卡头

- A lathe tool for use in place of face plate fixture.
- External thread 1.242"-20.
- Quick mounting and dismounting.
- Repeat accuracy.
- Soft head for easy machining.
- Heat treated tool shank.
- Precision ground all over.
- Black oxide finish.



Head Dia.	Head Length	Order No.
2"	1"	230-4460
2"	2"	230-4461
2"	3"	230-4462
3"	1"	230-4463
3"	2"	230-4464
3"	3"	230-4465
4"	1"	230-4466
4"	3"	230-4467
5"	1"	230-4468
6"	1"	230-4469
4"	2"	230-4470

5C Collet Block Sets 5C 四六方套卡头垫

- A simple and effective short jig, for machinist parallel, square of hex shapes as well as for cross hole drilling at 60°, 90° or 120°.
- Made of hardened tool steel.
- Overall dimensions: 1-3/4" x 1-3/4" x 3".
- Ground to .0005" flatness, squareness and parallelism +/- 0.0005".
- Capacity: 1/6" through 1-1/8".
- Standard nut closer and cam operated, quick-acting closer can be used on both square and hex blocks.



4Pcs/set

Order No. 235-7050

Individuals

Descriptions	Order No.
lever operated closer	235-7051
nut closer	235-7052
square block	235-7054
hex block	235-7056

Cutter Grinder Collets 磨刀机卡头



- M20x2.0 Thread.

Size	Order No.	Size	Order No.
1/8"	230-5308	3mm	230-5403
3/16"	230-5312	5mm	230-5405
1/4"	230-5316	6mm	230-5406
5/16"	230-5320	8mm	230-5408
3/8"	230-5324	10mm	230-5410
7/16"	230-5328	11mm	230-5411
1/2"	230-5332	13mm	230-5413
9/16"	230-5336	14mm	230-5414
5/8"	230-5340	16mm	230-5416

5C Step Collets 5C 台阶卡头

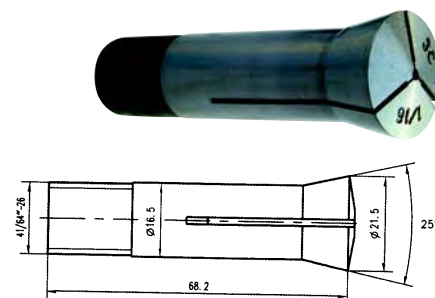
- Applied for machining to specific requirements.
- Soft head type featured 3 thickness.
- Internal thread 1.041"-24, external thread 1.242"-20.



Head Dia.	1" Thickness Order No.	1-1/8" Thickness Order No.	1-3/16" Thickness Order No.
2"	230-4362	230-4372	230-4382
3"	230-4363	230-4373	230-4383
4"	230-4364	230-4374	230-4384
5"	230-4365	230-4375	230-4385
6"	230-4366	230-4376	230-4386

3C Round Collets 3C 圆卡头

- 41/64"-26 External Thread.



Size	Order No.	Size	Order No.	Size	Order No.
3/64"	232-4703	7/32"	232-4714	25/64"	232-4725
1/16"	232-4704	15/64"	232-4715	13/32"	232-4726
5/64"	232-4705	1/4"	232-4716	27/64"	232-4727
3/32"	232-4706	17/64"	232-4717	7/16"	232-4728
7/64"	232-4707	9/32"	232-4718	29/64"	232-4729
1/8"	232-4708	19/64"	232-4719	15/32"	232-4730
9/64"	232-4709	5/16"	232-4720	31/64"	232-4731
5/32"	232-4710	21/64"	232-4721	1/2"	232-4732
11/64"	232-4711	11/32"	232-4722	33/64"	232-4733
3/16"	232-4712	23/64"	232-4723	17/32"	232-4734
13/64"	232-4713	3/8"	232-4724	35/64"	232-4735
				9/16"	232-4736

Size	Order No.	Size	Order No.
1mm	232-6010	7.5mm	232-6075
1.5mm	232-6015	8mm	232-6080
2mm	232-6020	8.5mm	232-6085
2.5mm	232-6025	9mm	232-6090
3mm	232-6030	9.5mm	232-6095
3.5mm	232-6035	10mm	232-6100
4mm	232-6040	10.5mm	232-6105
4.5mm	232-6045	11mm	232-6110
5mm	232-6050	11.5mm	232-6115
5.5mm	232-6055	12mm	232-6120
6mm	232-6060	12.5mm	232-6125
6.5mm	232-6065	13mm	232-6130
7mm	232-6070		

3C Square Collets

- 41/64"-26 External Thread.

3C 四方孔卡头



Size	Order No.
1/8"	232-6208
5/32"	232-6210
3/16"	232-6212
7/32"	232-6214
1/4"	232-6216
9/32"	232-6218
5/16"	232-6220
11/32"	232-6222
3/8"	232-6224

Size	Order No.
3mm	232-6230
4mm	232-6240
5mm	232-6250
5.5mm	232-6255
6mm	232-6260
7mm	232-6270
8mm	232-6280
9mm	232-6290

3C Hex Collets

- 41/64"-26 External Thread.

3C 六方孔卡头



Size	Order No.
1/8"	232-7008
5/32"	232-7010
3/16"	232-7012
7/32"	232-7014
1/4"	232-7016
9/32"	232-7018
5/16"	232-7020
11/32"	232-7022
3/8"	232-7024
13/32"	232-7026
7/16"	232-7028

Size	Order No.
3mm	232-7030
4mm	232-7040
5mm	232-7050
5.5mm	232-7055
6mm	232-7060
7mm	232-7070
8mm	232-7080
9mm	232-7090
10mm	232-7100
11mm	232-7110
12mm	232-7120

3C Step Collets

- Soft head for machining to specific requirements.
- 41/64"-26 External Thread.

3C 台阶卡头



Head Dia.	Thickness	Order No.
2"	1"	230-5521
2"	1-1/8"	230-5522
2"	1-1/4"	230-5523
3"	1"	230-5531
3"	1-1/8"	230-5532
3"	1-1/4"	230-5533

3AT Square Collets

- .637"-26 External Thread.

3AT 四方孔卡头



Size	Order No.
1/8"	232-4208
5/32"	232-4210
3/16"	232-4212
7/32"	232-4214
1/4"	232-4216
9/32"	232-4218
5/16"	232-4220
11/32"	232-4222
3/8"	232-4224

Size	Order No.
3mm	232-4230
4mm	232-4240
5mm	232-4250
5.5mm	232-4255
6mm	232-4260
7mm	232-4270
8mm	232-4280
9mm	232-4290

3AT Hex Collets

- .637"-26 External Thread.

3AT 六方孔卡头



Size	Order No.
1/8"	232-5008
5/32"	232-5010
3/16"	232-5012
7/32"	232-5014
1/4"	232-5016
9/32"	232-5018
5/16"	232-5020
11/32"	232-5022
3/8"	232-5024
13/32"	232-5026
7/16"	232-5028

Size	Order No.
3mm	232-5030
4mm	232-5040
5mm	232-5050
5.5mm	232-5055
6mm	232-5060
7mm	232-5070
8mm	232-5080
9mm	232-5090
10mm	232-5100
11mm	232-5110
12mm	232-5120

3AT Step Collets

3AT 台阶卡头

- .637"-26 External Thread.

Soft head

For machining to specific requirements.

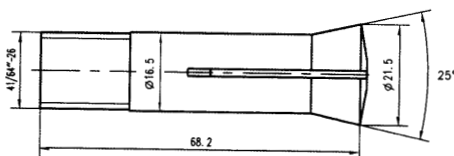


Head Dia.	Thickness	Order No.
2"	1"	230-5621
2"	1-1/8"	230-5622
2"	1-1/4"	230-5623
3"	1"	230-5631
3"	1-1/8"	230-5632
3"	1-1/4"	230-5633

3AT Round Collets

- .637"-26 External Thread.

3AT 圆卡头



Size	Order No.	Size	Order No.	Size	Order No.
3/64"	232-4803	13/64"	232-4813	23/64"	232-4823
1/16"	232-4804	7/32"	232-4814	3/8"	232-4824
5/64"	232-4805	15/64"	232-4815	25/64"	232-4825
3/32"	232-4806	1/4"	232-4816	13/32"	232-4826
7/64"	232-4807	17/64"	232-4817	27/64"	232-4827
1/8"	232-4808	9/32"	232-4818	7/16"	232-4828
9/64"	232-4809	19/64"	232-4819	29/64"	232-4829
5/32"	232-4810	5/16"	232-4820	15/32"	232-4830
11/64"	232-4811	21/64"	232-4821	31/64"	232-4831
3/16"	232-4812	11/32"	232-4822	1/2"	232-4832

Size	Order No.	Size	Order No.	Size	Order No.
1mm	232-4010	5.5mm	232-4055	10mm	232-4100
1.5mm	232-4015	6mm	232-4060	10.5mm	232-4105
2mm	232-4020	6.5mm	232-4065	11mm	232-4110
2.5mm	232-4025	7mm	232-4070	11.5mm	232-4115
3mm	232-4030	7.5mm	232-4075	12mm	232-4120
3.5mm	232-4035	8mm	232-4080	12.5mm	232-4125
4mm	232-4040	8.5mm	232-4085	13mm	232-4130
4.5mm	232-4045	9mm	232-4090		
5mm	232-4050	9.5mm	232-4095		

Morse Taper Round Collets

莫氏卡头

Morse Taper 1,

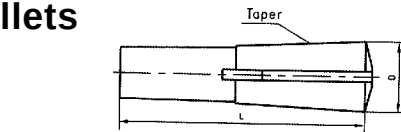
1/4"-20 Internal Thread

Size	Order No.	Size	Order No.
1/16"	230-4401	2mm	230-4412
1/8"	230-4402	3mm	230-4413
3/16"	230-4403	4mm	230-4414
1/4"	230-4404	6mm	230-4416
5/16"	230-4405	8mm	230-4418

Morse Taper 2,

3/8"-16 Internal Thread

Size	Order No.	Size	Order No.
1/8"	230-4508	2mm	230-5202
3/16"	230-4512	3mm	230-5203
1/4"	230-4516	5mm	230-5205
5/16"	230-4520	6mm	230-5206
3/8"	230-4524	10mm	230-5210
7/16"	230-4528	11mm	230-5211
1/2"	230-4532	12mm	230-5212



Morse Taper	D(mm)	L(mm)
MT1	12.2	57
MT2	18	68
MT3	24.1	86
MT4	31.5	108

Morse Taper 3, 1/2"-13 Internal Thread

Size	Order No.	Size	Order No.
1/8"	230-4608	3mm	230-5103
3/16"	230-4612	5mm	230-5105
1/4"	230-4616	6mm	230-5106
5/16"	230-4620	8mm	230-5108
3/8"	230-4624	10mm	230-5110
7/16"	230-4628	11mm	230-5111
1/2"	230-4632	13mm	230-5113
9/16"	230-4636	14mm	230-5114
5/8"	230-4640	16mm	230-5116
11/16"	230-4644	17mm	230-5117
3/4"	230-4648	18mm	230-5118

Morse Taper 4, 5/8"-11 Internal Thread

Size	Order No.	Size	Order No.
1/8"	230-4708	3mm	230-4803
3/16"	230-4712	5mm	230-4805
1/4"	230-4716	6mm	230-4806
5/16"	230-4720	8mm	230-4808
3/8"	230-4724	10mm	230-4810
7/16"	230-4728	11mm	230-4811
1/2"	230-4732	13mm	230-4813
9/16"	230-4736	14mm	230-4814
5/8"	230-4740	16mm	230-4816
11/16"	230-4744	17mm	230-4817
3/4"	230-4748	18mm	230-4818
13/16"	230-4752	20mm	230-4820
7/8"	230-4756	22mm	230-4822
15/16"	230-4760	24mm	230-4824
1"	230-4764	25mm	230-4825



7#, 9#, B&S Taper Round Collets

B-S 卡头

7#, 3/8"-16 Internal Thread

Size	Order No.	Size	Order No.
1/8"	230-1508	3mm	230-1573
3/16"	230-1512	5mm	230-1575
1/4"	230-1516	6mm	230-1576
5/16"	230-1520	8mm	230-1578
3/8"	230-1524	10mm	230-1580
7/16"	230-1528	11mm	230-1581
1/2"	230-1532	13mm	230-1583

9#, 1/2"-13 Internal Thread

Size	Order No.	Size	Order No.
1/8"	230-1608	3mm	230-1673
3/16"	230-1612	5mm	230-1675
1/4"	230-1616	6mm	230-1676
5/16"	230-1620	8mm	230-1678
3/8"	230-1624	10mm	230-1680
7/16"	230-1628	11mm	230-1681
1/2"	230-1632	13mm	230-1683
9/16"	230-1636	14mm	230-1684
5/8"	230-1640	16mm	230-1686
11/16"	230-1644	17mm	230-1687
3/4"	230-1648	18mm	230-1688
		20mm	230-1690

21# B&S Taper Round Collets

B-S 卡头

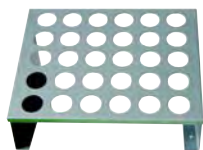
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Size	Order No.	Size	Order No.
1/8"	230-1108	3mm	230-1173
3/16"	230-1112	5mm	230-1175
1/4"	230-1116	6mm	230-1176
5/16"	230-1120	8mm	230-1178
3/8"	230-1124	10mm	230-1180
7/16"	230-1128	11mm	230-1181
1/2"	230-1132	13mm	230-1183
9/16"	230-1136	14mm	230-1184
5/8"	230-1140	16mm	230-1186
11/64"	230-1144	17mm	230-1187
3/4"	230-1148	18mm	230-1188
13/64"	230-1152	20mm	230-1190
7/8"	230-1156	22mm	230-1192
15/16"	230-1160	24mm	230-1194
1"	230-1164	25mm	230-1195



5C Collet Stand

5C 弹簧卡头架



Hold 30 pcs 5C collets

Order No. 239-9530



Hold 72 pcs 5C collets

Order No. 239-9572

R8 Collet Rack

R8 卡头架



R8 Collet Rack,
hold 12 collets

Order No. 239-9812



R8 Vertical Collet Rack,
hold 48 collets

Order No. 239-9848



R8 Collet Rack,
hold 15 collets and tools

Order No. 239-9815



R8 collet Wooden Rack
Hold 14 piece

Order No. 239-9814

R8 Rotating Collet Holder

R8 旋转卡头架

- Easily mounted for out of the way storage with quick accessibility.
- Holds 11 R8 collets
- Mounided of long lasting A.B.S.
- Collets are easily removed by lifting frome angle and pulling to side.
- Holder rotates for easy selection of sizes
- Collers seated firmly when holder is rotated.

NEW



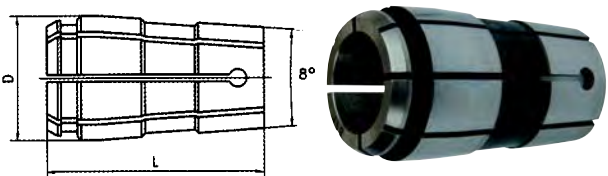
Order No. 239-9808

TG Series Single Angle Collets

TG 系列铣卡头

TG Collet Dimensions

TG Series	Dia. D	Length L
75	1.062" /27mm	1.844"/46.9mm
100	1.379"/35mm	2.375"/60.5mm
150	2.001"/50.8mm	3.000"/76.2mm
200	2.671"/67.8mm	3.250"/ 82.55mm



TG75 Collets, Metric

Size	Order No.	Size	Order No.	Size	Order No.
1mm	204-8001	8mm	204-8016	14.5mm	204-8032
1.5mm	204-8002	8.5mm	204-8017	15mm	204-8033
2mm	204-8003	9mm	204-8018	15.5mm	204-8034
2.5mm	204-8004	9.5mm	204-8019	16mm	204-8036
3mm	204-8005	10mm	204-8021	16.5mm	204-8037
3.5mm	204-8006	10.5mm	204-8022	17mm	204-8038
4mm	204-8007	11mm	204-8023	17.5mm	204-8039
4.5mm	204-8008	11.5mm	204-8024	18mm	204-8041
5mm	204-8009	12mm	204-8026	18.5mm	204-8042
5.5mm	204-8011	12.5mm	204-8027	19mm	204-8043
6mm	204-8012	13mm	204-8028	19.5mm	204-8044
6.5mm	204-8013	13.5mm	204-8029	20mm	204-8046
7mm	204-8014	14mm	204-8031		

TG75 Collets, Inch

Size	Order No.	Size	Order No.	Size	Order No.
1/16"	204-8101	5/16"	204-8121	9/16"	204-8141
5/64"	204-8102	21/64"	204-8122	37/64"	204-8142
3/32"	204-8103	11/32"	204-8123	19/32"	204-8143
7/64"	204-8104	23/64"	204-8124	39/64"	204-8144
1/8"	204-8106	3/8"	204-8126	5/8"	204-8146
9/64"	204-8107	25/64"	204-8127	41/64"	204-8147
5/32"	204-8108	13/32"	204-8128	21/32"	204-8148
11/64"	204-8109	27/64"	204-8129	43/64"	204-8149
3/16"	204-8111	7/16"	204-8131	11/16"	204-8151
13/64"	204-8112	29/64"	204-8132	45/64"	204-8152
7/32"	204-8113	15/32"	204-8133	23/32"	204-8153
15/64"	204-8114	31/64"	204-8134	47/64"	204-8154
1/4"	204-8116	1/2"	204-8136	3/4"	204-8156
17/64"	204-8117	33/64"	204-8137	49/64"	204-8157
9/32"	204-8118	17/32"	204-8138	25/32"	204-8158
19/64"	204-8119	35/64"	204-8139		

TG150 Collets, Inch

Size	Order No.	Size	Order No.
3/32"	204-0003	27/32"	204-0054
7/64"	204-0004	55/64"	204-0055
1/8"	204-0005	7/8"	204-0056
9/64"	204-0006	57/64"	204-0057
5/32"	204-0007	29/32"	204-0058
11/64"	204-0008	59/64"	204-0059
3/16"	204-0009	15/16"	204-0060
13/64"	204-0010	61/64"	204-0061
7/32"	204-0011	31/32"	204-0062
15/64"	204-0015	63/64"	204-0063
1/4"	204-0016	1"	204-0064
17/64"	204-0017	1-1/64"	204-0101
9/32"	204-0018	1-1/32"	204-0102
19/64"	204-0019	1-3/64"	204-0103
5/16"	204-0020	1-1/16"	204-0104
21/64"	204-0021	1-5/64"	204-0105
11/32"	204-0022	1-3/32"	204-0106
23/64"	204-0023	1-7/64"	204-0107
3/8"	204-0024	1-1/8"	204-0108
25/64"	204-0025	1-9/64"	204-0109
13/32"	204-0026	1-5/32"	204-0110
27/64"	204-0027	1-11/64"	204-0111
7/16"	204-0028	1-3/16"	204-0112
29/64"	204-0029	1-13/64"	204-0113
15/32"	204-0030	1-7/32"	204-0114
31/64"	204-0031	1-15/64"	204-0115
1/2"	204-0032	1-1/4"	204-0116
33/64"	204-0033	1-17/64"	204-0117
17/32"	204-0034	1-9/32"	204-0118
35/64"	204-0035	1-19/64"	204-0119
9/16"	204-0036	1-5/16"	204-0120
37/64"	204-0037	1-21/64"	204-0121
19/32"	204-0038	1-11/32"	204-0122
39/64"	204-0039	1-23/64"	204-0123
5/8"	204-0040	1-3/8"	204-0124
41/64"	204-0041	1-25/64"	204-0125
21/32"	204-0042	1-13/32"	204-0126
43/64"	204-0043	1-27/64"	204-0127
11/16"	204-0044	1-7/16"	204-0128
45/64"	204-0045	1-29/64"	204-0129
23/32"	204-0046	1-15/32"	204-0130
47/64"	204-0047	1-31/64"	204-0131
3/4"	204-0048	1-1/2"	204-0132
49/64"	204-0049	1-33/64"	204-0133
25/32"	204-0050	1-17/32"	204-0134
51/64"	204-0051	1-35/64"	204-0135
13/16"	204-0052	1-9/16"	204-0136
53/64"	204-0053		

TG150 Collets, Metric

Size	Order No.
2mm	204-0202
3mm	204-0203
4mm	204-0204
5mm	204-0205
6mm	204-0206
7mm	204-0207
8mm	204-0208
9mm	204-0209
10mm	204-0210
11mm	204-0211
12mm	204-0212
13mm	204-0213
14mm	204-0214
15mm	204-0215
16mm	204-0216
17mm	204-0217
18mm	204-0218
19mm	204-0219
20mm	204-0220
21mm	204-0221
22mm	204-0222
23mm	204-0223
24mm	204-0224
25mm	204-0225
26mm	204-0226
27mm	204-0227
28mm	204-0228
29mm	204-0229
30mm	204-0230
31mm	204-0231
32mm	204-0232
33mm	204-0233
34mm	204-0234
35mm	204-0235
36mm	204-0236
37mm	204-0237
38mm	204-0238
39mm	204-0239
40mm	204-0240

TG100 Collets, Inch

Size	Order No.	Size	Order No.
1/64"	204-9901	33/64"	204-9933
1/32"	204-9902	17/32"	204-9934
3/64"	204-9903	35/64"	204-9935
1/16"	204-9904	9/16"	204-9936
5/64"	204-9905	37/64"	204-9937
3/32"	204-9906	19/32"	204-9938
7/64"	204-9907	39/64"	204-9939
1/8"	204-9908	5/8"	204-9940
9/64"	204-9909	41/64"	204-9941
5/32"	204-9910	21/32"	204-9942
11/64"	204-9911	43/64"	204-9943
3/16"	204-9912	11/16"	204-9944
13/64"	204-9913	45/64"	204-9945
7/32"	204-9914	23/32"	204-9946
15/64"	204-9915	47/64"	204-9947
1/4"	204-9916	3/4"	204-9948
17/64"	204-9917	49/64"	204-9949
9/32"	204-9918	25/32"	204-9950
19/64"	204-9919	51/64"	204-9951
5/16"	204-9920	13/16"	204-9952
21/64"	204-9921	53/64"	204-9953
11/32"	204-9922	27/32"	204-9954
23/64"	204-9923	55/64"	204-9955
3/8"	204-9924	7/8"	204-9956
25/64"	204-9925	57/64"	204-9957
13/32"	204-9926	29/32"	204-9958
27/64"	204-9927	59/64"	204-9959
7/16"	204-9928	15/16"	204-9960
29/64"	204-9929	61/64"	204-9961
15/32"	204-9930	31/32"	204-9962
31/64"	204-9931	63/64"	204-9963
1/2"	204-9932	1"	204-9964

TG100, Metric

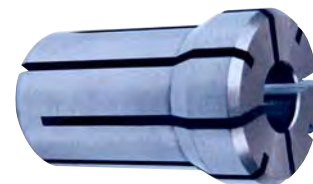
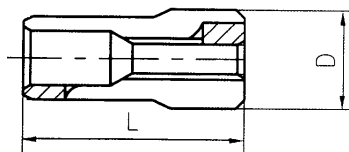
Size	Order No.
1mm	204-0301
2mm	204-0302
3mm	204-0303
4mm	204-0304
5mm	204-0305
6mm	204-0306
7mm	204-0307
8mm	204-0308
9mm	204-0309
10mm	204-0310
11mm	204-0311
12mm	204-0312
13mm	204-0313
14mm	204-0314
15mm	204-0315
16mm	204-0316
17mm	204-0317
18mm	204-0318
19mm	204-0319
20mm	204-0320
21mm	204-0321
22mm	204-0322
23mm	204-0323
24mm	204-0324
25mm	204-0325

TG200

Size	Order No.
1"	204-0564
1-1/4"	204-0516
1-1/2"	204-0532
1-3/4"	204-0543
2"	204-0550

DA Series-Double Angle Collets DA系列弹簧卡头

- concentric within 0.0005 TIR at collet nose assembled with chuck
- Self release for rapid, easy operation.



DA Series	D	L	Capacity Range
300	.375"	1.00"	1/32-1/4
200	.539"	1.18"	3/64-25/64
100	.769"	1.44"	3/64-9/16
180	1.035"	1.64"	3/64-3/4

Size	100DA Order No.	180DA Order No.	200DA Order No.	300DA Order No.
1/32"		159-0680		159-3020
3/64"	159-0000	159-0700	159-1140	159-3040
1/16"	159-0020	159-0720	159-1160	159-3060
5/64"	159-0040	159-0740	159-1180	159-3080
3/32"	159-0060	159-0760	159-1200	159-3100
7/64"	159-0080	159-0780	159-1220	159-3120
1/8"	159-0100	159-0800	159-1240	159-3140
9/64"	159-0120	159-0820	159-1260	159-3160
5/32"	159-0140	159-0840	159-1280	159-3180
11/64"	159-0160	159-0860	159-1300	159-3200
3/16"	159-0180	159-0880	159-1320	159-3220
13/64"	159-0200	159-0900	159-1340	159-3240
7/32"	159-0220	159-0920	159-1360	159-3260
15/64"	159-0240	159-0940	159-1380	159-3280
1/4"	159-0260	159-0960	159-1400	159-3300
17/64"	159-0280	159-0980	159-1420	
9/32"	159-0300	159-1000	159-1440	
19/64"	159-0320	159-1020	159-1460	
5/16"	159-0340	159-1040	159-1480	
21/64"	159-0360	159-1060	159-1500	
11/32"	159-0380	159-1080	159-1520	
23/64"	159-0400	159-1100	159-1540	
3/8"	159-0420	159-1120	159-1560	
25/64"	159-0440	159-1121	159-1580	
13/32"	159-0460	159-1122	159-1600	
27/64"	159-0480	159-1123	159-1620	
7/16"	159-0500	159-1124	159-1640	
29/64"	159-0520	159-1125	159-1660	
15/32"	159-0540	159-1126	159-1680	
31/64"	159-0560	159-1127	159-1700	
1/2"	159-0580	159-1128	159-1720	
33/64"	159-0600	159-1129	159-1740	
17/32"	159-0620	159-1130	159-1760	
35/64"	159-0640	159-1131	159-1780	
9/16"	159-0660	159-1132	159-1800	
37/64"		159-1133	159-1820	
19/32"		159-1134	159-1840	
39/64"		159-1135	159-1860	
5/8"		159-1136	159-1880	
41/64"		159-1137	159-1900	
21/32"		159-1138	159-1920	
43/64"		159-1139	159-1940	
11/16"		159-1141	159-1960	
45/64"		159-1142	159-1980	
23/32"		159-1143	159-2000	
47/64"		159-1144	159-2020	
3/4"		159-1145	159-2040	
49/64"		159-1146	159-2060	

Size	100DA Order No.	180DA Order No.	200DA Order No.
1.5mm	159-5000	159-5560	159-5918
2.0mm	159-5020	159-5580	159-5920
2.5mm	159-5040	159-5600	159-5940
3.0mm	159-5060	159-5620	159-5960
3.5mm	159-5080	159-5640	159-5980
4.0mm	159-5100	159-5660	159-6000
4.5mm	159-5120	159-5680	159-6020
5.0mm	159-5140	159-5700	159-6040
5.5mm	159-5160	159-5720	159-6060
6.0mm	159-5180	159-5740	159-6080
6.5mm	159-5200	159-5760	159-6100
7.0mm	159-5220	159-5780	159-6120
7.5mm	159-5240	159-5800	159-6140
8.0mm	159-5260	159-5820	159-6160
8.5mm	159-5280	159-5840	159-6180
9.0mm	159-5300	159-5860	159-6200
9.5mm	159-5320	159-5880	159-6220
10.0mm	159-5340	159-5900	159-6240
10.5mm	159-5360		159-6260
11.0mm	159-5380		159-6280
11.5mm	159-5400		159-6300
12.0mm	159-5420		159-6320
12.5mm	159-5440		159-6340
13.0mm	159-5460		159-6360
13.5mm	159-5480		159-6380
14.0mm	159-5500		159-6400
14.5mm	159-5520		159-6420
15.0mm			159-6440
15.5mm			159-6460
16.0mm			159-6480
16.5mm			159-6500
17.0mm			159-6520
17.5mm			159-6540
18.0mm			159-6560
18.5mm			159-6580
19.0mm			159-6600
19.5mm			159-6620
20.0mm			159-6640

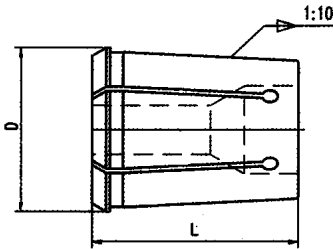
Collet Sets

Collet Series	No. of Pieces	Range	Order No.
100	29	1/8-9/16 by 64ths	159-1029
100	15	1/8-9/16 by 32ths	159-1015
180	41	1/8-3/4 by 64ths	159-1841
180	21	1/8-9/16 by 32ths	159-1821
200	17	1/8-3/8 by 64ths	159-2017
200	9	1/8-3/8 by 32ths	159-2009
300	9	1/8-1/4 by 64ths	159-3009
300	5	1/8-1/4 by 32ths	159-3005

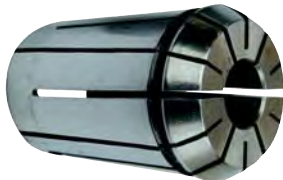
EOC Collets

EOC 卡簧夹头

Type	D	L
16A/B	25.5	40
20A/B	29.8	45
25A/B	35.05	52
32A/B	43.7	60
40A/B	52.2	68
50A/B	63.8	80



A Type

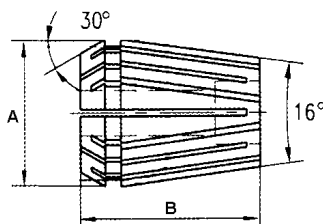


B Type

	16B	20B	25B	32B	40B	50B		25A	32A	40A	50A
Size	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Size	Order No.	Order No.	Order No.	Order No.
2mm	122-0502	122-1502	122-2502				2mm	204-5202			
3mm	122-0504	122-1504	122-2504				3mm	204-5203			
4mm	122-0506	122-1506	122-2506	122-3506			4mm	204-5204	204-5354		
5mm	122-0508	122-1508	122-2508	122-3508			5mm	204-5205	204-5355		
6mm	122-0510	122-1510	122-2510	122-3510	122-4510		6mm	204-5206	204-5356	204-5406	204-9456
7mm	122-0512	122-1512	122-2512	122-3512	122-4512		7mm	204-5207	204-5357	204-5407	204-9457
8mm	122-0514	122-1514	122-2514	122-3514	122-4514	122-5514	8mm	204-5208	204-5358	204-5408	204-9458
9mm	122-0516	122-1516	122-2516	122-3516	122-4516	122-5516	9mm	204-5209	204-5359	204-5409	204-9459
10mm	122-0518	122-1518	122-2518	122-3518	122-4518	122-5518	10mm	204-5210	204-5360	204-5410	204-9460
11mm	122-0520	122-1520	122-2520	122-3520	122-4520	122-5520	11mm	204-5211	204-5361	204-5411	204-9461
12mm	122-0522	122-1522	122-2522	122-3522	122-4522	122-5522	12mm	204-5212	204-5362	204-5412	204-9462
13mm	122-0524	122-1524	122-2524	122-3524	122-4524	122-5524	13mm	204-5213	204-5363	204-5413	204-9463
14mm	122-0526	122-1526	122-2526	122-3526	122-4526	122-5526	14mm	204-5214	204-5364	204-5414	204-9464
15mm	122-0528	122-1528	122-2528	122-3528	122-4528	122-5528	15mm	204-5215	204-5365	204-5415	204-9465
16mm	122-0530	122-1530	122-2530	122-3530	122-4530	122-5530	16mm	204-5216	204-5366	204-5416	204-9466
17mm		122-1532	122-2532	122-3532	122-4532	122-5532	17mm	204-5217	204-5367	204-5417	204-9467
18mm		122-1534	122-2534	122-3534	122-4534	122-5534	18mm	204-5218	204-5368	204-5418	204-9468
19mm		122-1536	122-2536	122-3536	122-4536	122-5536	19mm	204-5219	204-5369	204-5419	204-9469
20mm		122-1538	122-2538	122-3538	122-4538	122-5538	20mm	204-5220	204-5370	204-5420	204-9470
21mm			122-2540	122-3540	122-4540	122-5540	21mm	204-5221	204-5371	204-5421	204-9471
22mm			122-2542	122-3542	122-4542	122-5542	22mm	204-5222	204-5372	204-5422	204-9472
23mm			122-2544	122-3544	122-4544	122-5544	23mm	204-5223	204-5373	204-5423	204-9473
24mm			122-2546	122-3546	122-4546	122-5546	24mm	204-5224	204-5374	204-5424	204-9474
25mm			122-2548	122-3548	122-4548	122-5548	25mm	204-5225	204-5375	204-5425	204-9475
26mm				122-3550	122-4550	122-5550	26mm		204-5376	204-5426	204-9476
27mm				122-3552	122-4552	122-5552	27mm		204-5377	204-5427	204-9477
28mm				122-3554	122-4554	122-5554	28mm		204-5378	204-5428	204-9478
29mm				122-3556	122-4556	122-5556	29mm		204-5379	204-5429	204-9479
30mm				122-3558	122-4558	122-5558	30mm		204-5380	204-5430	204-9480
31mm				122-3560	122-4560	122-5560	31mm		204-5381	204-5431	204-9481
32mm				122-3562	122-4562	122-5562	32mm		204-5382	204-5432	204-9482
33mm					122-4564	122-5564	33mm			204-5433	204-9483
34mm					122-4566	122-5566	34mm			204-5434	204-9484
35mm					122-4568	122-5568	35mm			204-5435	204-9485
36mm					122-4570	122-5570	36mm				204-9486
37mm					122-4572	122-5572	37mm				204-9487
38mm					122-4574	122-5574	38mm				204-9488
39mm					122-4576	122-5576	39mm				204-9489
40mm					122-4578	122-5578	40mm				204-9490
41mm						122-5580	41mm				204-9491
42mm						122-5582	42mm				204-9492
43mm						122-5584	43mm				204-9493
44mm						122-5586	44mm				204-9494
45mm						122-5588	45mm				204-9495
46mm						122-5590	46mm				204-9496
47mm						122-5592	47mm				204-9497
48mm						122-5594	48mm				204-9498
49mm						122-5596	49mm				204-9499
50mm						122-5598	50mm				204-9500

ER Collets ER 铣卡头

- Unique 8° taper design affords highest gripping power.
- True double angle, for extreme concentricity.
- 16 Jaws giving powerful gripping and parallel clamping.
- A unique self-releasing system is built into the collet and clamping nut to eliminate cutting tools sticking in collets.



Type	A	B
ER11	11.5mm	18mm
ER16	17mm	27mm
ER20	21mm	31mm
ER25	26mm	35mm
ER32	33mm	40mm
ER40	41mm	46mm

Size	ER11 Order No.	ER16 Order No.	ER20 Order No.	ER25 Order No.	ER 32 Order No.	ER40 Order No.
1/32"	204-1102	204-1602				
3/64"	204-1103	204-1603	204-2003			
1/16"	204-1104	204-1604	204-2004	204-2504		
5/64"	204-1105	204-1605	204-2005	204-2505		
3/32"	204-1106	204-1606	204-2006	204-2506	204-3206	
7/64"	204-1107	204-1607	204-2007	204-2507	204-3207	
1/8"	204-1108	204-1608	204-2008	204-2508	204-3208	204-4008
9/64"	204-1109	204-1609	204-2009	204-2509	204-3209	204-4009
5/32"	204-1110	204-1610	204-2010	204-2510	204-3210	204-4010
11/64"	204-1111	204-1611	204-2011	204-2511	204-3211	204-4011
3/16"	204-1112	204-1612	204-2012	204-2512	204-3212	204-4012
13/64"	204-1113	204-1613	204-2013	204-2513	204-3213	204-4013
7/32"	204-1114	204-1614	204-2014	204-2514	204-3214	204-4014
15/64"	204-1115	204-1615	204-2015	204-2515	204-3215	204-4015
1/4"	204-1116	204-1616	204-2016	204-2516	204-3216	204-4016
17/64"	204-1117	204-1617	204-2017	204-2517	204-3217	204-4017
9/32"	204-1118	204-1618	204-2018	204-2518	204-3218	204-4018
19/64"		204-1619	204-2019	204-2519	204-3219	204-4019
5/16"		204-1620	204-2020	204-2520	204-3220	204-4020
21/64"		204-1621	204-2021	204-2521	204-3221	204-4021
11/32"		204-1622	204-2022	204-2522	204-3222	204-4022
23/64"		204-1623	204-2023	204-2523	204-3223	204-4023
3/8"		204-1624	204-2024	204-2524	204-3224	204-4024
25/64"			204-2025	204-2525	204-3225	204-4025
13/32"			204-2026	204-2526	204-3226	204-4026
27/64"			204-2027	204-2527	204-3227	204-4027
7/16"			204-2028	204-2528	204-3228	204-4028
29/64"			204-2029	204-2529	204-3229	204-4029
15/32"			204-2030	204-2530	204-3230	204-4030
31/64"			204-2031	204-2531	204-3231	204-4031
1/2"			204-2032	204-2532	204-3232	204-4032
33/64"				204-2533	204-3233	204-4033
17/32"				204-2534	204-3234	204-4034
35/64"				204-2535	204-3235	204-4035
9/16"				204-2536	204-3236	204-4036
37/64"				204-2537	204-3237	204-4037
19/32"				204-2538	204-3238	204-4038
39/64"				204-2539	204-3239	204-4039
5/8"				204-2540	204-3240	204-4040
41/64"					204-3241	204-4041
21/32"					204-3242	204-4042
43/64"					204-3243	204-4043
11/16"					204-3244	204-4044
45/64"					204-3245	204-4045
23/32"					204-3246	204-4046
47/64"					204-3247	204-4047
3/4"					204-3248	204-4048
49/64"					204-3249	204-4049
25/32"					204-3250	204-4050
51/64"					204-3251	204-4051
13/16"					204-3252	204-4052
53/64"						204-4053
27/32"						204-4054
55/64"						204-4055
7/8"						204-4056
57/64"						204-4057
29/32"						204-4058
59/64"						204-4059
15/16"						204-4060
61/64"						204-4061
31/32"						204-4062
63/64"						204-4063
1"						204-4064
1-1/64"						204-4065



Sets

Type	Descriptions	Order No.
ER11	7pcs with Stand. 1/32", 1/16", 3/32", 1/8", 3/16", 7/32" & 1/4"	204-1120
ER16	10pcs set includes 1/32", 1/16", 3/32", 1/8", 3/16", 7/32", 1/4", 5/16", 11/32", 3/8"	204-1630
ER20	12pcs set includes 1/16", 3/32", 1/8", 3/16", 7/32", 1/4", 5/16", 11/32", 3/8", 13/32", 7/16", 1/2"	204-2040
ER25	15pcs set includes 1/16", 3/32", 1/8", 3/16", 7/32", 1/4", 5/16", 11/32", 3/8", 13/32", 7/16", 1/2", 17/32", 9/16", 5/8"	204-2550
ER32	18pcs set includes 3/32", 1/8", 3/16", 7/32", 1/4", 5/16", 11/32", 3/8", 13/32", 7/16", 1/2", 17/32", 9/16", 5/8", 21/32", 11/16", 23/32", 3/4"	204-3260
ER40	23pcs/set with wooden stand, includes 1/8", 3/16", 7/32", 1/4", 5/16", 11/32", 3/8", 13/32", 7/16", 1/2", 17/32", 9/16", 5/8", 21/32", 11/16", 25/32", 13/16", 27/32", 7/8", 15/16", 31/32", 1"	204-4000

Metric Sets

Type	Descriptions	Order No.
ER32	12pcs, 3, 4, 5, 6, 8, 10, 12, 14, 15, 16, 18, 20mm	204-3512
ER25	10pcs, 3, 4, 5, 6, 8, 10, 12, 14, 15, 16mm	204-7391
ER40	15pcs, 3, 4, 5, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22, 24, 26mm	204-4195

Collet Punch Former

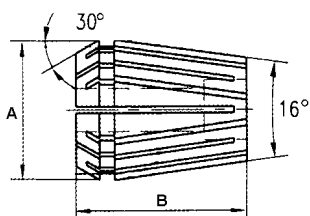
ER 夹头冲子成型器

- Clamping diameter: $\phi 2$ - $\phi 20$ mm
- Supply ER32 collet size: 4, 6, 8, 10, 12, 16, 20, 7Pcs in total
- For workpiece diameter smaller than 4mm, use shank 20mm/ER16 collet chuck
- It clamps workpiece quickly and steadily when processing without checking the center



OrderNo.287-6808

Metric ER Collets 公制ER铣卡头



Type	A	B
ER11	11.5mm	18mm
ER16	17mm	27mm
ER20	21mm	31mm
ER25	26mm	35mm
ER32	33mm	40mm
ER40	41mm	46mm

	ER 8	ER 9	ER11	ER 12	ER 16	ER-20	ER-25	ER 32	ER 40	ER-50	ER 60	ER 90
Size	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
1mm	204-0810	204-0910	204-1010	204-1210	204-6010	204-7010	204-7210					
1.5mm	204-0815	204-0915	204-1015	204-1215	204-6015	204-7015	204-7215					
2mm	204-0820	204-0920	204-1020	204-1220	204-6020	204-7020	204-7220	204-3320				
2.5mm	204-0825	204-0925	204-1025	204-1225	204-6025	204-7025	204-7225	204-3325				
3mm	204-0830	204-0930	204-1030	204-1230	204-6030	204-7030	204-7230	204-3330	204-4130			
3.5mm	204-0835	204-0935	204-1035	204-1235	204-6035	204-7035	204-7235	204-3335				
4mm		204-0940	204-1040	204-1240	204-6040	204-7040	204-7240	204-3340	204-4134			
4.5mm		204-0945	204-1045	204-1245	204-6045	204-7045	204-7245	204-3345				
5mm		204-0950	204-1050	204-1250	204-6050	204-7050	204-7250	204-3350	204-4135			
5.5mm			204-1055	204-1255	204-6055	204-7055	204-7255	204-3355				
6mm			204-1060	204-1260	204-6060	204-7060	204-7260	204-3360	204-4136	204-9060		
7mm			204-1070	204-1270	204-6070	204-7070	204-7270	204-3370	204-4137	204-9070		
8mm					204-6080	204-7080	204-7280	204-3380	204-4138	204-9080		
9mm					204-6090	204-7090	204-7290	204-3390	204-4139	204-9090		
10mm					204-6100	204-7100	204-7300	204-3400	204-4140	204-9100	204-6210	
11mm						204-7110	204-7310	204-3410	204-4141	204-9110	204-6211	
12mm						204-7120	204-7320	204-3420	204-4142	204-9120	204-6212	
13mm						204-7130	204-7330	204-3430	204-4143	204-9130	204-6213	
14mm							204-7340	204-3440	204-4144	204-9140	204-6214	
15mm							204-7350	204-3450	204-4145	204-9150	204-6215	
16mm							204-7360	204-3460	204-4146	204-9160	204-6216	
17mm								204-3470	204-4147	204-9170	204-6217	
18mm								204-3480	204-4148	204-9180	204-6218	
19mm								204-3490	204-4149	204-9190	204-6219	
20mm								204-3500	204-4150	204-9200	204-6220	204-6320
21mm									204-4151	204-9210	204-6221	
22mm									204-4152	204-9220	204-6222	204-6322
23mm									204-4153	204-9230	204-6223	
24mm									204-4154	204-9240	204-6224	204-6324
25mm									204-4155	204-9250	204-6225	
26mm									204-4156	204-9260	204-6226	204-6326
27mm									204-4157	204-9270	204-6227	
28mm									204-4158	204-9280	204-6228	204-6328
29mm									204-4159	204-9290	204-6229	
30mm									204-4160	204-9300	204-6230	204-6330
31mm										204-9310	204-6231	
32mm										204-9320	204-6232	204-6332
33mm										204-9330	204-6233	
34mm										204-9340	204-6234	204-6334
35mm											204-6235	
36mm											204-6236	204-6336
37mm											204-6237	
38mm											204-6238	204-6338
39mm											204-6239	
40mm											204-6240	204-6340
42mm												204-6342
44mm												204-6344
46mm												204-6346
48mm												204-6348
50mm												204-6350
52mm												204-6352
54mm												204-6354
56mm												204-6356
58mm												204-6358
60mm												204-6360

ER Collet Chucks

莫氏锥度 ER 卡头柄

Morse Taper Shank



Shank Type	Collet Type	Drawbar End Thread	Capacity	Order No.
MT2	ER-20	3/8"-16	.04-.511	230-7051
MT2	ER-25	3/8"-16	.04-.629	230-7053
MT3	ER-32	1/2"-13	.06-.787	230-7055
MT3	ER-40	1/2"-13	.12-.102	230-7057
MT4	ER-40	5/8"-11	.12-1.02	230-7062
MT4	ER-50	5/8"-11	.393-1.33	230-7063
MT5	ER-40	3/4"-10	.12-.102	230-7061
MT5	ER-50	3/4"-10	.393-1.33	230-7065
MT6	ER-50	1"-8	.393-1.33	230-7067

30-40-50 ER 卡头柄



30, 40 and 50 Taper Shank

Shank Type	Collet Type	Drawbar End Thread	Capacity	Order No.
30	ER-16	1/2"-13	.02-.393	230-7071
30	ER-32	1/2"-13	.08-.787	230-7073
30	ER-40	1/2"-13	.12-1.02	230-7075
40	ER-16	5/8"-11	.02-.393	230-7077
40	ER-20	5/8"-11	.04-.511	230-7079
40	ER-32	5/8"-11	.08-.787	230-7081
40	ER-40	5/8"-11	.12-1.02	230-7083
40	ER-50	5/8"-11	.393-1.33	230-7085
50	ER-16	1"-8	.02-.393	230-7087
50	ER-20	1"-8	.04-.511	230-7089
50	ER-40	1"-8	.12-1.02	230-7091
50	ER-50	1"-8	.393-1.33	230-7093

R8 柄 ER 卡头柄

R8 Shank



Shank Type	Collet Type	Gage Length	Capacity	Order No.
R8	ER-16	1-1/2"	.02-.393	230-7041
R8	ER-16	3	.02-.393	230-7043
R8	ER-32	1-5/8	.06-.787	230-7045
R8	ER-40	2-27/32	.12-1.02	230-7047



Shank Type	Collet Type	Drawbar End Thread	OAL	Order No.
R8	ER-16A	7/16"-20	5.31	230-7044
R8	ER32	7/16"-20	5.98	230-7046
R8	ER-40	7/16"-20	6.37	230-7048

直柄 ER 卡头柄



Straight Shank

Shank Diameter	Collet Type	Drawbar End Thread	Capacity	Order No.
5/8x2-1/2	ER-11	3/8"-16	.02-.275	230-7001
3/4x2-1/2	ER-11	3/8"-16	.02-.275	230-7003
3/4x4"	ER-11	3/8"-16	.02-.275	230-7005
3/4x6"	ER-11	3/8"-16	.02-.275	230-7007
3/4x2-1/2	ER-16	3/8"-16	.02-.393	230-7009
3/4x4"	ER-16	3/8"-16	.02-.393	230-7011
3/4x6"	ER-16	3/8"-16	.02-.393	230-7013
3/4x2-1/2	ER-20	3/8"-16	.04-.511	230-7015
3/4x4"	ER-20	3/8"-16	.04-.511	230-7017
3/4x6"	ER-20	3/8"-16	.04-.511	230-7019
3/4x2"	ER-25	3/8"-16	.04-.629	230-7021
3/4x4"	ER-25	3/8"-16	.04-.629	230-7023
3/4x1-31/32	ER-32	3/8"-16	.08-.787	230-7025
1"x1-31/32	ER-32	1/2"-13	.08-.787	230-7027
1"x2-3/8	ER-40	1/2"-13	.12-1.02	230-7033
1-1/4x2-3/8	ER-32	5/8"-11	.08-.787	230-7029
1-1/4x5-29/32	ER-32	5/8"-11	.08-.787	230-7031
1-1/4x2-3/8	ER-40	5/8"-11	.12-1.02	230-7035

ER Collet Chuck Sets

ER 套装铣卡头



ER11

7Pc. Collets in Set: 1/32, 1/16, 3/32, 1/8, 3/16, 7/32, 1/4

Shank Size	Order No.
R8	230-0718
30	230-0733
40	230-0734
50	230-0735
MT2	230-0772
MT3	230-0773
MT4	230-0774
3/4x2-1/2	230-0741
3/4x4"	230-0743
3/4x6"	230-0744

ER16

10Pc. Collets in Set: 1/32, 1/16, 3/32, 1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8

Shank Size	Order No.
R8	230-0608
30	230-0630
40	230-0640
50	230-0650
MT2	230-0662
MT3	230-0663
MT4	230-0664
3/4x2-1/2	230-0672
3/4x4"	230-0674
3/4x6"	230-0676

ER 25

6Pc. Collets in Set:

3/16, 1/4, 5/16, 3/8, 1/2, 5/8

Shank Size	Order No.
R8	230-0508
30	230-0530
40	230-0540
50	230-0550
MT2	230-0562
MT3	230-0563
MT4	230-0564
3/4x2-1/2	230-0574
1x2-3/8	230-0576

ER 25

10Pc. Collets in Set: 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8

Shank Size	Order No.
R8	230-0408
30	230-0430
40	230-0440
50	230-0450
MT2	230-0462
MT3	230-0463
MT4	230-0464
3/4"	230-0474
1"	230-0476

ER 32

12Pc. Collets in Set:

1/16, 3/32, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 13/16

Shank Size	Order No.
R8	230-0208
30	230-0230
40	230-0240
50	230-0250
MT3	230-0263
MT4	230-0264
MT5	230-0265
3/4x2-1/2	230-0274
1"x2-3/8	230-0276

ER 32

6Pc. Collets in Set:

1/4, 5/16, 3/8, 1/2, 5/8, 3/4

Shank Size	Order No.
R8	230-0308
30	230-0330
40	230-0340
50	230-0350
MT3	230-0363
MT4	230-0364
MT5	230-0365
3/4x2-1/2	230-0374
1"x2-3/8	230-0376

ER 40

8Pc. Collets in Set:

1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1

Shank Size	Order No.
R8	230-0108
30	230-0130
40	230-0140
50	230-0150
MT 3	230-0163
MT 4	230-0164
MT 5	230-0165
1x2-3/8	230-0176
1-1/4x2-3/8	230-0178

ER 40

15Pc. Collets in Set: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1"

Shank Size	Order No.
R8	230-0008
ISO 30	230-0030
ISO 40	230-0040
ISO 50	230-0050
MT 3	230-0063
MT 4	230-0064
MT 5	230-0065
1x2-3/8	230-0076
1-1/4x2-3/8	230-0078



Metric ER Collet Chuck Sets

公制ER套装铣卡头

ER16

8 collets in set:
2, 3, 4, 5, 6, 7, 8,
10mm

ER25

6 collets in set:
4, 6, 8, 10, 12,
16mm

ER25

10 collets in set:
3, 4, 5, 6, 8, 10, 12,
14, 15, 16mm

ER32

6 collets in set:
6, 8, 10, 12, 16,
20mm

ER32

12 collets in set:
3, 4, 5, 6, 8, 10, 12,
14, 15, 16, 18, 20mm

ER40

8 collets in set:
3, 5, 8, 12, 15, 18,
22, 26mm

ER40

15 collets in set:
3, 4, 5, 6, 8, 10, 12,
14, 15, 16, 18, 20, 22,
24, 26mm

Shank Size	Order No.
R8	230-2608
30	230-2630
40	230-2640
50	230-2650
MT2	230-2662
MT3	230-2663
MT4	230-2664
1/2"	230-2672
3/4"	230-2674

Shank Size	Order No.
R8	230-2508
30	230-2530
40	230-2540
50	230-2550
MT2	230-2562
MT3	230-2563
MT4	230-2564
3/4"	230-2574
1"	230-2576

Shank Size	Order No.
R8	230-2408
30	230-2430
40	230-2440
50	230-2450
MT2	230-2462
MT3	230-2463
MT4	230-2464
3/4"	230-2474
1"	230-2476

Shank Size	Order No.
R8	230-2308
30	230-2330
40	230-2340
50	230-2350
MT3	230-2363
MT4	230-2364
MT5	230-2365
3/4"	230-2374
1"	230-2376

Shank Size	Order No.
R8	230-2208
30	230-2230
40	230-2240
50	230-2250
MT3	230-2263
MT4	230-2264
MT5	230-2265
3/4"	230-2274
1"	230-2276

Shank Size	Order No.
R8	230-2108
30	230-2130
40	230-2140
45	230-2145
50	230-2150
MT3	230-2163
MT4	230-2164
MT5	230-2165
1"	230-2176
1-1/4"	230-2178

Shank Size	Order No.
R8	230-2008
30	230-2030
40	230-2040
45	230-2045
50	230-2050
MT3	230-2063
MT4	230-2064
MT5	230-2065
1"	230-2076
1-1/4"	230-2078

Milling Collet Chuck Sets

Type J7616

J7616 套装铣卡头

Inch Set: Each set complete with 4 collets of 1/4, 3/8, 1/2, 5/8"
Metric Set: Each set complete with 8 collets of 4, 5, 6, 8, 10, 12,
14, 16mm



Chuck Type	Inch Set Order No.	Metric Set Order No.
R8	230-1008	230-1208
30	230-1030	230-1230
40	230-1040	230-1240
50	230-1050	230-1250
3MT	230-1063	230-1263
4MT	230-1064	230-1264
5MT	230-1065	230-1265

Milling Collet Chuck Sets

Type Q24-16

Q24-16 套装铣卡头

Inch Set: Each set complete with 8 collets of 1/8, 3/16,
1/4, 5/16, 3/8, 1/2, 9/16, 5/8"
Metric Set: Each set complete with 8 collets of
4, 5, 6, 8, 10, 12, 14, 16mm

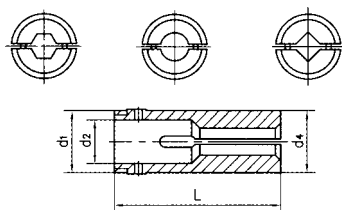


Chuck Type	Inch Set Order No.	Metric Set Order No.
R8	230-0908	230-1908
30	230-0930	230-1930
40	230-0940	230-1940
MT2	230-0962	230-1962
MT3	230-0963	230-1963
MT4	230-0964	230-1964
Straight 1"	230-0976	230-1976
Straight 1-1/4"	230-0978	230-1978

Feeding Collets

DIN6344

DIN6344 进料卡头



Size	Hex Order No.
8mm	530-1208
10mm	530-1210
16mm	530-1216
20mm	530-1220
30mm	530-1230
45mm	530-1245

Size	Square Order No.
7mm	530-1107
8mm	530-1108
13mm	530-1113
17mm	530-1117
25mm	530-1125
36mm	530-1136

Size	Round Order No.
10mm	530-1010
12mm	530-1012
18mm	530-1018
24mm	530-1024
36mm	530-1036
52mm	530-1052

Replacement Wrenches for

ER Collet Chuck

ER卡头扳手

Spanner Type

Collet Chuck	Order No.
ER11	230-7090
ER16	230-7092
ER20	230-7094



Collet Chuck	Order No.
ER25	230-7096
ER32	230-7098
ER40	230-7099



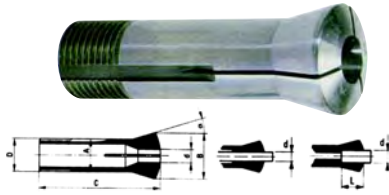
Pin Spanner Wrench

Collet Chuck	Order No.
ER25	230-7196
ER32	230-7198
ER40	230-7199



Collet W12-318E

弹簧夹头 W12

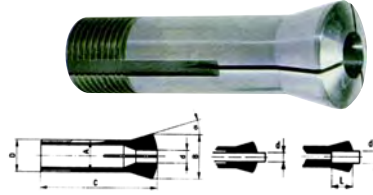
NEW

A	B	C	D	a	Hole
12	16	46	11.75x1.25	15°	8

Size	Round Order No.
1.00mm	230-3302
1.50	230-3304
2.00	230-3306
2.50	230-3308
3.00	230-3310
3.50	230-3312
4.00	230-3314
4.50	230-3316
5.00	230-3318
5.50	230-3320
6.00	230-3322
6.50	230-3324
7.00	230-3326
7.50	230-3328
8.00	230-3330
8.50	230-3332
9.00	230-3334
9.50	230-3336
10.00	230-3338
10.50	230-3340
11.00	230-3342
11.50	230-3344
12.00	230-3346

Collet W20-349E

弹簧夹头 W20-349E

NEW

A	B	C	D	a	Hole
20	26.3	73	19.7x1.666	15°	14.5

A	B	C	D	a	Hole
20	26.3	73	19.7x1.666	15°	14

A	B	C	D	a	Hole
20	26.3	73	19.7x1.666	15°	16

Size	Round Order No.	Square Order No.	Hex Order No.
1.00mm	230-3402		
1.50	230-3404		
2.00	230-3406		
2.50	230-3408		
3.00	230-3410		
3.50	230-3412		
4.00	230-3414	230-3505	230-3605
4.50	230-3416		
5.00	230-3418	230-3510	230-3610
5.50	230-3420		
6.00	230-3422	230-3515	230-3615
6.50	230-3424		
7.00	230-3426	230-3520	230-3620
7.50	230-3428		
8.00	230-3430	230-3525	230-3625
8.50	230-3432		
9.00	230-3434	230-3530	230-3630
9.50	230-3436		
10.00	230-3438	230-3535	230-3635
10.50	230-3440		
11.00	230-3442	230-3540	230-3640
11.50	230-3444		
12.00	230-3446	230-3545	230-3645
12.5	230-3448		
13.00	230-3450	230-3550	230-3650
13.50	230-3452		
14.00	230-3454	235-3555	235-3655
14.50	230-3456		
15.00	230-3458		230-3660
16.00	230-3462		230-3665
18.00	230-3470		
20.00	230-3478		

W25 Expanding Collets

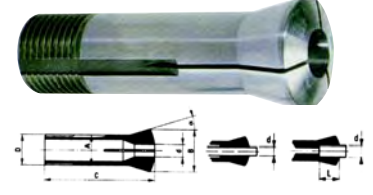
W25 涨力夹头

NEW

Head Dia.	Long	Capacity	Order No.
60.5	35	60	230-3885
90.5	55	90	230-3890

Collet W25-364E

弹簧夹头 W25-364E

NEW

A	B	C	D	a	Hole
25	33.7	97.6	24.7x15	15°	19

Size	Round Order No.
0.50mm	230-3702
1.00	230-3704
1.50	230-3706
2.00	230-3708
2.50	230-3710
3.00	230-3712
3.50	230-3714
4.00	230-3716
4.50	230-3718
5.00	230-3720
5.50	230-3722
6.00	230-3724
6.50	230-3726
7.00	230-3728
7.50	230-3730
8.00	230-3732
8.50	230-3734
9.00	230-3736
9.50	230-3738
10.00	230-3740
10.50	230-3742
11.00	230-3744
11.50	230-3746
12.00	230-3748
12.50	230-3750
13.00	230-3752
13.50	230-3754
14.00	230-3756
14.50	230-3758
15.00	230-3760
15.50	230-3762
16.00	230-3764
16.50	230-3766
17.00	230-3768
17.50	230-3770
18.00	230-3772
18.50	230-3774
19.00	230-3776
19.50	230-3778
20.00	230-3780
20.50	230-3782
21.00	230-3784

W20&W25 Collet, Fixture Mounts

W20/W25 大头夹头



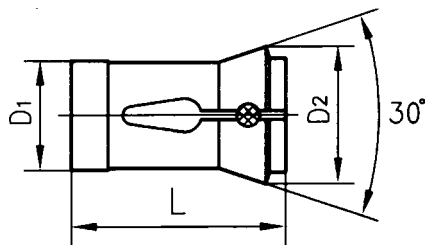
Head Dia.	Long	Round Order No.
26.5	50	230-3805
30.5	50	230-3810
35.0	50	230-3815
40.0	50	230-3820



Head Dia.	Long	Round Order No.
33.9	50	230-3855
44.0	50	230-3860
50.0	50	230-3865
60.0	50	230-3870

DIN 6343 Clamping Collets D6343 夹紧夹头

- Plastic
- Hardness: clamping part HRC55~60
Body HRC40~45
- This unit is applicable to all sorts of automatic lathes, turret lathes



Model	D1 (mm)	D2 (mm)	L (mm)	Hole Size(mm)			Wt(kg)
				Round	Square	Hex	
DIN6343-F17.5	17.5	22	51	13	8	10	0.05
DIN6343-F22	22	30	55	16	11	13	0.09
DIN6343-F27	27	38	72.7	22	15	19	0.10
DIN6343-F28	28	38	70	22	15	19	0.12
DIN6343-F32	32	45	75	26	18	22	0.27
DIN6343-F35	35	48	80	30	21	26	0.35
DIN6343-F42	42	55	94	36	25	30	0.49
DIN6343-F48	48	60	94	42	29	6	0.57
DIN6343-F56	56	68	94	50	35	42	0.65
DIN6343-F66	66	84	110	60	42	52	1.06



Square Hole

[illegible]

DIN 6343 Clamping collets Continued

Hex Hole

D6343 夹紧夹头

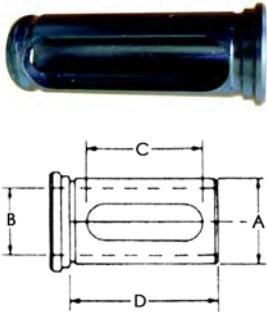
- Hardness: clamping part HRC55~60
Body part HRC40~45
- This unit is applicable to all sorts of automatic lathes, turret lathes

[illegible]

Tool Holder Bushings 导套

Type C C 型导套

- Simplicity.
- Reliability.
- Precision.
- Superior design.
- Available for all sizes of CNC Lathes.

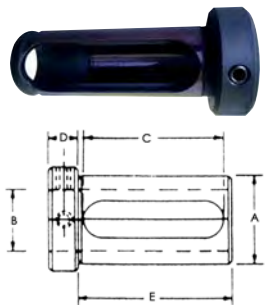


A O.D.	C Slot Length	D Length Under Head	Head Thick	B I.D.	Order No.
3/4"	1-7/8"	2-1/4"	3/16"	1/4"	210-6001
				5/16"	210-6002
				3/8"	210-6003
				1/2"	210-6004
1"	2-3/8"	2-3/4"	3/16"	1/4"	210-6005
				5/16"	210-6006
				3/8"	210-6007
				1/2"	210-6008
				5/8"	210-6009
1-1/4"	2-7/8"	3-1/4"	3/16"	3/4"	210-6010
				3/8"	210-6011
				1/2"	210-6012
				5/8"	210-6013
				3/4"	210-6014
				7/8"	210-6015
				1"	210-6016

A O.D.	C Slot Length	D Length Under Head	Head Thick	B I.D.	Order No.
1-1/2"	3"	3-3/8"	3/16"	3/8"	210-6017
				1/2"	210-6018
				5/8"	210-6019
				3/4"	210-6020
				7/8"	210-6021
1-3/4"	3-1/8"	3-1/2"	3/16"	1"	210-6022
				1-1/4"	210-6023
				1/2"	210-6024
				5/8"	210-6025
				3/4"	210-6026
2"	3-5/8"	4"	3/16"	7/8"	210-6027
				1"	210-6028
				1-1/4"	210-6029
				1-1/2"	210-6030
				1/2"	210-6031
				5/8"	210-6032
				3/4"	210-6033
				1"	210-6034
				1-1/4"	210-6035
				1-1/2"	210-6036
				1-3/4"	210-6037

Type Z Z 型导套

- Simplicity.
- Reliability.
- Precision.
- Superior design.
- Available for all sizes of CNC Lathes.



A O.D.	E Length Under Head	D Head Thickness	C Slot Length	B I.D.	Order No.
1"	2-3/4"	1/2"	2-3/8"	1/4"	210-6040
				5/16"	210-6041
				3/8"	210-6042
				1/2"	210-6043
				5/8"	210-6044
				3/4"	210-6045
1-1/4"	3"	5/8"	2-5/8"	3/8"	210-6046
				1/2"	210-6047
				5/8"	210-6048
				3/4"	210-6049
				7/8"	210-6050
				1"	210-6051
1-1/2"	3-1/4"	3/4"	2-7/8"	3/8"	210-6052
				1/2"	210-6053
				5/8"	210-6054
				3/4"	210-6055
				7/8"	210-6056
				1"	210-6057
				1-1/4"	210-6058

A O.D.	C Length Under Head	D Head Thickness	C Slot Length	B I.D.	Order No.
1-3/4"	3-1/2"	3/4"	3-1/8"	1/2"	210-6059
				5/8"	210-6060
				3/4"	210-6061
				7/8"	210-6062
				1"	210-6063
				1-1/4"	210-6064
2"	3-3/4"	3/4"	3-3/8"	1-1/2"	210-6065
				1/2"	210-6066
				5/8"	210-6067
				3/4"	210-6068
				7/8"	210-6069
				1"	210-6070
				1-1/4"	210-6071
				1-1/2"	210-6072
				1-3/4"	210-6073

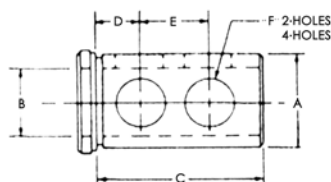
Type J J 型导套

- Value
- Simplicity.
- Reliability.
- Precision.
- Superior design.
- Available for all sizes of CNC Lathes.



A O.D.	C	E	D	F	Head Thick	B I.D.	Order No.
3/4"	1-1/2"	13/16"	3/8"	3/8"	3/16"	1/4"	210-6080
						5/16"	210-6081
						3/8"	210-6082
						1/2"	210-6083
1"	1-3/4"	7/8"	7/16"	5/8"	3/16"	3/8"	210-6084
						1/2"	210-6085
						5/8"	210-6086
						3/4"	210-6087
						3/8"	210-6088
1-1/4"	2-1/8"	1"	5/8"	5/8"	3/16"	1/2"	210-6089
						5/8"	210-6090
						3/4"	210-6091
						7/8"	210-6092
						1"	210-6093

A O.D.	C	E	D	F	Head Thick	B I.D.	Order No.
1-1/2"	2-1/2"	1-1/8"	11/16"	7/8"	3/16"	3/8"	210-6094
						1/2"	210-6095
						5/8"	210-6096
						3/4"	210-6097
						7/8"	210-6098
						1"	210-6099
1-3/4"	3"	1-1/4"	3/4"	7/8"	3/16"	1-1/4"	210-6100
						1/2"	210-6101
						5/8"	210-6102
						3/4"	210-6103
						7/8"	210-6104
						1"	210-6105
2"	3-1/2"	1-1/2"	3/4"	1"	3/16"	1-1/4"	210-6106
						1-1/2"	210-6107
						1/2"	210-6108
						5/8"	210-6109
						3/4"	210-6110
						7/8"	210-6111
						1"	210-6112
						1-1/4"	210-6113
						1-1/2"	210-6114
						1-3/4"	210-6115



R8 End Mill Holders R8 端面铣刀杆

For single and double end mills (* for single end mills only).

- Internal thread 7/16"-20.

Hole Dia.	Order No.	Hole Dia.	Order No.
3/16"	210-0102	4mm	210-1104
1/4"	210-0103	5mm	210-1105
5/16"	210-0104	6mm	210-1106
3/8"	210-0105	7mm	210-1107
7/16"	210-0106	8mm	210-1108
1/2"	210-0107	10mm	210-1110
5/8"	210-0108	12mm	210-1112
3/4"	210-0110*	14mm	210-1114
7/8"	210-0112*	16mm	210-1116
1"	210-0114*	18mm	210-1118
1-1/8"	210-0115*	20mm	210-1120
1-1/4"	210-0116*	22mm	210-1122
1-1/2"	210-0118*	25mm	210-1125*
2"	210-0120*	27mm	210-1127*



Sets

No. of Pieces	Specifications	Order No.
4	3/8, 1/2, 3/4, 1"	210-0304
5	3/16, 3/8, 1/2, 5/8, 3/4"	210-0305
6	3/16, 3/8, 1/2, 5/8, 3/4, 7/8"	210-0306
8	3/16, 1/4, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4"	210-0307
8	3/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4"	210-0308
9	3/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4, 1-1/2"	210-0309

30-40-50 End Mill Holders

锥度端面铣刀杆

For holding single and double end mills (* for holding single end mills only).

- Drawbar end thread: 30#: 1/2"-13, 40#: 5/8"-11, 50#: 1"-8. Metric: 30#: M12, 40#: M16, 50#: M24.
- 30, 40 & 50 shanks.



Hole Dia.	30# Order No.	40# Order No.	50# Order No.
3/16"	210-3012	210-4012	
5/16"	210-3015	210-4015	
3/8"	210-3024	210-4024	210-5024
1/2"	210-3032	210-4032	210-5032
5/8"	210-3040	210-4040	210-5040
3/4"	210-3048	210-4048	210-5048
7/8"	210-3056*	210-4056	210-5056
1"	210-3064*	210-4064*	210-5064
1-1/4"	210-3066*	210-4066*	210-5066*
1-1/2"		210-4068*	210-5068*
2"		210-4070*	210-5070*
2-1/2"			210-5072*

Hole Dia.	30# Order No.	40# Order No.	50# Order No.
6mm	210-3306		
8mm	210-3308	210-4308	210-5308
10 mm	210-3310	210-4310	210-5310
12mm	210-3312	210-4312	210-5312
13mm	210-3313	210-4313	210-5313
14mm	210-3314	210-4314	210-5314
16mm	210-3316	210-4316	210-5316
18mm	210-3318	210-4318	210-5318
19mm	210-3319	210-4319	210-5319
20mm	210-3320	210-4320	210-5320
22mm	210-3322*	210-4322	210-5322
25mm	210-3325*	210-4325*	210-5325
32mm	210-3332*	210-4332*	210-5332*
40mm		210-4340*	210-5340*
50mm			210-5350*
63mm			210-5363*

Morse Taper End Mill Holders

Tang Type

扁尾型莫氏铣刀杆

For Single & Double End Mills

(* For Single End Mills Only)



Shank Taper	Hole Dia.	Order No.	Shank Taper	Hole Dia.	Order No.
MT2	3/16"	219-2012	MT4	7/8"	219-4019*
MT2	1/4"	219-2013	MT4	1"	219-4020*
MT2	5/16"	219-2014	MT4	1-1/4"	219-4021*
MT2	3/8"	219-2015	MT4	1-1/2"	219-4022*
MT2	1/2"	219-2016*	MT5	3/16"	219-5012
MT 2	5/8"	219-2017*	MT5	1/4"	219-5013
MT2	3/4"	219-2018*	MT5	5/16"	219-5014
MT3	3/16"	219-3012	MT5	3/8"	219-5015
MT3	1/4"	219-3013	MT5	1/2"	219-5016
MT3	5/16"	219-3014	MT5	5/8"	219-5017
MT3	3/8"	219-3015	MT5	3/4"	219-5018
MT3	1/2"	219-3016	MT5	7/8"	219-5019
MT3	5/8"	219-3017*	MT5	1"	219-5020
MT3	3/4"	219-3018*	MT5	1-1/4"	219-5021*
MT3	7/8"	219-3019*	MT5	1-1/2"	219-5022*
MT3	1"	219-3020*	MT5	2"	219-5024*
MT4	3/16"	219-4012	MT5	2-1/2"	219-5025*
MT4	1/4"	219-4013	MT6	7/8"	219-6019
MT4	5/16"	219-4014	MT6	1"	219-6020
MT4	3/8"	219-4015	MT6	1-1/4"	219-6021*
MT4	1/2"	219-4016	MT6	1-1/2"	219-6022*
MT4	5/8"	219-4017	MT6	2"	219-6024*
MT4	3/4"	219-4018	MT6	2-1/2"	219-6025*

Morse Taper End Mill Holders

Drawbar End Type

拉杆型莫氏铣刀杆

For Single & Double End Mills(* For Single End Mills Only)

- Drawbar end thread: MT2:3/8"-16, MT3: 1/2"-13, MT4:5/8"-11, MT5: 3/4"-10, MT6: 1"-8.



Shank Taper	Hole Dia.	Order No.	Shank Taper	Hole Dia.	Order No.
MT2	3/16"	219-2112	MT4	1-1/4"	219-4121*
MT2	1/4"	219-2113	MT4	1-1/2"	219-4122*
MT2	5/16"	219-2114	MT5	3/8"	219-5115
MT2	3/8"	219-2115	MT5	1/2"	219-5116
MT2	1/2"	219-2116*	MT5	5/8"	219-5117
MT2	5/8"	219-2117*	MT5	3/4"	219-5118
MT2	3/4"	219-2118*	MT5	7/8"	219-5119
MT3	3/16"	219-3112	MT5	1"	219-5120
MT3	1/4"	219-3113	MT5	1-1/4"	219-5121*
MT3	5/16"	219-3114	MT5	1-1/2"	219-5122*
MT3	3/8"	219-3115	MT5	2"	219-5124*
MT3	1/2"	219-3116	MT6	3/8"	219-6115
MT3	5/8"	219-3117*	MT6	1/2"	219-6116
MT3	3/4"	219-3118*	MT6	5/8"	219-6117
MT3	7/8"	219-3119*	MT6	3/4"	219-6118
MT3	1"	219-3120*	MT6	7/8"	219-6119*
MT4	3/8"	219-4115	MT6	1"	219-6120*
MT4	1/2"	219-4116	MT6	1-1/4"	219-6121*
MT4	5/8"	219-4117	MT6	1-1/2"	219-6122*
MT4	3/4"	219-4118	MT6	2"	219-6124*
MT4	7/8"	219-4119*	MT6	2-1/2"	219-6126*
MT4	1"	219-4120*			

Morse Taper Shell End Mill Holders

Tang End

莫氏套式铣刀杆



Shank Taper	Hole Size	Order No.	Shank Taper	Hole Size	Order No.
MT2	1/2"	219-2032	MT4	7/8"	219-4056
MT2	5/8"	219-2040	MT4	1"	219-4100
MT2	3/4"	219-2048	MT4	1-1/4"	219-4106
MT3	1/2"	219-3032	MT4	1-1/2"	219-4132
MT3	5/8"	219-3040	MT5	1/2"	219-5032
MT3	3/4"	219-3048	MT5	5/8"	219-5040
MT3	7/8"	219-3056	MT5	3/4"	219-5048
MT3	1"	219-3064	MT5	7/8"	219-5056
MT3	1-1/4"	219-3066	MT5	1"	219-5100
MT4	1/2"	219-4032	MT5	1-1/4"	219-5106
MT4	5/8"	219-4040	MT5	1-1/2"	219-5132
MT4	3/4"	219-4048	MT5	2"	219-5200

Shank Taper	Hole Size	Order No.	Shank Taper	Hole Size	Order No.
MT2	13mm	219-1213	MT4	27mm	219-1427
MT2	16mm	219-1216	MT4	32mm	219-1432
MT2	22mm	219-1222	MT4	40mm	219-1440
MT3	16mm	219-1316	MT5	16mm	219-1516
MT3	22mm	219-1322	MT5	22mm	219-1522
MT3	27mm	219-1327	MT5	27mm	219-1525
MT3	32mm	219-1332	MT5	32mm	219-1532
MT4	16mm	219-1416	MT5	40mm	219-1540
MT4	22mm	219-1422	MT5	50mm	219-1550

Draw Bar Thread End

- Drawbar end thread: MT2: 3/8"-16, MT3: 1/2"-13, MT4: 5/8"-11, MT5: 3/4"-10.
Metric: MT2: M10, MT3: M12
MT4: M16, MT5: M20.



Shank Taper	Hole Size	Order No.	Shank Taper	Hole Size	Order No.
MT2	1/2"	219-2232	MT4	7/8"	219-4456
MT2	5/8"	219-2240	MT4	1"	219-4464
MT2	3/4"	219-2248	MT4	1-1/4"	219-4466
MT3	1/2"	219-3432	MT4	1-1/2"	219-4468
MT3	5/8"	219-3440	MT5	1/2"	219-5532
MT3	3/4"	219-3448	MT5	5/8"	219-5540
MT3	7/8"	219-3456	MT5	3/4"	219-5548
MT3	1"	219-3464	MT5	7/8"	219-5556
MT3	1-1/4"	219-3466	MT5	1"	219-5564
MT4	1/2"	219-4432	MT5	1-1/4"	219-5566
MT4	5/8"	219-4440	MT5	1-1/2"	219-5568
MT4	3/4"	219-4448	MT5	2"	219-5570

Shank Taper	Hole Size	Order No.	Shank Taper	Hole Size	Order No.
MT2	13mm	219-2213	MT4	27mm	219-4327
MT2	16mm	219-2216	MT4	32mm	219-4332
MT2	22mm	219-2222	MT4	40mm	219-4340
MT3	16mm	219-3316	MT5	16mm	219-5316
MT3	22mm	219-3322	MT5	22mm	219-5322
MT3	27mm	219-3327	MT5	27mm	219-5327
MT3	32mm	219-3332	MT5	32mm	219-5332
MT4	16mm	219-4316	MT5	40mm	219-5340
MT4	22mm	219-4322	MT5	50mm	219-5350

Straight Shank Shell End Mill Holders

直柄套式铣刀杆



Dia. Of Shank	Arbor Dia.	Order No.
1/2"	1/2"	210-5501
1/2"	3/4"	210-5502
1/2"	1"	210-5503
1/2"	1-1/4"	210-5504
1/2"	1-1/2"	210-5505

Dia. Of Shank	Arbor Dia.	Order No.
3/4"	1/2"	210-5506
3/4"	3/4"	210-5507
3/4"	1"	210-5508
3/4"	1-1/4"	210-5509
3/4"	1-1/2"	210-5510

R8 Shell End Mill Holders

R8 套式铣刀杆

- Internal thread 7/16"-20.



Arbor	Order No.
1/2"	210-0401
3/4"	210-0402
1"	210-0403
1-1/4"	210-0404
1-1/2"	210-0405

Arbor Dia.	Order No.
16mm	210-0416
19mm	210-0419
22mm	210-0422
27mm	210-0427
32mm	210-0432
40mm	210-0440

30-40-50 Shell End Mill Holders

7:24 套式端面铣刀杆

- Drawbar end thread: Inch 30#: 1/2"-13, 40#: 5/8"-11, 50#: 1"-8.
Metric: 30#: M12, 40#: M16, 50#: M24.



ISO

Hole Size	ISO 30 Order No.	ISO 40 Order No.	ISO 50 Order No.
16mm	210-7316	210-7416	210-7516
19mm	210-7319	210-7419	210-7519
22mm	210-7322	210-7422	210-7522
25mm	210-7325	210-7425	210-7525
27mm	210-7327	210-7427	210-7527
32mm	210-7332	210-7432	210-7532
40mm	210-7340	210-7440	210-7540
50mm	210-7350	210-7450	210-7550
63mm	210-7363	210-7463	210-7563

Inch

Hole Size	30 Taper Order No.	40 Taper Order No.	50 Taper Order No.
1/2"	210-6332	210-6431	210-6531
3/4"	210-6348	210-6448	210-6548
1"	210-6364	210-6464	210-6564
1-1/4"	210-6366	210-6466	210-6566
1-1/2"	210-6368	210-6468	210-6568
2"	210-6370	210-6470	210-6570
2-1/2"			210-6572

DIN 2080

Hole Size	SK50 Order No.	SK40 Order No.	SK 30 Order No.
16	210-9516	210-9416	210-9316
22	210-9522	210-9422	210-9322
27	210-9527	210-9427	210-9327
32	210-9532	210-9432	210-9332
40	210-9540	210-9440	
50	210-9550	210-9450	

Morse Taper Comb Shell

End Mill Arbors 莫氏混合套式铣刀杆

- Drawbar end thread: MT3: 1/2"-13, MT4: 5/8"-11, MT5: 3/4"-10.
Metric: MT3: M12, MT4: M16, MT5: M20.



Shank Taper	Arbor Dia.	Order No.	Shank Taper	Arbor Dia.	Order No.
MT3	1/2"	210-3532	MT4	1-1/4"	210-4566
MT3	5/8"	210-3540	MT4	1-1/2"	210-4568
MT3	3/4"	210-3548	MT4	2"	210-4570
MT3	7/8"	210-3556	MT5	5/8"	210-5540
MT3	1"	210-3564	MT5	3/4"	210-5548
MT3	1-1/4"	210-3566	MT5	7/8"	210-5556
MT4	1/2"	210-4532	MT5	1"	210-5564
MT4	5/8"	210-4540	MT5	1-1/4"	210-5566
MT4	3/4"	210-4548	MT5	1-1/2"	210-5568
MT4	7/8"	210-4556	MT5	2"	210-5570
MT4	1"	210-4564			

Shank Taper	Arbor Dia.	Order No.	Shank Taper	Arbor Dia.	Order No.
MT3	13mm	210-3613	MT4	27mm	210-4627
MT3	16mm	210-3616	MT4	32mm	210-4632
MT3	22mm	210-3622	MT4	40mm	210-4640
MT3	27mm	210-3627	MT5	22mm	210-5622
MT3	32mm	210-3632	MT5	27mm	210-5627
MT4	13mm	210-4613	MT5	32mm	210-5632
MT4	16mm	210-4616	MT5	40mm	210-5640
MT4	22mm	210-4622	MT5	50mm	210-5650

30-40-50 Comb Shell End Mill Arbors

7:24 混合套式铣刀杆

- Drawbar end thread: Inch 30#: 1/2"-13, 40#: 5/8"-11, 50#: 1"-8.
Metric: 30#: M12, 40#: M16, 50#: M24.



Arbor Dia.	30 Order No.	40 Order No.	50 Order No.
1/2"	210-3132		
5/8"	210-3140	210-4140	210-5140
3/4"	210-3148	210-4148	210-5148
7/8"	210-3156	210-4156	210-5156
1"	210-3164	210-4164	210-5164
1-1/4"	210-3166	210-4166	210-5166
1-1/2"		210-4168	210-5168
2"		210-4170	210-5170

Arbor Dia.	30 Order No.	40 Order No.	50 Order No.
13mm	210-3213		
16mm	210-3216	210-4216	210-5216
22mm	210-3222	210-4222	210-5222
27mm	210-3227	210-4227	210-5227
32mm	210-3232	210-4232	210-5232
40mm		210-4240	210-5240
50mm		210-4250	210-5250

R8 Comb Shell End Mill Arbors

R8 混合套式铣刀杆

It could be used clutch drive ring cross screw, cross spanner to help to clamp various end mills.

- Internal thread 7/16"-20.



Arbor Dia.	Order No.
1/2"	210-1332
5/8"	210-1340
3/4"	210-1348
1"	210-1364
1-1/4"	210-1366
1-1/2"	210-1368

Arbor Dia.	Order No.
13mm	210-1413
16mm	210-1416
22mm	210-1422
27mm	210-1427
32mm	210-1432
40mm	210-1440

Accessories For Comb Shell End Mill Arbors

混合套式铣刀杆零件



Screws 螺丝

Arbor Dia.	Thread	Order No.
1/2"	1/4-28	210-5840
3/4"	3/8-24	210-5841
1"	1/2-20	210-5842
1-1/4"	5/8-18	210-5843
1-1/2"	3/4-16	210-5844
2"	1-14	210-5845

Arbor Dia.	Thread	Order No.
13mm	M6	210-5830
16mm	M8	210-5831
22mm	M10	210-5832
27mm	M12	210-5833
32mm	M16	210-5834
40mm	M20	210-5835
50mm	M24	210-5836
60mm	M30	210-5837

Spanners

扳手



Arbor Dia.	Order No.
1/2"	210-5860
5/8"	210-5861
3/4"	210-5862
1"	210-5863
1-1/4"	210-5864
1-1/2"	210-5865
2"	210-5866

Arbor Dia.	Order No.
13mm	210-5850
16mm	210-5851
22mm	210-5852
27mm	210-5853
32mm	210-5854
40mm	210-5855
50mm	210-5856
60mm	210-5857

Driver Rings

拨环



Size	Order No.
1/2"	210-5810
5/8"	210-5811
3/4"	210-5822
7/8"	210-5823
1"	210-5824
1-1/4"	210-5825
1-1/2"	210-5826
2"	210-5827
1/2"	210-5880

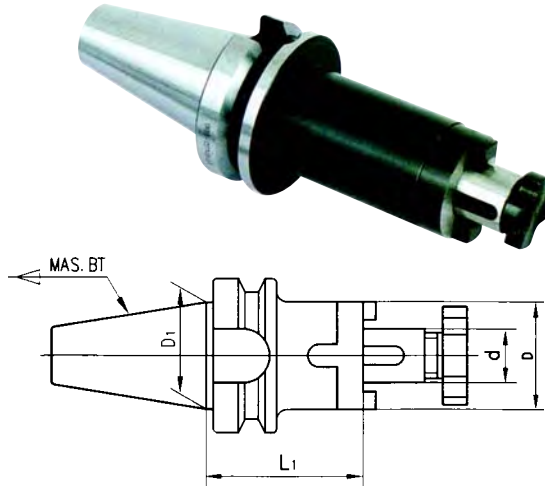
Size	Order No.
13mm	210-5800
16mm	210-5801
22mm	210-5802
27mm	210-5803
32mm	210-5804
40mm	210-5805
50mm	210-5806
60mm	210-5807

Combination Shell End Mill Arbors

数控混合插入式铣刀杆

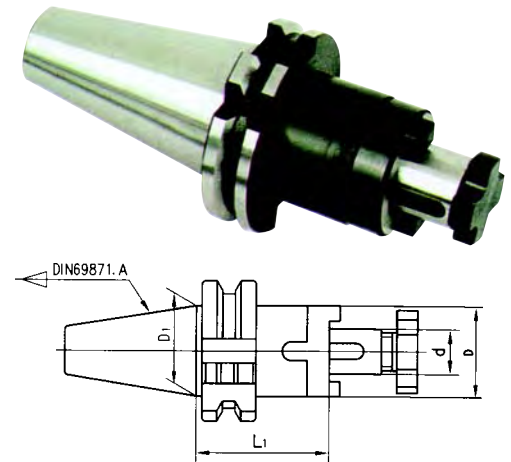
- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

BT



BT x d - L1	D mm	D1 mm	Weight kg	Order No.
BT30 x13-55	28	31.75	1.00	210-8201
BT30 x16-55	32	31.75	1.00	210-8202
BT30 x16-100	32	31.75	1.20	210-8203
BT30 x22-55	40	31.75	1.20	210-8204
BT30 x22-100	40	31.75	1.40	210-8205
BT30 x27-55	48	31.75	1.20	210-8206
BT30 x27-100	48	31.75	2.00	210-8207
BT30 x32-60	58	31.75	1.50	210-8208
BT30 x32-100	58	31.75	2.60	210-8209
BT30 x40-60	70	31.75	2.30	210-8210
BT30 x40-100	70	31.75	3.50	210-8211
BT40 x13-55	28	44.45	1.00	210-8212
BT40 x16-55	32	44.45	1.20	210-8213
BT40 x16-100	32	44.45	1.50	210-8214
BT40 x22-55	40	44.45	1.25	210-8215
BT40 x22-100	40	44.45	1.85	210-8216
BT40 x27-55	48	44.45	1.50	210-8217
BT40 x27-100	48	44.45	2.00	210-8218
BT40 x32-60	58	44.45	1.50	210-8219
BT40 x32-100	58	44.45	2.30	210-8220
BT40 x40-60	70	44.45	2.00	210-8221
BT40 x40-100	70	44.45	3.00	210-8222
BT50 x13-63	28	69.85	3.50	210-8223
BT50 x16-63	32	69.85	3.60	210-8224
BT50 x16-100	32	69.85	4.00	210-8225
BT50 x22-70	40	69.85	3.70	210-8226
BT50 x22-100	40	69.85	4.00	210-8227
BT50 x27-70	48	69.85	4.00	210-8228
BT50 x27-100	48	69.85	4.40	210-8229
BT50 x32-70	58	69.85	4.20	210-8230
BT50 x32-100	58	69.85	4.70	210-8231
BT50 x40-75	70	69.85	4.50	210-8232
BT50 x40-100	70	69.85	5.50	210-8233
BT50 x50-75	90	69.85	4.60	210-8234
BT50 x50-125	90	69.85	7.20	210-8235

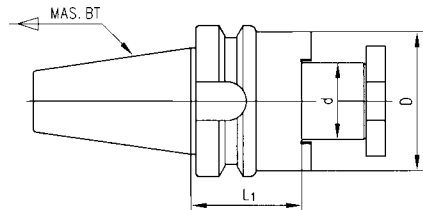
DIN69871.A



DIN69871.A x d - L1	D mm	D1 mm	Weight kg	Order No.
DIN69871.A30 x 13-55	28	31.75	1.00	210-8601
DIN69871.A30 x 16-55	32	31.75	1.00	210-8602
DIN69871.A30 x 16-100	32	31.75	1.20	210-8603
DIN69871.A30 x 22-55	40	31.75	2.00	210-8604
DIN69871.A30 x 22-100	40	31.75	3.50	210-8605
DIN69871.A30 x 27-55	48	31.75	2.10	210-8606
DIN69871.A30 x 27-100	48	31.75	4.30	210-8607
DIN69871.A30 x 32-60	58	31.75	1.80	210-8608
DIN69871.A30 x 32-100	58	31.75	2.60	210-8609
DIN69871.A30 x 40-60	70	31.75	7.30	210-8610
DIN69871.A30 x 40-100	70	31.75	3.50	210-8611
DIN69871.A40 x 13-55	28	44.45	1.10	210-8612
DIN69871.A40 x 16-55	32	44.45	1.20	210-8613
DIN69871.A40 x 16-100	32	44.45	1.50	210-8614
DIN69871.A40 x 22-55	40	44.45	1.23	210-8615
DIN69871.A40 x 22-100	40	44.45	1.83	210-8616
DIN69871.A40 x 27-55	48	44.45	1.30	210-8617
DIN69871.A40 x 27-100	48	44.45	2.20	210-8618
DIN69871.A40 x 32-60	58	44.45	1.50	210-8619
DIN69871.A40 x 32-100	58	44.45	2.30	210-8620
DIN69871.A40 x 40-60	70	44.45	1.80	210-8621
DIN69871.A40 x 40-100	70	44.45	3.00	210-8622
DIN69871.A50 x 13-63	28	69.85	3.50	210-8623
DIN69871.A50 x 16-63	32	69.85	3.50	210-8624
DIN69871.A50 x 16-100	32	69.85	3.80	210-8625
DIN69871.A50 x 22-70	40	69.85	3.60	210-8626
DIN69871.A50 x 22-100	40	69.85	4.00	210-8627
DIN69871.A50 x 27-70	48	69.85	3.70	210-8628
DIN69871.A50 x 27-100	48	69.85	4.40	210-8629
DIN69871.A50 x 32-70	58	69.85	3.80	210-8630
DIN69871.A50 x 32-100	58	69.85	4.70	210-8631
DIN69871.A50 x 40-75	70	69.85	3.90	210-8632
DIN69871.A50 x 40-100	70	69.85	5.30	210-8633
DIN69871.A50 x 50-75	90	69.85	4.50	210-8634
DIN69871.A50 x 50-125	90	69.85	7.20	210-8635

BT Shell Mill Arbors 数控套式铣刀杆

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

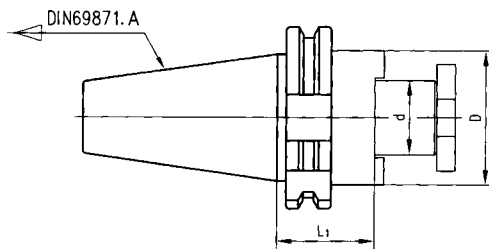


BT x d - L1	D mm	Weight kg	Order No.
BT30 x16-60	32	1.0	210-8701
BT30 x22-60	40	1.3	210-8702
BT30 x27-60	48	1.5	210-8703
BT30 x32-60	58	1.8	210-8704
BT30 x40-60	70	2.2	210-8705
BT30 x50-60	90	4.5	210-8706
BT40 x16-45	32	1.0	210-8707
BT40 x16-60	32	1.3	210-8708
BT40 x16-120	32	1.7	210-8709
BT40 x22-45	40	1.5	210-8710
BT40 x22-60	40	1.7	210-8711
BT40 x22-100	40	3.0	210-8712
BT40 x22-120	40	3.6	210-8713
BT40 x27-45	48	1.5	210-8714
BT40 x27-60	48	1.6	210-8715
BT40 x27-75	48	1.8	210-8716
BT40 x27-105	48	2.1	210-8717
BT40 x27-120	48	2.3	210-8718
BT40 x32-45	58	1.2	210-8719
BT40 x32-60	58	1.5	210-8720
BT40 x32-75	58	1.8	210-8721
BT40 x32-120	58	2.8	210-8722
BT40 x40-60	70	2.0	210-8723
BT40 x40-75	70	2.2	210-8724
BT40 x50-70	90	2.5	210-8725

BT x d - L1	D mm	Weight kg	Order No.
BT45 x22-60	40	2.6	210-8726
BT45 x27-60	48	2.8	210-8727
BT45 x27-100	48	3.1	210-8728
BT45 x40-100	70	3.4	210-8729
BT45 x40-105	70	3.5	210-8730
BT50 x16-60	32	3.6	210-8731
BT50 x16-75	32	3.9	210-8732
BT50 x16-120	32	4.3	210-8733
BT50 x22-60	40	5.0	210-8734
BT50 x22-75	40	4.0	210-8735
BT50 x22-100	40	4.5	210-8736
BT50 x22-120	48	5.5	210-8737
BT50 x27-60	48	5.5	210-8738
BT50 x27-105	48	4.0	210-8739
BT50 x32-60	58	4.5	210-8740
BT50 x32-75	58	1.6	210-8741
BT50 x32-105	58	1.8	210-8742
BT50 x40-60	70	2.2	210-8743
BT50 x40-75	70	3.6	210-8744
BT50 x40-90	70	3.7	210-8745
BT50 x40-100	70	3.75	210-8746
BT50 x40-105	70	3.8	210-8747
BT50 x50-60	90	4.0	210-8748
BT50 x50-70	90	4.2	210-8749
BT50 x50-120	90	4.4	210-8750

DIN Shell Mill Arbors 数控套式铣刀杆

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

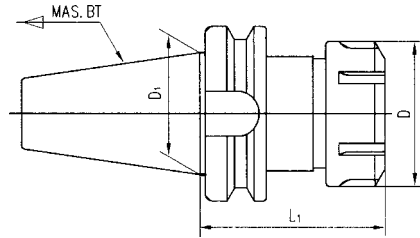


DIN69871.A x d-L1	D mm	Weight kg	Order No.
DIN69871.A30 x16-60	32	1.0	210-8801
DIN69871.A30 x22-60	40	1.3	210-8802
DIN69871.A30 x27-60	48	1.5	210-8803
DIN69871.A30 x32-60	58	1.8	210-8804
DIN69871.A30 x40-60	70	2.2	210-8805
DIN69871.A30 x50-70	90	3.2	210-8806
DIN69871.A40 x16-60	32	1.2	210-8807
DIN69871.A40 x22-60	40	1.3	210-8808
DIN69871.A40 x27-60	48	1.4	210-8809
DIN69871.A40 x27-75	48	1.6	210-8810

DIN69871.A x d-L1	D mm	Weight kg	Order No.
DIN69871.A40 x32-60	58	4.5	210-8811
DIN69871.A40 x40-60	70	4.8	210-8812
DIN69871.A40 x50-70	90	3.7	210-8813
DIN69871.A50 x16-60	32	3.8	210-8814
DIN69871.A50 x22-60	40	4.0	210-8815
DIN69871.A50 x27-60	48	4.2	210-8816
DIN69871.A50 x32-60	58	4.5	210-8817
DIN69871.A50 x40-60	70	4.8	210-8818
DIN69871.A50 x50-70	90	5.0	210-8819
DIN69871.A50 x50-80	90	5.1	210-8820

BT Milling Chuck Arbors BT 数控铣夹头刀柄

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Metric

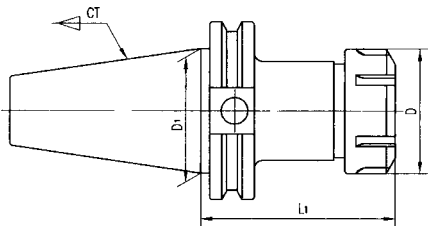
BT x ER x L1	D Nose Dia.	D1	Order No.
BT30 x ER16 x70	28	31.75	210-7101
BT30 x ER16 x100	28	31.75	210-7102
BT30 x ER16 x120	28	31.75	210-7103
BT30 x ER20 x70	35	31.75	210-7104
BT30 x ER20 x135	35	31.75	210-7105
BT30 x ER25 x70	42	31.75	210-7106
BT30 x ER25 x135	42	31.75	210-7107
BT30 x ER32 x70	50	31.75	210-7108
BT30 x ER40 x80	63	31.75	210-7109
BT40 x ER16 x50	28	44.45	210-7110
BT40 x ER16 x63	28	44.45	210-7111
BT40 x ER16 x70	28	44.45	210-7112
BT40 x ER16 x100	28	44.45	210-7113
BT40 x ER16 x125	28	44.45	210-7114
BT40 x ER16 x150	28	44.45	210-7115
BT40 x ER20 x70	35	44.45	210-7116
BT40 x ER20 x90	35	44.45	210-7117
BT40 x ER20 x100	35	44.45	210-7118
BT40 x ER20 x105	35	44.45	210-7119
BT40 x ER20 x135	35	44.45	210-7120
BT40 x ER20 x150	35	44.45	210-7121
BT40 x ER25 x60	42	44.45	210-7122
BT40 x ER25 x70	42	44.45	210-7123
BT40 x ER25 x90	42	44.45	210-7124
BT40 x ER25 x100	42	44.45	210-7125
BT40 x ER25 x125	42	44.45	210-7126
BT40 x ER25 x150	42	44.45	210-7127
BT40 x ER32 x70	50	44.45	210-7128
BT40 x ER32 x100	50	44.45	210-7129
BT40 x ER32 x150	50	44.45	210-7130
BT40 x ER40 x70	63	44.45	210-7131
BT40 x ER40 x80	63	44.45	210-7132
BT40 x ER40 x100	63	44.45	210-7133
BT40 x ER40 x120	63	44.45	210-7134
BT40 x ER40 x150	63	44.45	210-7135
BT45 x ER16 x70	28	57.15	210-7136
BT45 x ER16 x100	28	57.15	210-7137
BT45 x ER16 x125	28	57.15	210-7138
BT45 x ER20 x70	35	57.15	210-7139
BT45 x ER20 x90	35	57.15	210-7140
BT45 x ER20 x100	35	57.15	210-7141
BT45 x ER20 x105	35	57.15	210-7142
BT45 x ER20 x135	35	57.15	210-7143

BT x ER x L1	D Nose Dia.	D1	Order No.
BT45 x ER25 x70	42	57.15	210-7144
BT45 x ER25 x90	42	57.15	210-7145
BT45 x ER25 x100	42	57.15	210-7146
BT45 x ER25 x125	42	57.15	210-7147
BT45 x ER32 x70	50	57.15	210-7148
BT45 x ER32 x100	50	57.15	210-7149
BT45 x ER32 x120	50	57.15	210-7150
BT45 x ER32 x150	50	57.15	210-7151
BT45 x ER40 x80	63	57.15	210-7152
BT45 x ER40 x100	63	57.15	210-7153
BT45 x ER40 x120	63	57.15	210-7154
BT45 x ER40 x150	63	57.15	210-7155
BT45 x ER50 x80	78	57.15	210-7156
BT45 x ER50 x100	78	57.15	210-7157
BT50 x ER16 x70	28	69.85	210-7158
BT50 x ER16 x90	28	69.85	210-7159
BT50 x ER16 x105	28	69.85	210-7160
BT50 x ER16 x135	28	69.85	210-7161
BT50 x ER16 x165	28	69.85	210-7162
BT50 x ER20 x70	35	69.85	210-7163
BT50 x ER20 x90	35	69.85	210-7164
BT50 x ER20 x105	35	69.85	210-7165
BT50 x ER20 x135	35	69.85	210-7166
BT50 x ER20 x150	35	69.85	210-7167
BT50 x ER20 x165	35	69.85	210-7168
BT50 x ER25 x70	42	69.85	210-7169
BT50 x ER25 x105	42	69.85	210-7170
BT50 x ER25 x135	42	69.85	210-7171
BT50 x ER25 x165	42	69.85	210-7172
BT50 x ER32 x70	50	69.85	210-7173
BT50 x ER32 x80	50	69.85	210-7174
BT50 x ER32 x100	50	69.85	210-7175
BT50 x ER32 x120	50	69.85	210-7176
BT50 x ER40 x80	63	69.85	210-7177
BT50 x ER40 x100	63	69.85	210-7178
BT50 x ER40 x120	63	69.85	210-7179
BT50 x ER40 x135	63	69.85	210-7180
BT50 x ER50 x90	78	69.85	210-7181
BT50 x ER50 x120	78	69.85	210-7182

CAT Milling Chuck Arbors

CAT 数控铣夹头刀柄

- Suitable for CNC RPM ≥ 12000.
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Metric

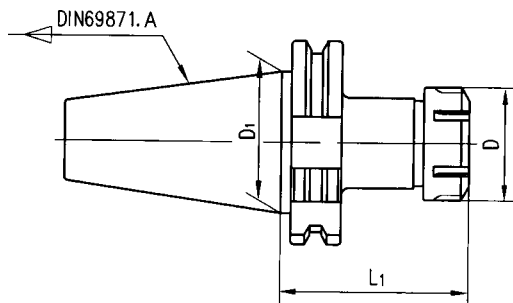
CT x ER x L1	D Nose Dia.	D1	Order No.
CT40 x ER16 x63mm	28mm	44.45mm	210-7201
CT40 x ER16 x70	28	44.45	210-7202
CT40 x ER16 x100	28	44.45	210-7203
CT40 x ER16 x125	28	44.45	210-7204
CT40 x ER16 x150	28	44.45	210-7205
CT40 x ER20 x70	35	44.45	210-7206
CT40 x ER20 x90	35	44.45	210-7207
CT40 x ER20 x100	35	44.45	210-7208
CT40 x ER20 x105	35	44.45	210-7209
CT40 x ER20 x135	35	44.45	210-7210
CT40 x ER20 x150	35	44.45	210-7211
CT40 x ER25 x70	42	44.45	210-7212
CT40 x ER25 x90	42	44.45	210-7213
CT40 x ER25 x100	42	44.45	210-7214
CT40 x ER25 x125	42	44.45	210-7215
CT40 x ER25 x150	42	44.45	210-7216
CT40 x ER32 x70	50	44.45	210-7217
CT40 x ER32 x100	50	44.45	210-7218
CT40 x ER32 x120	50	44.45	210-7219
CT40 x ER32 x150	50	44.45	210-7220
CT40 x ER40x70	63	44.45	210-7221
CT40 x ER40x80	63	44.45	210-7222
CT40 x ER40x100	63	44.45	210-7223
CT40 x ER40x120	63	44.45	210-7224
CT40 x ER40x150	63	44.45	210-7225
CT40 x ER50x80	78	44.45	210-7226
CT40 x ER50x100	78	44.45	210-7227
CT50 x ER16x70	28	69.85	210-7228
CT50 x ER16x90	28	69.85	210-7229
CT50 x ER16x105	28	69.85	210-7230
CT50 x ER16x135	28	69.85	210-7231
CT50 x ER16x165	28	69.85	210-7232
CT50 x ER20x70	35	69.85	210-7233
CT50 x ER20x90	35	69.85	210-7234
CT50 x ER20x105	35	69.85	210-7235
CT50 x ER20x135	35	69.85	210-7236
CT50 x ER20x150	35	69.85	210-7237
CT50 x ER20x165	35	69.85	210-7238
CT50 x ER25x70	42	69.85	210-7239
CT50 x ER25x105	42	69.85	210-7240
CT50 x ER25x135	42	69.85	210-7241
CT50 x ER25x165	42	69.85	210-7242
CT50 x ER32x70	50	69.85	210-7243
CT50 x ER32x80	50	69.85	210-7244
CT50 x ER32x100	50	69.85	210-7245

Metric

CT x ER x L1	D Nose Dia.	D1	Order No.
CT50 x ER32x120mm	50mm	69.85mm	210-7246
CT50 x ER40x80	63	69.85	210-7247
CT50 x ER40x100	63	69.85	210-7248
CT50 x ER40x120	63	69.85	210-7249
CT50 x ER40x135	63	69.85	210-7250
CT50 x ER50x90	78	69.85	210-7251
CT50 x ER50x120	78	69.85	210-7252
CT50 x EOC16x100	43	69.85	210-7253
CT50 x EOC25x80	60	69.85	210-7254
CT50 x EOC25x100	60	69.85	210-7255
CT50 x EOC25x120	60	69.85	210-7256
CT50 x EOC32x70	72	69.85	210-7257
CT50 x EOC32x90	72	69.85	210-7258
CT50 x EOC32x105	72	69.85	210-7259
CT50 x EOC32x120	72	69.85	210-7260
CT50 x EOC32x150	72	69.85	210-7261

DIN Milling Chuck Arbors DIN 数控铣夹头刀柄

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Metric

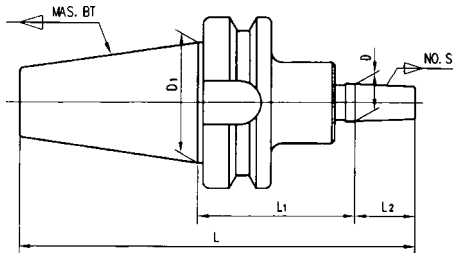
DIN69871.A x ER x L1	D Nose Dia.	D1	Order No.
DIN69871.A30xER11x80mm	19mm	31.75mm	210-7601
DIN69871.A30xER16x63	28	31.75	210-7602
DIN69871.A30xER16x100	28	31.75	210-7603
DIN69871.A30xER16x120	28	31.75	210-7604
DIN69871.A30xER16x135	28	31.75	210-7605
DIN69871.A30xER20x63	35	31.75	210-7606
DIN69871.A30xER20x120	35	31.75	210-7607
DIN69871.A30xER25x63	42	31.75	210-7608
DIN69871.A40xER11x80	19	44.45	210-7609
DIN69871.A40xER11x125	19	44.45	210-7610
DIN69871.A40xER11x150	19	44.45	210-7611
DIN69871.A40xER16x63	28	44.45	210-7612
DIN69871.A40xER16x70	28	44.45	210-7613
DIN69871.A40xER16x100	28	44.45	210-7614
DIN69871.A40xER16x120	28	44.45	210-7615
DIN69871.A40xER16x125	28	44.45	210-7616
DIN69871.A40xER16x160	28	44.45	210-7617
DIN69871.A40xER16x180	28	44.45	210-7618
DIN69871.A40xER20x70	35	44.45	210-7619
DIN69871.A40xER20x100	35	44.45	210-7620
DIN69871.A40xER20x135	35	44.45	210-7621
DIN69871.A40xER20x160	35	44.45	210-7622
DIN69871.A40xER25x60	42	44.45	210-7623
DIN69871.A40xER25x70	42	44.45	210-7624
DIN69871.A40xER25x100	42	44.45	210-7625
DIN69871.A40xER25x150	42	44.45	210-7626
DIN69871.A40xER25x180	42	44.45	210-7627
DIN69871.A40xER25x200	42	44.45	210-7628
DIN69871.A40xER32x70	50	44.45	210-7629
DIN69871.A40xER32x80	50	44.45	210-7630
DIN69871.A40xER32x100	50	44.45	210-7631
DIN69871.A40xER32x150	50	44.45	210-7632
DIN69871.A40xER40x80	63	44.45	210-7633
DIN69871.A40xER40x100	63	44.45	210-7634
DIN69871.A40xER40x150	63	44.45	210-7635
DIN69871.A40xER50x100	78	44.45	210-7636
DIN69871.A40xEOC16x70	43	44.45	210-7637
DIN69871.A40xEOC16x100	43	44.45	210-7638
DIN69871.A40xEOC25x70	60	44.45	210-7639
DIN69871.A40xEOC25x100	60	44.45	210-7640
DIN69871.A40xEOC25x120	60	44.45	210-7641
DIN69871.A40xEOC32x90	72	44.45	210-7642

DIN69871.A x ER x L1	D Nose Dia.	D1	Order No.
DIN69871.A40xEOC32x120mm	72mm	44.45mm	210-7643
DIN69871.A40xEOC32x150	72	44.45	210-7644
DIN69871.A50xER16x100	28	69.85	210-7645
DIN69871.A50xER16x160	28	69.85	210-7646
DIN69871.A50xER16x180	28	69.85	210-7647
DIN69871.A50xER20x100	35	69.85	210-7648
DIN69871.A50xER20x135	35	69.85	210-7649
DIN69871.A50xER20x160	35	69.85	210-7650
DIN69871.A50xER25x70	42	69.85	210-7651
DIN69871.A50xER25x100	42	69.85	210-7652
DIN69871.A50xER25x150	42	69.85	210-7653
DIN69871.A50xER25x200	42	69.85	210-7654
DIN69871.A50xER32x70	50	69.85	210-7655
DIN69871.A50xER32x80	50	69.85	210-7656
DIN69871.A50xER32x120	50	69.85	210-7657
DIN69871.A50xER32x160	50	69.85	210-7658
DIN69871.A50xER32x200	50	69.85	210-7659
DIN69871.A50xER40x80	63	69.85	210-7660
DIN69871.A50xER40x120	63	69.85	210-7661
DIN69871.A50xER40x160	63	69.85	210-7662
DIN69871.A50xER40x200	63	69.85	210-7663
DIN69871.A50xER50x80	78	69.85	210-7664
DIN69871.A50xER50x90	78	69.85	210-7665
DIN69871.A50xER50x120	78	69.85	210-7666
DIN69871.A50xER50x160	78	69.85	210-7667
DIN69871.A50xER50x200	78	69.85	210-7668
DIN69871.A50xEOC16x100	43	69.85	210-7669
DIN69871.A50xEOC25x70	60	69.85	210-7670
DIN69871.A50xEOC25x100	60	69.85	210-7671
DIN69871.A50xEOC25x140	60	69.85	210-7672
DIN69871.A50xEOC32x70	72	69.85	210-7673
DIN69871.A50xEOC32x80	72	69.85	210-7674
DIN69871.A50xEOC32x140	72	69.85	210-7675
DIN69871.A50xEOC40x90	85	89.85	210-7676

BT Taper Drill Chuck Arbors

BT 数控钻接杆

- Suitable for CNC RPM ≥ 12000.
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

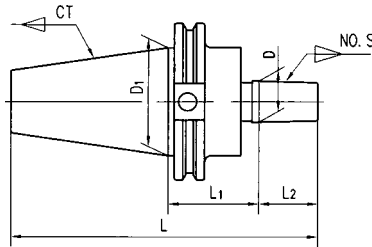


Metric

BT - NO.S - L1	L2 mm	L mm	D mm	D1 mm	Drawer Thread	Weight kg	Order No.
BT30-J1-45	16.669	110	9.754	31.75	M12	.60	210-7801
BT30-J2-45	22.225	115.6	14.199	31.75	M12	.70	210-7802
BT30-J2S-45	19.05	112.4	13.940	31.75	M12	.70	210-7803
BT30-J3-45	30.956	124.4	20.599	31.75	M12	.80	210-7804
BT30-J4-45	42.069	135.4	28.550	31.75	M12	.85	210-7805
BT30-J5-45	47.625	141	35.890	31.75	M12	.90	210-7806
BT30-J6-45	25.4	118.8	17.170	31.75	M12	.75	210-7807
BT30-J33-40	25.4	113.8	15.850	31.75	M12	.75	210-7808
BT30-J33-45	25.4	118.8	15.850	31.75	M12	.75	210-7809
BT30-B10-45	14.5	107.9	10.094	31.75	M12	.60	210-7810
BT30-B12-45	18.5	111.9	12.065	31.75	M12	.60	210-7811
BT30-B16-45	24	117.4	15.733	31.75	M12	.70	210-7812
BT30-B18-45	32	125.4	17.780	31.75	M12	.82	210-7813
BT40-J1-45	16.669	127.1	9.754	44.45	M16	1.16	210-7814
BT40-J2-45	22.225	132.6	14.199	44.45	M16	1.25	210-7815
BT40-J2S-45	19.05	129.4	13.940	44.45	M16	1.20	210-7816
BT40-J3-45	30.956	141.4	20.599	44.45	M16	1.45	210-7817
BT40-J4-45	42.069	152.5	28.550	44.45	M16	1.55	210-7818
BT40-J5-45	47.625	158	35.890	44.45	M16	1.60	210-7819
BT40-J6-45	25.4	135.8	17.170	44.45	M16	1.30	210-7820
BT40-J33-45	25.4	135.8	15.850	44.45	M16	1.30	210-7821
BT40-B10-45	14.5	124.9	10.094	44.45	M16	1.40	210-7822
BT40-B10-120	14.5	199.9	10.094	44.45	M16	1.76	210-7823
BT40-B12-45	18.5	128.9	12.065	44.45	M16	1.34	210-7824
BT40-B16-32	24	121.4	15.733	44.45	M16	1.40	210-7825
BT40-B16-45	24	134.4	15.733	44.45	M16	1.45	210-7826
BT40-B16-75	24	164.4	15.733	44.45	M16	1.55	210-7827
BT40-B16-90	24	179.4	15.733	44.45	M16	1.40	210-7828
BT40-B18-45	32	142.4	17.780	44.45	M16	1.70	210-7829
BT40-B18-75	32	172.4	17.780	44.45	M16	1.76	210-7830
BT45-B16-90	24	196.8	15.733	51.75	M20	2.30	210-7831
BT45-B16-100	24	206.8	15.733	51.75	M20	2.40	210-7832
BT50-J1-45	16.669	163.5	9.754	69.85	M24	3.60	210-7833
BT50-J2-45	22.225	169	14.199	69.85	M24	3.95	210-7834
BT50-J2S-45	19.05	165.9	13.940	69.85	M24	3.90	210-7835
BT50-J3-45	30.956	177.8	20.599	69.85	M24	3.70	210-7836
BT50-J4-45	42.069	188.9	28.550	69.85	M24	3.75	210-7837
BT50-J5-45	47.625	194.4	35.890	69.85	M24	3.80	210-7838
BT50-J6-45	25.4	172.2	17.170	69.85	M24	4.00	210-7839
BT50-J33-45	25.4	172.2	15.850	69.85	M24	4.00	210-7840
BT50-B10-45	14.5	161.3	10.094	69.85	M24	3.60	210-7841
BT50-B10-100	14.5	216.3	10.094	69.85	M24	3.80	210-7842
BT50-B12-45	18.5	165.3	12.065	69.85	M24	3.60	210-7843
BT50-B16-45	24	170.8	15.733	69.85	M24	3.65	210-7844
BT50-B16-60	24	185.8	15.733	69.85	M24	3.70	210-7845
BT50-B16-75	24	200.8	15.733	69.85	M24	3.74	210-7846
BT50-B16-90	24	215.8	15.733	69.85	M24	3.78	210-7847
BT50-B18-45	32	178.8	17.780	69.85	M24	3.70	210-7848

CAT Taper Drill Chuck Arbors CAT 数控钻接杆

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

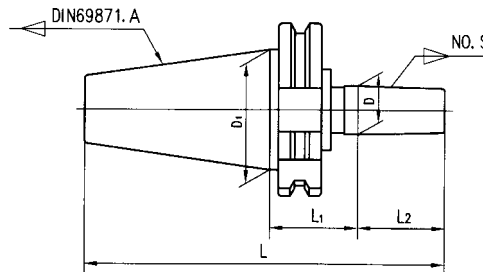


Metric

CT- NO.S - L1	L2 mm	L mm	D mm	D1 mm	Drawbar Thread	Weight kg	Order No.
CT40-J2-45	22.225	135.5	14.199	44.45	5/8"-11	1.55	210-8001
CT40-J3-45	30.956	144.2	20.599	44.45	5/8"-11	1.55	210-8002
CT40-J4-45	42.069	155.3	28.55	44.45	5/8"-11	1.60	210-8003
CT40-J6-45	25.4	138.65	17.17	44.45	5/8"-11	1.60	210-8004
CT40-J33-45	24.5	138.65	15.85	44.45	5/8"-11	1.62	210-8005
CT45-J1-45	16.669	144.2	9.754	57.15	3/4"-10	1.65	210-8006
CT45-J2-45	22.225	150	14.199	57.15	3/4"-10	1.70	210-8007
CT45-J3-45	30.956	158.5	20.599	57.15	3/4"-10	1.60	210-8008
CT45-J4-45	42.069	196.6	38.55	57.15	3/4"-10	1.60	210-8009
CT45-J5-45	47.625	175.2	35.89	57.15	3/4"-10	1.62	210-8010
CT45-J6-45	25.4	153	17.17	57.15	3/4"-10	1.65	210-8011
CT45-J33-45	25.4	153	15.85	57.15	3/4"-10	1.67	210-8012
CT50-J2-45	22.225	168.85	14.199	69.85	1"-8	1.70	210-8013
CT50-J3-45	30.956	177.56	20.599	69.85	1"-8	1.74	210-8014
CT50-J4-45	42.069	188.67	28.55	69.85	1"-8	1.55	210-8015
CT50-J5-45	47.625	194.23	35.89	69.85	1"-8	1.60	210-8016
CT50-J6-45	25.4	172	17.17	69.85	1"-8	1.65	210-8017
CT50-J33-45	25.4	172	15.85	69.85	1"-8	1.62	210-8018
CT45-B10-45	14.5	142	10.094	57.15	3/4"-10	1.67	210-8019
CT45-B12-45	18.5	146	12.065	57.15	3/4"-10	1.65	210-8020
CT45-B16-32	24	138.6	15.733	57.15	3/4"-10	1.67	210-8021
CT45-B16-45	24	151.6	15.733	57.15	3/4"-10	2.40	210-8022
CT45-B18-32	32	159.6	17.780	57.15	3/4"-10	2.45	210-8023

DIN Taper Drill Chuck Arbors DIN 数控钻接杆

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Metric

DIN69871.A - NO.S - L1	L2 mm	L mm	D mm	D1 mm	Drawbar Thread	Weight kg	Order No.
DIN69871.A40-J0-32	11.112	111.5	6.35	44.45	M16	1.55	210-7900
DIN69871.A40-J1-32	16.669	117	9.754	44.45	M16	1.55	210-7901
DIN69871.A40-J2-32	22.225	122.6	14.199	44.45	M16	1.60	210-7902
DIN69871.A40-J2S-32	19.05	119.5	13.940	44.45	M16	1.60	210-7903
DIN69871.A40-J3-32	30.956	131.4	20.599	44.45	M16	1.62	210-7904
DIN69871.A40-J4-32	42.069	142.5	28.550	44.45	M16	1.65	210-7905
DIN69871.A40-J5-32	47.625	148	35.890	44.45	M16	1.70	210-7906
DIN69871.A40-J6-32	25.4	125.8	17.170	44.45	M16	1.60	210-7907
DIN69871.A40-J33-32	25.4	125.8	15.850	44.45	M16	1.60	210-7908
DIN69871.A40-B6-32	10	110.4	6.35	44.45	M16	1.62	210-7909
DIN69871.A40-B10-32	14.5	114.9	10.094	44.45	M16	1.65	210-7910
DIN69871.A40-B10-45	14.5	127.9	10.094	44.45	M16	1.67	210-7911
DIN69871.A40-B12-32	18.5	118.9	12.065	44.45	M16	1.70	210-7912
DIN69871.A40-B12-80	18.5	166.9	12.065	44.45	M16	1.74	210-7913
DIN69871.A40-B16-26	24	118.4	15.733	44.45	M16	1.55	210-7914

DIN Taper Drill Chuck Arbors

Continued

DIN 数控钻接杆

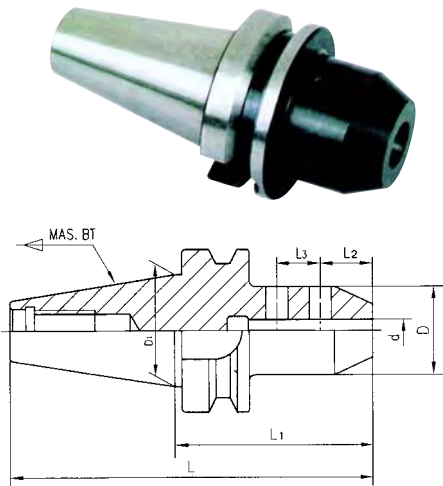
Metric

DIN69871.A - NO.S - L1	L2 mm	L mm	D mm	D1 mm	Drawber Thread	Weight kg	Order No.
DIN69871.A40-B16-32	24	124.4	15.733	44.45	M16	1.60	210-7915
DIN69871.A40-B16-45	24	137.4	15.733	44.45	M16	1.65	210-7916
DIN69871.A40-B18-32	32	132.4	17.780	44.45	M16	1.62	210-7917
DIN69871.A40-B18-45	32	145.4	17.780	44.45	M16	1.67	210-7918
DIN69871.A40-B22-32	40.5	140.9	21.793	44.45	M16	1.65	210-7919
DIN69871.A40-B24-32	50.5	150.9	23.825	44.45	M16	1.67	210-7920
DIN69871.A50-B16-45	24	170.74	15.733	69.85	M24	2.40	210-7921

BT Flange End Mill Holders

BT 数控立铣刀杆

- Suitable for CNC RPM ≥ 12000.
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Inch

Taper	d In.	L1 mm	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.
BT30	1/4"	60	108.4	27	31.75	12		210-0516
	5/16"	60	108.4	30	31.75	16		210-0520
	3/8"	60	108.4	32	31.75	19		210-0524
	1/2"	60	108.4	35	31.75	22		210-0532
	5/8"	75	123.4	41	31.75	23		210-0540
	3/4"	75	123.4	44.5	31.75	25		210-0548
	1"	90	138.4	55	31.75	28	25.4	210-0564
BT40	1/4"	50	115.4	27	44.45	12		210-0616
	5/16"	50	115.4	30	44.45	16		210-0620
	3/8"	63	128.4	32	44.45	19		210-0624
	1/2"	63	128.4	35	44.45	22		210-0632
	5/8"	63	128.4	41	44.45	23		210-0640
	3/4"	63	128.4	44.5	44.45	25		210-0648
	1"	100	165.4	55	44.45	28	25.4	210-0664
BT50	1-1/4"	100	165.4	62	44.45	28	25.4	210-0666
	1/4"	63	164.8	27	69.85	12		210-0716
	5/16"	63	164.8	30	69.85	16		210-0720
	3/8"	63	164.8	32	69.85	19		210-0724
	1/2"	80	181.8	35	69.85	22		210-0732
	5/8"	80	181.8	41	69.85	23		210-0740
	3/4"	80	181.8	44.5	69.85	25		210-0748
	1"	100	201.8	55	69.85	28	25.4	210-0764
	1-1/4"	105	206.8	62	69.85	28	25.4	210-0766
	1-1/2"	105	216.8	38	69.85	28	25.4	210-0768

Metric

Taper	d mm	L1 mm	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.
BT30	6	50	98.4	25	31.75	18		210-0906
	6	60	108.4	25	31.75	18		210-0907
	8	60	108.4	28	31.75	18		210-0908
	10	60	108.4	35	31.75	20		210-0910
	10	80	128.4	35	31.75	20		210-0911
	12	60	108.4	42	31.75	22.5		210-0912
	14	60	108.4	42	31.75	22.5		210-0914
	16	75	123.4	48	31.75	24		210-0916
	18	75	123.4	50	31.75	24		210-0918
	20	75	123.4	52	31.75	25		210-0920
	25	90	138.4	65	31.75	24	25	210-0925
BT40	6	50	115.4	25	44.45	18		210-1206
	6	60	125.4	25	44.45	18		210-1207
	8	50	115.4	28	44.45	18		210-1208
	10	63	128.4	35	44.45	20		210-1210
	12	63	128.4	42	44.45	22.5		210-1212
	14	63	128.4	44	44.45	22.5		210-1214
	16	63	128.4	48	44.45	24		210-1216
	16	70	135.4	48	44.45	24		210-1217
	18	63	128.4	50	44.45	24		210-1218
	20	63	128.4	52	44.45	25		210-1220
	20	70	135.4	52	44.45	25		210-1221
	25	90	155.4	65	44.45	24	25	210-1225
	25	100	165.4	65	44.45	24	25	210-1226
	32	100	165.4	72	44.45	24	28	210-1232
BT50	32	110	175.4	72	44.45	24	28	210-1233
	40	120	185.4	90	44.45	30	32	210-1240
	40	140	205.4	90	44.45	30	32	210-1241
	6	63	164.4	25	69.85	18		210-1506
	8	63	164.4	28	69.85	18		210-1508
	10	63	164.4	35	69.85	20		210-1510
	12	80	181.8	42	69.85	22.5		210-1512
	16	80	181.8	48	69.85	24		210-1516
	20	80	181.8	52	69.85	25		210-1520
	25	100	201.8	65	69.85	24	25	210-1525
	25	105	206.8	65	69.85	24	25	210-1526
	25	150	251.8	65	69.85	24	25	210-1527
	25	200	301.8	65	69.85	24	25	210-1528
	32	100	201.8	72	69.85	24	28	210-1532
	32	105	206.8	72	69.85	24	28	210-1533
	40	115	216.8	90	69.85	30	32	210-1540
	40	120	221.8	90	69.85	30	32	210-1541
	42	120	221.8	90	69.85	30	32	210-1542
	50	150	251.8	100	69.85	35	35	210-1550

DIN Flange End Mill Holders

DIN69871 数控立铣刀杆

DIN69871.A

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Taper	d In.	L1 mm	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.	Taper	d In.	L1 mm	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.
A30	1/4"	50	97.8	27	31.75	12		210-3416	A40	1-1/4"	100	168.4	62	44.45	28	25.4	210-3766
A30	5/16	50	97.8	30	31.75	16		210-3420	A50	1/4	63	164.75	27	69.85	12		210-4416
A30	3/8	50	97.8	32	31.75	19		210-3424	A50	5/16	63	164.75	30	69.85	16		210-4420
A30	1/2	50	97.8	35	31.75	23		210-3432	A50	3/8	63	164.75	32	69.85	19		210-4424
A30	5/8	63	110.8	41	31.75	23		210-3440	A50	1/2	63	164.75	35	69.85	22		210-4432
A40	1/4	50	118.4	27	44.45	12		210-3716	A50	5/8	63	164.75	41	69.85	23		210-4440
A40	5/16	50	118.4	30	44.45	16		210-3720	A50	3/4	63	164.75	44.5	69.85	28	25.4	210-4448
A40	3/8	50	118.4	32	44.45	19		210-3724	A50	1	80	181.75	55	69.85	28	25.4	210-4464
A40	1/2	50	118.4	35	44.45	22		210-3732	A50	1-1/4	100	201.75	62	69.85	28	25.4	210-4466
A40	5/8	63	131.4	41	44.45	23		210-3740	A50	1-1/2	100	201.75	68	69.85	28	36.5	210-4468
A40	3/4	63	431.4	44.5	44.45	25		210-3748	A50	2	125	226.75	97	69.85	30	36.5	210-4470
A40	1	100	168.4	55	44.45	28		210-3764	A50	2-1/2	150	250.75	125	69.85	30	36.5	210-4472

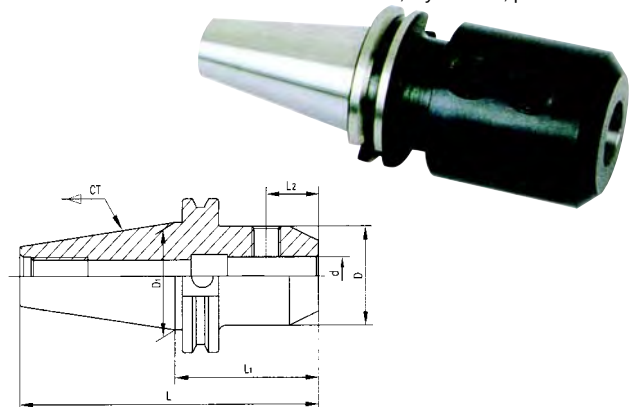
Metric

Taper	d mm	L1 mm	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.
A30	6	50	97.8	25	31.75	18		210-4706
A30	8	50	97.8	28	31.75	18		210-4708
A30	10	50	97.8	35	31.75	20		210-4710
A30	12	50	97.8	42	31.75	22.5		210-4712
A30	16	50	97.8	48	31.75	24		210-4716
A40	6	50	118.4	25	44.45	18		210-4806
A40	6	100	168.4	25	44.45	18		210-4807
A40	8	50	118.4	28	44.45	18		210-4808
A40	8	100	168.4	28	44.45	18		210-4809
A40	10	50	118.4	35	44.45	20		210-4810
A40	10	100	168.4	35	44.45	20		210-4811
A40	12	50	118.4	42	44.45	22.5		210-4812
A40	14	50	118.4	44	44.45	22.5		210-4814
A40	16	63	131.4	48	44.45	24		210-4816
A40	18	63	131.4	50	44.45	24		210-4818
A40	20	63	131.4	52	44.45	25		210-4820
A40	25	100	168.4	65	44.45	24	25	210-4825
A40	32	100	168.4	72	44.45	24	28	210-4832
A40	40	120	188.4	90	44.45	30	32	210-4840
A50	6	63	164.75	25	39.85	18		210-4906
A50	8	63	164.75	28	39.85	18		210-4908
A50	10	63	164.75	35	39.85	20		210-4910
A50	12	63	164.75	42	39.85	22.5		210-4912
A50	14	63	164.75	44	39.85	22.5		210-4914
A50	16	63	164.75	48	39.85	24		210-4916
A50	18	63	164.75	50	39.85	24		210-4918
A50	20	63	164.75	52	39.85	25		210-4920
A50	25	80	181.75	65	39.85	24	25	210-4925
A50	32	100	201.75	72	39.85	24	25	210-4932
A50	40	100	201.75	90	39.85	30	32	210-4940
A50	40	120	221.75	90	39.85	30	32	210-4941
A50	40	125	226.75	100	39.85	35	35	210-4942
A50	63	150	251.75	125	39.85	40	40	210-4963

CAT V-Flange End Mill Holders

CAT 数控立铣刀杆

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

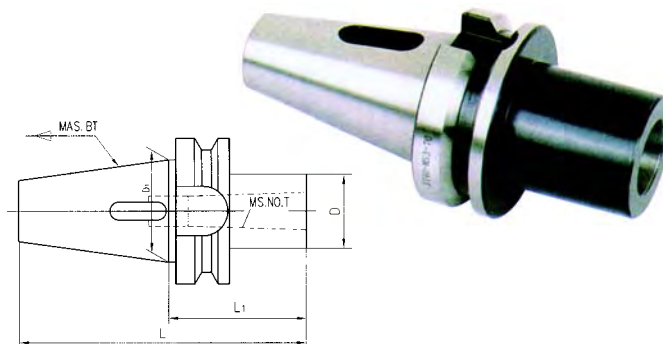


CT x d-L1	L mm	D mm	D1 mm	L2 mm	L3 mm	Order No.
CT40x3/16" - 2-1/2"	131.8	19.05	44.45	14.3		210-5412
CT40x1/4" - 2-1/2"	131.8	20.26	44.45	19.8		210-5416
CT40x5/16" - 2-1/2"	131.8	22.52	44.45	19.8		210-5420
CT40x3/8" - 2-1/2"	131.8	32	44.45	19.8		210-5424
CT40x7/16" - 2-1/2"	131.8	31.75	44.45	22.2		210-5428
CT40x1/2" - 2-5/8"	134.9	44.45	44.45	22.2		210-5432
CT40x5/8" - 3-3/4"	163.5	44.45	44.45	23.8		210-5440
CT40x3/4" - 3-3/4"	163.5	44.45	44.45	25.4		210-5448
CT40x7/8" - 4"	169.9	52	44.45	27	22.2	210-5456
CT40x1" - 4"	169.9	63	44.45	28.6	25.4	210-5464
CT40x1-1/4" - 4-1/8"	173	69.85	44.45	28.6	25.4	210-5466
CT50x3/8" - 4-1/2"	215.9	31.75	69.85	19.8		210-5724
CT50x3/8" - 6-1/2"	266.7	31.75	69.85	19.8		210-5726
CT50x1/2" - 2-5/8"	168.3	44.45	69.85	22.2		210-5732
CT50x1/2" - 4-5/8"	219.2	44.45	69.85	22.2		210-5733
CT50x5/8" - 3-3/4"	196.85	44.45	69.85	23.8		210-5740
CT50x5/8" - 5-3/4"	247.7	44.45	69.85	23.8		210-5741
CT50x3/4" - 3-3/4"	196.85	44.45	69.85	25.4		210-5748
CT50x3/4" - 5-3/4"	247.7	44.45	69.85	25.4		210-5749
CT50x7/8" - 3-3/4"	196.85	52	69.85	27	22.2	210-5756
CT50x7/8" - 5-3/4"	247.7	52	69.85	27	22.2	210-5757
CT50x1" - 4"	203.2	63	69.85	28.6	25.4	210-5764
CT50x1" - 6"	254	63	69.85	28.6	25.4	210-5766
CT50x1" - 8"	304.8	63	69.85	28.6	25.4	210-5768
CT50x1-1/4" - 4"	203.2	69.85	69.85	28.6	25.4	210-5774
CT50x1-1/4" - 6"	254	69.85	69.85	28.6	25.4	210-5776
CT50x1-1/4" - 8"	304.8	69.85	69.85	28.6	25.4	210-5778
CT50x1-1/2" - 4"	203.2	69.85	69.85	28.6	25.4	210-5784
CT50x1-1/2" - 6"	254	69.85	69.85	28.6	25.4	210-5786
CT50x1-1/2" - 8"	304.8	69.85	69.85	28.6	25.4	210-5788
CT50x2" - 5-5/8"	244.5	69.85	69.85	30.2	36.5	210-5794
CT50x2" - 7-5/8"	295.3	69.85	69.85	30.2	36.5	210-5796
CT50x2-1/2" - 6"	254	69.85	69.85	30.2	36.5	210-5798

BT Shank to Morse Taper Adaptors (with Tang)

BT 数控莫氏变径套 (扁尾型)

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Metric

Taper	Morse Taper Hole	L1 Gage	L mm	D Nose Dia.	Order No.
BT30	MT1	45mm	93.4mm	25mm	210-5901
BT30	MT1	50	98.4	25	210-5902
BT30	MT2	60	108.4	32	210-5903
BT30	MT3	80	128.4	40	210-5904
BT40	MT1	45	110.4	25	210-6201
BT40	MT1	50	115.4	25	210-6202
BT40	MT1	120	185.4	25	210-6203
BT40	MT2	50	115.4	32	210-6204
BT40	MT2	60	125.4	32	210-6205
BT40	MT2	120	185.4	32	210-6206
BT40	MT3	70	135.4	40	210-6207
BT40	MT3	75	140.4	40	210-6208
BT40	MT4	90	155.4	48	210-6209
BT40	MT4	95	160.4	48	210-6210
BT40	MT4	135	200.4	48	210-6211
BT40	MT4	165	230.4	48	210-6212
BT45	MT1	120	202.8	25	210-6223
BT45	MT2	120	202.8	32	210-6224
BT45	MT3	120	202.8	40	210-6225
BT45	MT3	140	222.8	40	210-6226
BT45	MT4	98	180.8	48	210-6227
BT50	MT1	45	146.8	25	210-6601
BT50	MT2	50	151.8	32	210-6602
BT50	MT2	60	161.8	32	210-6603
BT50	MT2	120	221.8	32	210-6604
BT50	MT2	135	236.8	32	210-6605
BT50	MT3	65	166.8	40	210-6606
BT50	MT3	75	176.8	40	210-6607
BT50	MT3	120	221.8	40	210-6608
BT50	MT3	135	236.8	40	210-6609
BT50	MT3	150	251.8	40	210-6610
BT50	MT4	85	186.8	48	210-6611
BT50	MT4	95	196.8	48	210-6612
BT50	MT4	180	281.8	48	210-6613
BT50	MT5	105	206.8	63	210-6614
BT50	MT5	108	209.8	63	210-6615

BT Shank to Morse Taper Adaptors (with Tang)

BT 数控莫氏变径套 (扁尾型)

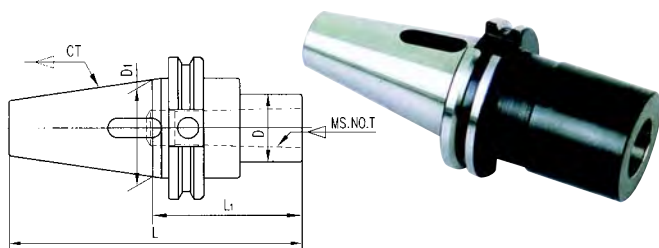
Inch

Taper	Morse Taper Hole	L1 Gage	D Nose Dia.	Order No.
BT40	MT2	2.375"	1.25"	210-6701
BT40	MT3	3.00	1.562	210-6702
BT40	MT4	2.562	2.00	210-6703
BT50	MT2	1.75	1.25	210-6731
BT50	MT3	1.75	1.562	210-6732
BT50	MT4	3.00	2.00	210-6733
BT50	MT5	1.125	2.75	210-6734

CAT Morse Taper Adaptors (with Tang)

CAT 数控莫氏变径套 (扁尾型)

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



Inch

Taper	Morse Taper Hole	L1 Gage	D Nose Dia.	Order No.
CT40	MT2	2.375"	1.25"	210-6942
CT40	MT3	3.00	1.562	210-6943
CT40	MT4	2.562	2.00	210-6944
CT50	MT2	1.75	1.25	210-6952
CT50	MT3	1.75	1.562	210-6953
CT50	MT4	3.00	2.00	210-6954
CT50	MT5	4.125	2.75	210-6955

Metric

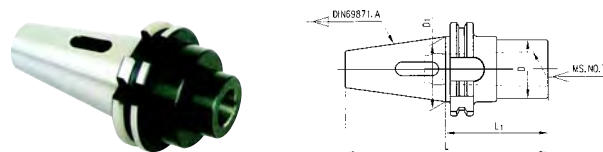
Taper	Morse Taper Hole	L1 Gage	L	D Nose Dia.	Order No.
CT40	MT1	45mm	113.25mm	25mm	210-6801
CT40	MT2	63	131.25	32	210-6802
CT40	MT3	75	143.25	40	210-6803
CT40	MT4	100	168.25	48	210-6804
CT45	MT1	40	122.55	25	210-6831
CT45	MT2	50	132.55	32	210-6832
CT45	MT3	73	155.55	40	210-6833
CT45	MT4	95	177.55	48	210-6834
CT45	MT5	125	207.55	61	210-6835
CT50	MT1	40	141.6	25	210-6851
CT50	MT2	50	151.6	32	210-6852
CT50	MT2	135	236.6	32	210-6853
CT50	MT3	63	164.6	40	210-6854
CT50	MT3	150	251.6	40	210-6855
CT50	MT4	65	166.6	48	210-6856
CT50	MT4	85	186.6	48	210-6857
CT50	MT5	105	206.6	61	210-6858

DIN Morse Taper Adaptors (with Tang)

DIN69871.A

DIN 数控莫氏变径套 (扁尾型)

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

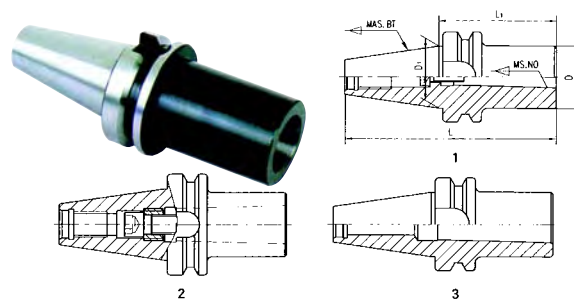


Taper	Morse Taper Hole	L1 Gage	L	D Nose Dia.	Order No.
A30	MT1	50mm	97.8mm	25mm	210-7031
A30	MT2	60	107.8	32	210-7032
A30	MT3	75	122.8	40	210-7033
A40	MT1	45	113.4	25	210-7041
A40	MT1	50	118.4	25	210-7042
A40	MT2	50	118.4	32	210-7043
A40	MT2	60	128.4	32	210-7044
A40	MT3	70	138.4	40	210-7045
A40	MT4	95	163.4	48	210-7046
A40	MT5	125	193.4	63	210-7047
A50	MT1	45	146.75	25	210-7051
A50	MT2	60	161.75	32	210-7052
A50	MT3	65	166.75	40	210-7053
A50	MT4	95	196.75	48	210-7054
A50	MT5	100	201.75	61	210-7055
A50	MT5	105	206.75	61	210-7056

BT Morse Taper Adaptors (Drawbar)

数控莫氏变径套 (后拉型)

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



BTx MW.NO.T- L1	L mm	D mm	D1 mm	Figure	Order No.
BT40 x MW1-45	110.4	25	44.45	1	210-8101
BT40 x MW2-60	125.4	32	44.45	1	210-8102
BT40 x MW3-75	140.4	40	44.45	2	210-8103
BT40 x MW3-90	155.4	40	44.45	2	210-8104
BT40 x MW4-95	160.4	48	44.45	3	210-8105
BT40 x MW4-100	165.4	48	44.45	2	210-8106
BT50 x MW1-45	146.8	25	69.85	1	210-8107
BT50 x MW2-45	146.8	32	69.85	1	210-8108
BT50 x MW2-60	168.1	40	69.85	1	210-8109
BT50 x MW3-60	161.8	40	69.85	1	210-8110
BT50 x MW3-75	176.8	48	69.85	1	210-8111
BT50 x MW4-80	181.8	48	69.85	3	210-8112
BT50 x MW4-100	201.8	48	69.85	2	210-8113
BT50 x MW5-100	201.8	63	69.85	3	210-8114
BT50 x MW5-120	221.8	63	69.85	2	210-8115

CAT Morse Taper Adaptors (with Drawbar)

数控莫氏变径套（后拉型）

- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.

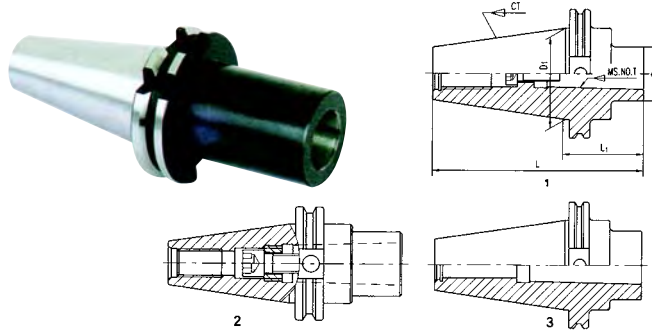


CTx MW.NO.T- L1	L mm	D mm	D1 mm	Figure	Order No.
CT40 x MW1-45	113.25	25	44.45	1	210-8131
CT40 x MW2-60	128.25	32	44.45	1	210-8132
CT40 x MW3-75	143.25	40	44.45	2	210-8133
CT40 x MW3-90	158.25	40	44.45	2	210-8134
CT40 x MW4-100	168.25	48	44.45	2	210-8135
CT40 x MW4-120	168.25	48	44.45	2	210-8136
CT50 x MW2-60	161.6	31.75	69.85	1	210-8137
CT50 x MW3-60	161.6	41.28	69.85	1	210-8138
CT50 x MW4-90	161.6	50.8	69.85	1	210-8139
CT50 x MW5-100	201.6	69.85	69.85	3	210-8140

DIN Morse Taper Adaptors (with Drawbar)

数控莫氏变径套（后拉型）

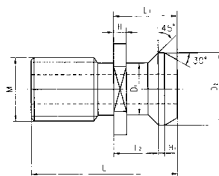
- Suitable for CNC RPM ≥ 12000 .
- Checked by balance.
- RPM ≥ 20000 balance toolholders available, if you need, please contact.



DIN69871.A x MW.NO.T- L1	L mm	D mm	D1 mm	Figure	Order No.
DIN69871.A40 x MW1-45	113.4	25	44.45	1	210-8161
DIN69871.A40 x MW2-60	128.4	32	44.45	1	210-8162
DIN69871.A40 x MW3-70	138.4	40	44.45	3	210-8163
DIN69871.A40 x MW3-80	148.4	40	44.45	2	210-8164
DIN69871.A40 x MW3-100	168.4	40	44.45	2	210-8165
DIN69871.A40 x MW4-90	158.4	48	44.45	3	210-8166
DIN69871.A40 x MW4-100	168.4	48	69.85	2	210-8167
DIN69871.A40 x MW4-120	188.4	48	69.85	2	210-8168
DIN69871.A50 x MW1-45	146.8	25	69.85	1	210-8169
DIN69871.A50 x MW2-45	146.8	32	69.85	1	210-8170
DIN69871.A50 x MW2-60	161.8	32	69.85	1	210-8171
DIN69871.A50 x MW3-60	161.8	40	69.85	1	210-8172
DIN69871.A50 x MW3-80	181.8	40	69.85	1	210-8173
DIN69871.A50 x MW4-80	181.8	48	69.85	3	210-8174
DIN69871.A50 x MW4-90	191.8	48	69.85	2	210-8175
DIN69871.A50 x MW4-120	221.8	48	69.85	2	210-8176
DIN69871.A50 x MW5-100	201.8	61	69.85	3	210-8177
DIN69871.A50 x MW5-120	221.8	61	69.85	2	210-8178

Retention Knobs 拉钉

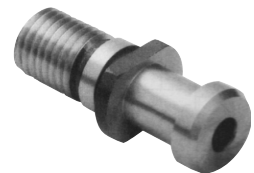
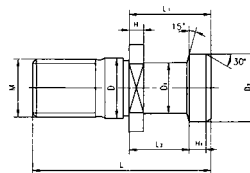
ANSI/ASME B5.50-1985



mm

Type	D1	D2	M	L	L1	L2	H	H1	Order No.
30	9.78	13.21	1/2"-13	27.94	11.68	8.13	2.54	1.01	210-7701
40	12.45	18.80	5/8"-11	38.10	16.26	11.18	3.05	1.52	210-7702
45	15.37	23.88	3/4-10	45.72	20.83	14.73	4.06	2.03	210-7703
50	20.83	28.96	1"-8	58.42	25.4	17.78	5.08	2.54	210-7704

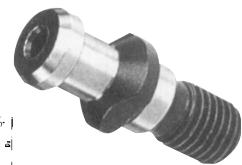
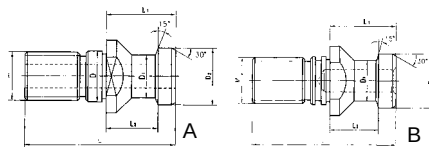
ISO7388/2-1984A



mm

Type	D	D1	D2	M	L	L1	L2	H	H1	Order No.
30A	13	8	12	M12	44	24	19	4	3	210-7711
40A	17	14	19	M16	54	26	20	4	4	210-7712
45A	21	17	23	M20	65	30	23	5	5	210-7713
50A	25	21	28	M24	74	34	25	6	7	210-7714

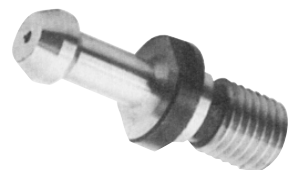
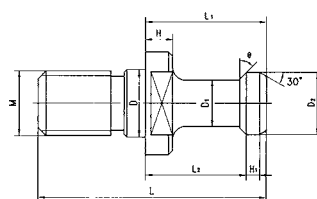
DIN69872-1988



mm

Type	D	D1	D2	M	L	L1	L2	Order No.
30A	13	8	12	M12	44	24	19	210-7721
40A	17	14	19	M16	54	26	20	210-7722
45A	21	17	23	M20	65	30	23	210-7723
50A	25	21	28	M24	74	34	25	210-7724
30B		8	12	M12	44	24	19	210-7725
40B		14	19	M16	54	26	20	210-7726
45B		17	23	M20	65	30	23	210-7727
50B		21	28	M24	74	34	25	210-7728

MAS403-1982



mm

Type	D	D1	D2	M	L	L1	L2	H	H1	θ	Order No.
P30T(°)	12.5	7	11	M12	43	23	18	5	2.5	30°	210-7731
P40T(°)	17	10	15	M16	60	35	28	6	3	30°	210-7732
P45T(°)	21	14	19	M20	70	40	31	8	4	30°	210-7733
P50T(°)	25	17	23	M24	85	45	35	10	5	30°	210-7734
P30T(°)	12.5	7	11	M12	43	23	18	5	2.5	45°	210-7741
P40T(°)	17	10	15	M16	60	35	28	6	3	45°	210-7742
P45T(°)	21	14	19	M20	70	40	31	8	4	45°	210-7743
P50T(°)	25	17	23	M24	85	45	35	10	5	45°	210-7744

Milling Machine Arbors 7:24 卧铣刀杆

Style A

- Style A with 23/32" x 1-1/2" pilots.
- Machined from high grade forging; have standard key ways and include arbor spacers and running bushings.



Arbor No.	Taper	Arbor Dia.	Length of Shoulder To nut	Dia. of Running Bushings	Dia. of Bushings Furnished	Order No.
30-7/8—A10-2	30	7/8"	10	1-5/8"	1	219-8332
31-A10-2	30	1"	10	1-5/8"	1	219-8336
31-1/4-A10-2	30	1-1/4"	10	1-7/8"	1	219-8338
40-7/8-A10	40	7/8"	10		None	219-8432
40-7/8-A16-3	40	7/8"	16	1-7/8"	1	219-8434
41-A8	40	1"	8		None	219-8436
41-A10	40	1"	10		None	219-8438
41-A12	40	1"		12"	None	219-8440
41-A16-3	40	1"	16	1-7/8"	1	219-8442
41-1/4-A8	40	1-1/4"	8		None	219-8444
41-1/4-A10	40	1-1/4"	10		None	219-8446
41-1/4-A12	40	1-1/4"	12		None	219-8448
41-1/4-A-16-3	40	1-1/4"	16	1-7/8"	1	219-8450
50-7/8-A10	50	7/8"	10		None	219-8532
50-7/8-A18-4	50	7/8"	18	2-1/8"	1	219-8534
51-A8	50	1"	8		None	219-8536
51-A12	50	1"	12	2-1/8"	None	219-8538
51-A18-4	50	1"	18		1	219-8540
51-1/4-A8	50	1-1/4"	8		None	219-8542
51-1/4-A12	50	1-1/4"	12		None	219-8544
51-1/4-A18-4	50	1-1/4"	18	2-1/8"	1	219-8546

Style B

- Style B without pilots.
- Machined from high grade forging; have standard key ways and include arbor spacers and running bushings.



Arbor No.	Taper	Arbor Dia.	Length of Shoulder To nut	Dia. of Running Bushings	Dia. of Bushings Furnished	Order No.
31-B2	30	1"	2"	None	None	219-9334
40-7/8-B14-3	40	7/8"	14	1-7/8"	1	219-9432
40-7/8-B16-3	40	7/8"	16	1-7/8"	1	219-9434
41-B3	40	1"	3"	None	None	219-9436
41-B14-3	40	1"	14	1-7/8"	1	219-9438
41-B20-3	40	1"	20	1-7/8"	1	219-9440
41-1/4-B3	40	1-1/4"	3"	None	None	219-9442
41-1/4-B14-3	40	1-1/4"	14	1-7/8"	1	219-9444
41-1/4-B20-3	40	1-1/4"	20	1-7/8"	1	219-9446
41-1/2-B10	40	1-1/2"	10	2-1/8"	None	219-9448
41-1/2-B20-4	40	1-1/2"	20	2-1/8"	1	219-9450
51-B3-1/2	50	1"	3-1/2"	None	None	219-9532
51-B15-4	50	1"	15	2-1/8"	1	219-9534
51-B18-4	50	1"	18	2-1/8"	2	219-9536
51-B24-4	50	1"	24	2-1/8"	2	219-9538
51-1/4-B3-1/2	50	1-1/4"	3-1/2"	None	None	219-9540
51-1/4-B15-4	50	1-1/4"	15	2-1/8"	1	219-9542
51-1/4-B18-4	50	1-1/4"	18	2-1/8"	2	219-9544
51-1/4-B24-4	50	1-1/4"	24	2-1/8"	2	219-9546
51-1/4-B30-4	50	1-1/4"	30	2-1/8"	2	219-9548
51-1/2-B3-1/2	50	1-1/2"	3-1/2"	None	None	219-9550
51-1/2-B18-4	50	1-1/2"	18	2-1/8"	2	219-9552
51-1/2-B24-5	50	1-1/2"	24	2-3/4"	2	219-9554
51-1/2-B30-5	50	1-1/2"	30	2-3/4"	2	219-9556
51-1/2-B36-5	50	1-1/2"	36	2-3/4"	2	219-9558
52-B24-5	50	2"	24	2-3/4"	2	219-9560
52-B30-5	50	2"	30	2-3/4"	2	219-9562
52-B36-5	50	2"	36	2-3/4"	2	219-9564
52-1/2-B36-6	50	2-1/2"	36	3-3/8"	2	219-9566

Arbor Spacers with Keyways

刀杆垫圈



Spacer Width	7/8" Hole and 1-3/8" Outside Dia.	1" Hole and 1-1/2" Outside Dia.	1-1/4" Hole and 1-3/4" Outside Dia.	1-1/2" Hole and 2-1/8" Outside Dia.	2" Hole and 2-3/4" Outside Dia.
1/16"	219-8110	219-8210	219-8710	219-8810	219-8910
3/32"	219-8112	219-8212	219-8712	219-8812	219-8912
1/8"	219-8114	219-8214	219-8714	219-8814	219-8914
3/16"	219-8116	219-8216	219-8716	219-8816	219-8916
1/4"	219-8118	219-8218	219-8718	219-8818	219-8918
5/16"	219-8120	219-8220	219-8720	219-8820	219-8920
3/8"	219-8122	219-8222	219-8722	219-8822	219-8922
7/16"	219-8124	219-8224	219-8724	219-8824	219-8924
1/2"	219-8126	219-8226	219-8726	219-8826	219-8926
5/8"	219-8128	219-8228	219-8728	219-8828	219-8928
3/4"	219-8130	219-8230	219-8730	219-8830	219-8930
7/8"	219-8132	219-8232	219-8732	219-8832	219-8932
1"	219-8134	219-8234	219-8734	219-8834	219-8934
1-1/4"	219-8136	219-8236	219-8736	219-8836	219-8936
1-1/2"	219-8138	219-8238	219-8738	219-8838	219-8938
2"	219-8140	219-8240	219-8740	219-8840	219-8940
3"	219-8142	219-8242	219-8742	219-8842	219-8942

Arbor Running Bushings with Keyways 刀杆轴套

For Style A and Style B milling machine arbors



Arbor Dia.	Outside Dia.	Length	Order No.	Arbor Dia.	Outside Dia.	Length	Order No.
7/8"	1-5/8"	2-5/8"	219-8652	1-1/4"	2-1/8"	3-3/4"	219-8668
1"	1-5/8"	2-5/8"	219-8654	1-1/2"	2-1/8"	3-3/4"	219-8670
1-1/4"	1-7/8"	2-5/8"	219-8656	7/8"	2-3/4"	4-1/4"	219-8672
7/8"	1-7/8"	3-1/8"	219-8658	1"	2-3/4"	4-1/4"	219-8674
1"	1-7/8"	3-1/8"	219-8660	1-1/4"	2-3/4"	4-1/4"	219-8676
1-1/4"	1-7/8"	3-1/8"	219-8662	1-1/2"	2-3/4"	4-1/4"	219-8678
7/8"	2-1/8"	3-3/4"	219-8664	2"	2-3/4"	4-1/4"	219-8680
1"	2-1/8"	3-3/4"	219-8666	2-1/2"	3-3/8"	4-1/4"	219-8682

Nuts 刀杆螺母

For milling machine arbors



Arbor Dia.	Thread	Right Hand Order No.	Left Hand Order No.
7/8"	7/8-14RH	219-8632	219-8602
1"	1-14RH	219-8634	219-8604
1-1/4"	1-1/4-12RH	219-8636	219-8606
1-1/2"	1-1/2-12 RH	219-8638	219-8608
2"	2-12RH	219-8640	219-8610
2-1/2"	2-1/2-12RH	219-8642	219-8612

Micrometer Adjustable Spacing Collars

可调精密垫圈

- Provides you with quick, accurate and positive adjustment.
- Features precise calibration of 1/1000".



Range	Hole Dia.	Outside Dia.	Thickness	Order No.
7/16-5/8"	3/4	1-1/2	7/16	712-0400
9/16-3/4"	7/8	1-1/2	9/16	712-0410
5/8-7/8"	1	1-3/4	5/8	712-0420
3/4-1"	1-1/4	2-1/8	3/4	712-0430
7/8-1-1/4"	1-1/2	2-5/8	7/8	712-0440
15/16-1-1/2"	2	3-5/8	15/16	712-0450

Straight Shank Stub Milling Machine Arbors

直柄卧铣刀杆

- For holding saws or small cutters.
- These arbors are designed and made to fit directly into standard End Mill Adapters. Sets include spacers and nut.
- Arbors furnished with standard key ways and L.H. arbor nut.
- Lengths of shoulder to nut are 1"
- Hardened and ground.



Dia. Of Straight Shank	Arbor Dia.	Length of Shoulder to Nut	Order No.
1/2"	1/2"	1"	210-3800
1/2"	5/8"	1"	210-3801
1/2"	3/4"	1"	210-3802
3/4"	1/2"	1"	210-3803
3/4"	5/8"	1"	210-3804
3/4"	3/4"	1"	210-3805
3/4"	7/8"	1"	210-3806
3/4"	1"	1"	210-3807
3/4"	1-1/4"	1"	210-3808

30-40-50 to Morse Taper Adaptors 7:24/MS 变径套

ANSI, BS & Metric

Outside Taper	Inside Taper	Overall Length	Drawbar Thread	Order No.	Drawbar Thread	Metric Order No.	Drawbar Thread	BS Order No.
30	MT1	118mm	1/2"-13	214-7300	M12	214-7700		
30	MT2	118mm	1/2"-13	214-7305	M12	214-7705	1/2 BSW	214-7605
30	MT3	138mm	1/2"-13	214-7310	M12	214-7710	1/2 BSW	214-7610
30	MT4	212mm	1/2"-13	214-7315	M12	214-7715		
40	MT1	143mm	5/8"-11	214-7320	M16	214-7720		
40	MT2	143mm	5/8"-11	214-7325	M16	214-7725	5/8 BSW	214-7625
40	MT3	158mm	5/8"-11	214-7330	M16	214-7730	5/8 BSW	214-7630
40	MT4	188mm	5/8"-11	214-7335	M16	214-7735	5/8 BSW	214-7635
40	MT5	273mm	5/8"-11	214-7340	M16	214-7740		
50	MT1	172mm	1"-8	214-7345	M24	214-7745		
50	MT2	187mm	1"-8	214-7350	M24	214-7750		
50	MT3	192mm	1"-8	214-7355	M24	214-7755		
50	MT4	197mm	1"-8	214-7360	M24	214-7760		
50	MT5	232mm	1"-8	214-7365	M24	214-7765		



Stub Milling Machine Arbors

卧铣刀杆

- Adjust the washer to hold the end mills according to your various needs.



Shank	End Mill Dia.	Order No.
R8	22mm	210-2208
MT2	22mm	210-2212
MT3	22mm	210-2213
MT4	22mm	210-2214
MT5	22mm	210-2215
R8	27mm	210-2218
MT2	27mm	210-2222
MT3	27mm	210-2223
MT4	27mm	210-2224
MT5	27mm	210-2225

Shank	Arbor Dia.	Length of Shoulder to Nut	Order No.
R8	1"	2"	210-2108
MT2	1"	2"	210-2112
MT3	1"	2"	210-2113
MT4	1"	2"	210-2114
MT5	1"	2"	210-2115
R8	1-1/4"	2"	210-2118
MT2	1-1/4"	2"	210-2122
MT3	1-1/4"	2"	210-2123
MT4	1-1/4"	2"	210-2124
MT5	1-1/4"	2"	210-2125
30	1"	1-1/2"	210-2130
30	1-1/4"	1-3/4"	210-2133
40	1"	1-1/2"	210-2140
40	1-1/4"	1-3/4"	210-2144
50	1"	1-1/2"	210-2150
50	1-1/4"	1-3/4"	210-2155

R8 to Morse Taper Sleeves

R8/MT 变径套

- Internal thread 7/16"-20.



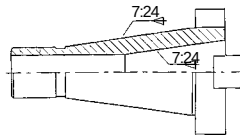
Outside Taper	Morse Taper	Order No.
R8	MT1	214-9001
R8	MT2	214-9002
R8	MT3	214-9003
R8	MT4	214-9004

30-40-50 to 30-40-50 Adaptors

7:24 变径套

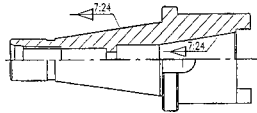
Inside Taper Draw Key Type

Outside Taper	Inside Taper	Overall Length	Order No.
40	30	110mm	214-7270
50	30	145mm	214-7275
50	40	145mm	214-7280



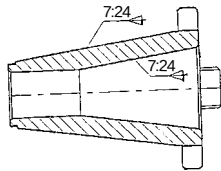
Outside Taper Draw Type

Outside Taper	Inside Taper	Overall Length	Order No.
40	30	152.4mm	214-7220
50	30	185.8mm	214-7225
50	40	207.8mm	214-7230



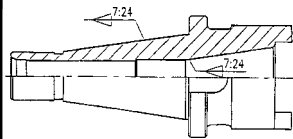
End Open Type

Outside Taper	Inside Taper	Overall Length	Order No.
40	30	86mm	214-7200
50	30	129.5mm	214-7205
50	40	129.5mm	214-7210



Inside Taper Draw Type

Outside Taper	Inside Taper	Overall Length	Order No.
40	30	152.4mm	214-7240
40	40	204.4mm	214-7245
50	30	185.8mm	214-7250
50	40	207.8mm	214-7255
50	50	260.8mm	214-7260



Morse Taper Sleeves

莫氏扁尾变径套



Hardened Tang Only

Morse Taper Outside	Morse Taper Inside	Order No.	Morse Taper Inside	Morse Taper Outside	Order No.
MT1	MT0	214-8001	MT2	MT5	214-8025
MT2	MT1	214-8012	MT2	MT6	214-8026
MT3	MT1	214-8013	MT3	MT4	214-8034
MT4	MT1	214-8014	MT3	MT5	214-8035
MT5	MT1	214-8015	MT3	MT6	214-8036
MT6	MT1	214-8016	MT4	MT5	214-8045
MT3	MT2	214-8023	MT4	MT6	214-8046
MT4	MT2	214-8024	MT5	MT6	214-8056

Hardened & Ground Throughout

Morse Taper Outside	Morse Taper Inside	Order No.	Morse Taper Inside	Morse Taper Outside	Order No.
MT1	MT0	214-8101	MT2	MT5	214-8125
MT2	MT1	214-8112	MT2	MT6	214-8126
MT3	MT1	214-8113	MT3	MT4	214-8134
MT4	MT1	214-8114	MT3	MT5	214-8135
MT5	MT1	214-8115	MT3	MT6	214-8136
MT6	MT1	214-8116	MT4	MT5	214-8145
MT3	MT2	214-8123	MT4	MT6	214-8146
MT4	MT2	214-8124	MT5	MT6	214-8156

Drift Keys

钻套楔铁

Drop Forged

Removes taper shank drills or reamers
From sleeves or sockets quickly



Size	Fits Mt. Sleeves and Sockets	Overall Length	ThickNess	Width at Hole	Order No.
1	MT1	4-1/2"	13/64"	11/16"	292-6220
2	MT2	4-1/8"	1/4"	13/16"	292-6225
3	MT3	6-3/4"	5/16"	1-1/16"	292-6230
4	MT4, MT5, MT6	7-1/8"	15/32"	1-1/8"	292-6235
4pcs/set includes: #1, #2, #3 & #4MT					392-6240

Half Automatic Mores Shank Pullers

DIN 318 半自动楔铁

The morse shank can easy to be pulled off by the half-automatic morse shank puller operation quickly, saving time and pressure.



MS. NO	Order No.
MS1, MS2, MS3	292-6211
MS4, MS5, MS6	292-6212

Morse Taper Extension Sockets

莫氏加长变径套



Hardened Tang Only

Shank Taper to Hole Taper	Order No.	Shank Taper to Hole Taper	Order No.
MT1 to MT1	214-8511	MT5 to MT2	214-8525
MT2 to MT1	214-8512	MT6 to MT2	214-8526
MT3 to MT1	214-8513	MT2 to MT3	214-8532
MT4 to MT1	214-8514	MT3 to MT3	214-8533
MT5 to MT1	214-8515	MT4 to MT3	214-8534
MT6 to MT1	214-8516	MT5 to MT3	214-8535
MT1 to MT2	214-8521	MT6 to MT3	214-8536
MT2 to MT2	214-8522	MT2 to MT4	214-8542
MT3 to MT2	214-8523	MT3 to MT4	214-8543
MT4 to MT2	214-8524	MT4 to MT4	214-8544
MT5 to MT5	214-8555	MT5 to MT4	214-8545
MT6 to MT5	214-8556	MT6 to MT4	214-8546
MT4 to MT6	214-8564	MT3 to MT5	214-8553
MT5 to MT6	214-8565	MT4 to MT5	214-8554
MT6 to MT6	214-8566		

Hardened & Ground Throughout

Shank Taper to Hole Taper	Order No.	Shank Taper to Hole Taper	Order No.
MT2 to MT1	214-8612	MT2 to MT4	214-8642
MT3 to MT1	214-8613	MT3 to MT4	214-8643
MT4 to MT1	214-8614	MT4 to MT4	214-8644
MT1 to MT2	214-8621	MT5 to MT4	214-8645
MT2 to MT2	214-8622	MT6 to MT4	214-8646
MT3 to MT2	214-8623	MT3 to MT5	214-8653
MT4 to MT2	214-8624	MT4 to MT5	214-8654
MT2 to MT3	214-8632	MT5 to MT5	214-8655
MT3 to MT3	214-8633	MT6 to MT5	214-8656
MT4 to MT3	214-8634	MT5 to MT6	214-8665
MT5 to MT3	214-8635	MT6 to MT6	214-8666

Solid Sockets 直柄变径套

MORSE TAPER I.D., STRAIGHT SHANK O.D, GROUND & ACCURATE.

Used to convert spindles to larger or smaller tapers and to extend the spindles of drill presses, radial drills, boring mills, turret lathes and similar machines.



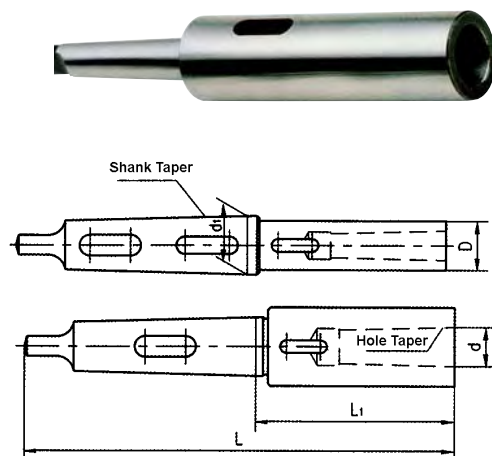
Solid Socket Number	Morse Taper I.D.	Shank Diameter	Overall Length	Order No.
1	1	1"	3-1/2	214-8701
2	1	1-1/4"	3-1/2	214-8702
3	1	1-1/2"	3-1/2	214-8703
4	2	1"	4	214-8704
5	2	1-1/4"	4	214-8705
6	2	1-1/2"	4	214-8706
7	2	1-3/4"	4	214-8707
8	2	2"	4	214-8708
9	3	1-1/4"	4-3/4	214-8709

Solid Socket Number	Morse Taper I.D.	Shank Diameter	Overall Length	Order No.
10	3	1-1/2"	4-3/4	214-8710
11	3	1-3/4"	4-3/4	214-8711
12	3	2"	4-3/4	214-8712
13	4	1-1/2"	6	214-8713
14	4	1-3/4"	6	214-8714
15	4	2"	6	214-8715
16	5	2-1/4"	7-3/8	214-8716
17	5	2-1/2"	7-3/8	214-8717
18	6	3-1/4"	10-1/8	214-8718
19	6	3-1/2"	10-1/8	214-8719

Morse Taper Sleeves DIN1806 莫式变径套

DIN1806

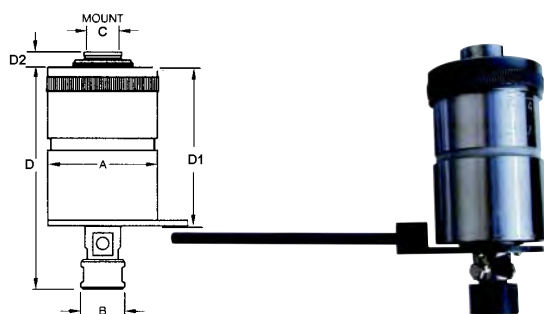
Shank Taper to Hole Taper	Overall Length (mm)	L1 (mm)	D (mm)	d (mm)	d1 (mm)	Accuracy (mm)	Order No.
MT3 to MT1	175	81	20	12.065	23.825	0.03	214-6105
MT3 to MT2	194	100	30	17.780	23.825	0.03	214-6110
MT3 to MT2	500	406	30	17.780	23.825	0.04	214-6115
MT3 to MT3	215	121	36	23.825	23.825	0.03	214-6120
MT3 to MT3	300	206	36	23.825	23.825	0.04	214-6125
MT4 to MT2	215	97.5	30	17.780	31.267	0.03	214-6130
MT4 to MT3	240	122.5	36	23.825	31.267	0.03	214-6135
MT4 to MT4	265	147.5	48	31.267	31.267	0.03	214-6140
MT5 to MT2	247	97.5	30	17.780	44.399	0.04	214-6145
MT5 to MT3	268	118.5	36	23.825	44.399	0.04	214-6150
MT5 to MT4	300	150.5	48	31.267	44.399	0.04	214-6155
MT5 to MT5	335	185.5	63	44.399	44.399	0.04	214-6160
MT5 to MT6	396	246.5	85	63.348	44.399	0.05	214-6165
MT6 to MT4	355	145	48	31.267	63.348	0.04	214-6170
MT6 to MT5	390	180	63	44.399	63.348	0.04	214-6175
MT6 to MT6	460	250	85	63.348	63.348	0.05	214-6180



Reversing Type Tapping Heads 可逆攻丝夹头

- Use with Jacobs or threaded mounts adapters on manual operated drilling and milling machine.
- The Adjustable torque prevents damage and tap breakage.
- High ratio of reverse turing speed improves productivity.
- Easy operation design.
- Rubber flexible collets.

Capacity of Metric Thread (In Steel)	Capacity of Inch Thread (In Steel)	Mounts	Dimensions(mm)							Order No.
			D	D1	D2	A	B	C		
M1.4-M7	#0-1/4"	JT6	124	88	11	52	23	22.5	210-0210	
M1.4-M7	#0-1/4"	JT33	124	88	11	52	23	22.5	210-0211	
M1.4-M7	#0-1/4"	5/16"-24	124	88	11	52	23	22.5	210-0212	
M1.4-M7	#0-1/4"	3/8"-24	124	88	11	52	23	22.5	210-0213	
M1.4-M7	#0-1/4"	1/2"-20	124	88	11	52	23	22.5	210-0214	
M1.4-M7	#0-1/4"	5/8"-16	124	88	11	52	23	22.5	210-0215	
M3-M12	#6-1/2"	JT6	155	110	9	74	28	28	210-0220	
M3-M12	#6-1/2"	JT33	155	110	9	74	28	28	210-0221	
M3-M12	#6-1/2"	1/2"-20	155	110	9	74	28	28	210-0222	
M3-M12	#6-1/2"	5/8"-16	155	110	9	74	28	28	210-0223	
M3-M12	#6-1/2"	3/4"-16	155	110	9	74	28	28	210-0224	
M5-M20	#10-3/4"	JT3	195	132	10	91	38	35.5	210-0230	
M5-M20	#10-3/4"	1/2"-20	195	132	10	91	38	35.5	210-0231	
M5-M20	#10-3/4"	5/8"-16	195	132	10	91	38	35.5	210-0232	
M5-M20	#10-3/4"	3/4"-16	195	132	10	91	38	35.5	210-0233	



Rubberflex Collets 橡胶攻丝夹头



	Order No.
4.2mm (2.0-4.2mm/.079-.165")	210-0280
6.5mm (4.2-6.5mm/.165-.256")	210-0282
7.0mm (3.5-7.0mm/.137-.275")	210-0284
9.0mm (5.0-9.0mm/.196-.354")	210-0286
10.0mm (7.0-10.0mm/.275-.393")	210-0288
14.0mm (9.0-14.0mm/.354-.551")	210-0290

Expanding Arbors 可涨接杆

Chuck these expanding arbors to hold special parts in lathes, milling machine, grinders, chucks, collets, fixtures etc.

3 Pc in Set

Set includes one each of:
1-1/2, 1-3/4 & 2" w/1pc wrench

Supplied with wooden stand

Order No. 262-0103

8 Pc in Set

Set includes one each of:
1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4"

Supplied with wooden stand

Order No. 262-0108



Size	Length of Arbor	Accuracy	Order No.
1/4"	3"	.005"	262-4016
3/8	3	.005	262-4024
1/2	3	.005	262-4032
5/8	3	.005	262-4040
3/4	4	.005	262-4048
7/8	4	.005	262-4056
1	4	.005	262-4100
1-1/4	4	.005	262-4116
1-1/2	4	.005	262-4120
1-3/4	4	.005	262-4126
2	4	.005	262-4127
2-1/2	4	.005	262-4128
3	4	.005	262-4129

Precision Expanding Mandrels 膨胀芯轴

Hardened & precision ground for maximum concentricity and holding power

- Center holes are ground and lapped.
- Automatic expansion feature can be used on any bore within the range of the mandrel standard or non-standard.
- Sizes up to 1" are furnished with 1 sleeve larger sizes have 2 sleeve, 1 large and 1 small.



Individuals

Range	Length of Arbor	Length of Sleeve	Order No.
1/2" ~ 9/16"	5"	2-1/2"	262-3050
9/16" ~ 21/32"	6"	2-3/4"	262-3052
21/32" ~ 3/4"	7"	2-3/4"	262-3054
3/4" ~ 7/8"	7"	3-1/4"	262-3056
7/8" ~ 1"	7"	3-1/2"	262-3058
1" ~ 1-1/4"	9"	4"	262-3060
1-1/4" ~ 1-1/2"	9"	4"	262-3062
1-1/2" ~ 2"	11-1/2"	5"	262-3064
2" ~ 2-3/4"	14"	6"	262-3066
2-3/4" ~ 3-3/4"	17"	7"	262-3068

Sets

No. of Mandrels	Range	Order No.
5	1/2" ~ 1"	262-3010
3	1" ~ 2"	262-3020
8	1/2" ~ 2"	262-3030

Lathe Mandrels 实芯膨胀芯轴

Made of hardened tool steel which is accurately ground to size. Slightly tapered with marked in the large end Standard taper .0005" per inch. Sizes under 1" are .0005" undersize on small end. Sizes 1-1/16" to 3" are .001" under size on small end.



Inch

Diameter	Length	Order No.
1/8"	2-1/2"	262-2008
5/32	3	262-2010
3/16	3	262-2012
7/32	3-3/4	262-2014
1/4	3-3/4	262-2016
9/32	4	262-2018
5/16	4	262-2020
11/32	4-1/4	262-2022
3/8	4-1/4	262-2024
13/32	4-1/2	262-2026
7/16	4-1/2	262-2028
15/32	5	262-2030
1/2	5	262-2032
17/32	5-1/4	262-2034
9/16	5-1/4	262-2036
19/32	5-1/2	262-2038
5/8	5-1/2	262-2040
21/32	5-3/4	262-2042
11/16	5-3/4	262-2044
23/32	6	262-2046
3/4	6	262-2048
25/32	6-1/4	262-2050
13/16	6-1/4	262-2052
27/32	6-1/2	262-2054
7/8	6-1/2	262-2056
29/32	6-3/4	262-2058
15/16	6-3/4	262-2060
31/32	7	262-2062
1	7	262-2100
1-1/32	7-1/4	262-2102
1-1/16	7-1/4	262-2104
1-3/32	7-1/2	262-2106
1-1/8	7-1/2	262-2108
1-5/32	7-3/4	262-2110
1-3/16	7-3/4	262-2112
1-7/32	8	262-2114
1-1/4	8	262-2116
1-9/32	8-1/4	262-2118
1-5/16	8-1/4	262-2120
1-11/32	8-3/4	262-2122
1-3/8	8-1/2	262-2124
1-7/16	8-3/4	262-2128
1-15/32	9	262-2130
1-1/2	9	262-2132
1-9/16	9-1/4	262-2136
1-5/8	9-1/2	262-2140
1-11/16	9-3/4	262-2144
1-3/4	10	262-2148
1-13/16	10-1/4	262-2152
1-7/8	10-1/2	262-2156
1-15/16	10-3/4	262-2160
2	11	262-2200
2-1/8	11-1/2	262-2208
2-1/4	12	262-2216
2-3/8	12	262-2224
2-1/2	12-1/2	262-2232
2-5/8	12-1/2	262-2240
2-3/4	13	262-2248
2-7/8	13	262-2256
3	13	262-2300

Metric

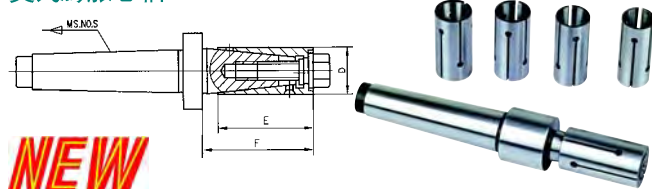
- Standard Taper; 1:2000
- Small end 3mm to 25mm, tolerance is -0.0125mm
- Small end 26mm to 72mm, tolerance is -0.025mm

NEW

Diameter	OAL	Order No.
3mm	63.5mm	262-2401
4	76	262-2402
5	95	262-2403
6	95	262-2405
7	102	262-2407
8	102	262-2409
9	108	262-2411
10	114	262-2413
11	114	262-2415
12	127	262-2417
13	127	262-2419
14	133	262-2421
15	140	262-2423
16	140	262-2425
17	146	262-2427
18	152	262-2429
19	152	262-2431
20	159	262-2433
21	165	262-2435
22	165	262-2437
23	171.5	262-2439
25	178	262-2443
26	184	262-2445
27	184	262-2447
28	190.5	262-2449
30	197	262-2453
32	203	262-2455
34	210	262-2457
35	216	262-2461
36	222	262-2463
38	229	262-2465
40	235	262-2467
42	241	262-2469
44	254	262-2471
45	254	262-2473
46	260	262-2475
48	267	262-2477
50	273	262-2479
51	279	262-2481
55	292	262-2483
58	305	262-2485
60	305	262-2487
62	317.5	262-2489
65	317.5	262-2491
70	330	262-2493
72	330	262-2495

Morse Taper Expanding Mandrels

莫氏膨胀芯轴

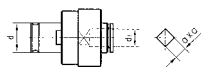
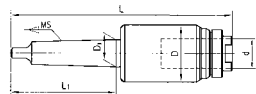


NEW

Model#	Tapper	Diameter D(mm)	Sleeve Length E(mm)	Overall Gripping F(mm)	Extensibility	Order No.
No. 00	MT2	14.7-18.7	35	41.5	5 1	262-1002
No. 00	MT3	14.7-18.7	35	41.5	5 1	262-1003
No. 00	MT4	14.7-18.7	35	41.5	5 1	262-1004
No. 01	MT2	19.7-23.7	40	46.5	5 1	262-1012
No. 01	MT3	19.7-23.7	40	46.5	5 1	262-1013
No. 01	MT4	19.7-23.7	40	46.5	5 1	262-1014
No. 02	MT2	24.7-28.7	46	52.5	5 1	262-1022
No. 02	MT3	24.7-28.7	46	52.5	5 1	262-1023
No. 02	MT4	24.7-28.7	46	52.5	5 1	262-1024
No. 02	MT5	24.7-28.7	46	52.5	5 1	262-1025
No. 03	MT3	29.7-33.7	50	56.5	5 1	262-1033
No. 03	MT4	29.7-33.7	50	56.5	5 1	262-1034
No. 03	MT5	29.7-33.7	50	56.5	5 1	262-1035
No. 04	MT3	34.7-38.7	60	66.5	5 1	262-1043
No. 04	MT4	34.7-38.7	60	66.5	5 1	262-1044
No. 04	MT5	34.7-38.7	60	66.5	5 1	262-1045
No. 05	MT3	39.7-43.7	60	66.5	5 1	262-1053
No. 05	MT4	39.7-43.7	60	66.5	5 1	262-1054
No. 05	MT5	39.7-43.7	60	66.5	5 1	262-1055
No. 06	MT3	44.7-52.7	80	92	5 2	262-1063
No. 06	MT4	44.7-52.7	80	92	5 2	262-1064
No. 06	MT5	44.7-52.7	80	92	5 2	262-1065
No. 07	MT3	54.7-62.7	90	102	5 2	262-1073
No. 07	MT4	54.7-62.7	90	102	5 2	262-1074
No. 07	MT5	54.7-62.7	90	102	5 2	262-1075
No. 08	MT4	64.7-80.7	100	112	9 2	262-1084
No. 08	MT5	64.7-80.7	100	112	9 2	262-1085
No. 09	MT4	81.7-99.7	122	134	10 2	262-1094
No. 09	MT5	81.7-99.7	122	134	10 2	262-1095
No. 10	MT5	100.7-118.7	140	152	10 2	262-1005
No. 11	MT5	119.7-139.7	180	192	11 2	262-1115

J41 Tapping Chucks

J41 MT 攻丝夹头



NEW

Shank Taper	Tapping Range	Body Dia. D (mm)	Body L L (mm)	d1	L1	Order No.
MT2	M3-M12	46	171.5	19	75	230-2902
MT3	M3-M12	46	191	19	94	230-2903
MT4	M3-M12	46	216	19	117.5	230-2904
R8	M3-M12	46	193.6	19	101.6	230-2908
MT2	M3-M12	46	171.5	19	75	230-2912
MT3	M3-M16	46	191	19	94	230-2913
MT4	M3-M16	46	216	19	117.5	230-2914
MT3	M3-M16	66	227	30	94	230-2923
MT4	M3-M16	66	252	30	117.5	230-2924
MT5	M12-M24	66	284	30	149.5	230-2925

Revolving Tailstock Turrets

六攻位镗头

These turrets, available in 2 sizes, have 6 holes each for holding 6 tools. A trigger type handle is conveniently located which enables instant changing.



Shank	Diameter of Turret	Size of Hole	Order No.
MT1	2-1/2"	5/8"	220-0900
MT2	2-1/2"	5/8"	220-0901
MT3	2-1/2"	5/8"	220-0902
MT4	2-1/2"	5/8"	220-0903
1/2" Dia. Straight Shank	2-1/2"	5/8"	220-0904
5/8" Dia. Straight Shank	2-1/2"	5/8"	220-0905
3/4" Dia. Straight Shank	2-1/2"	5/8"	220-0906
7/8" Dia. Straight Shank	2-1/2"	5/8"	220-0907
1" Dia. Straight Shank	2-1/2"	5/8"	220-0908
MT2	5"	1"	220-0911
MT3	5"	1"	220-0912
MT4	5"	1"	220-0913
7/8" Dia. Straight Shank	5"	1"	220-0915
1" Dia. Straight Shank	5"	1"	220-0916
1-1/4" Dia. Straight Shank	5"	1"	220-0917
1-1/2" Dia. Straight Shank	5"	1"	220-0918

Accessories for Tailstock Turrets

NEW



No. of Pieces	Specification	Individual Order No.	Set Order No.
6Pcs/set	for 2-1/2" Dia. (5/8"Hole) Turret		
	• 2pcs Drilling chuck(Dia.1-13mm)	220-09091	220-0909
	• Tapping Collet (M3-M12)	220-09092	
	• Die Holder (M3-M12),	220-09093	
	• Reamming Chuck(ER16 Dia.1-10mm)	220-09094	
	• live center (MT1)	220-09095	
6Pcs/set	for 5" Dia. (1"Hole) Turret		
	• 2pcs Drilling chuck(Dia.1-16mm)	220-09191	220-0919
	• Tapping Collet (M3-M16)	220-09192	
	• Die Holder (M3-M16),	220-09193	
	• Reamming Chuck(ER20 Dia.1-13mm)	220-09194	
	• live center (MT2)	220-09195	

Precision Boring Heads-F1

精密镗头

- High quality, excellent performance, practical design at affordable price.
- Maximum rigidity is assured even when boring bar holder is used in an offset position.
- Hardened and ground adjusting screw along with outside base design guarantees long life and trouble free use.

Adjusting Screws

Range	Order No.
for 2"	220-1201
for 3"	220-1302
For 4"	220-1401



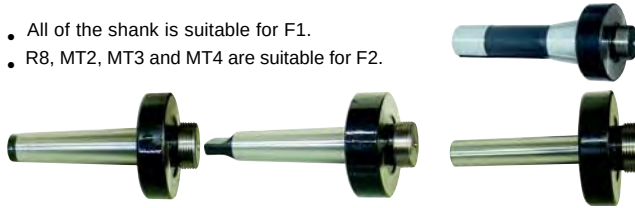
Boring Head Dia.	Boring Bar Hole Size	Max. Offset	Grad.	1-1/2"-18 Order No.	7/8"-20 Order No.
2	1/2	5/8	.0005"	220-1200	220-1210
3	3/4	1	.0005"	220-1300	220-1310
4	1	1-5/8	.0005"	220-1400	220-1410

Boring Head Dia.	Boring Bar Hole Size	Max. Offset	Grad.	1-1/2"-18 Order No.	7/8"-20 Order No.
50	12	16	.01mm	220-1050	220-1060
75	18	25	.01mm	220-1075	220-1085
100	25	41	.01mm	220-1100	220-1110

Precision Boring Head Shanks

镗头接杆

- All of the shank is suitable for F1.
- R8, MT2, MT3 and MT4 are suitable for F2.



Morse Taper Shank	Thread	Draw Bar Thread	Draw Bar End Order No.	Tang End Order No.
1	7/8"-20	1/4"-20	220-1511	220-1512
1	1-1/2"-18	1/4"-20	220-1513	220-1514
2	3/4"-20	3/8"-16	220-1519	220-1520
2	7/8"-20	3/8"-16	220-1521	220-1522
2	1-1/2"-18	3/8"-16	220-1523	220-1524
3	7/8"-20	3/8"-16	220-1531	220-1532
3	1-1/2"-18	3/8"-16	220-1533	220-1534
4	7/8"-20	5/8"-11	220-1541	220-1542
4	1-1/2"-18	5/8"-11	220-1543	220-1544
5	7/8"-20	1"-8	220-1551	220-1552
5	1-1/2"-18	1"-8	220-1553	220-1554

Shank Types	7/8"-20 Thread Order No.	1-1/2"-18 Thread Order No.
R8	220-1560	220-1561
1/2" Dia. Straight Shank	220-1563	220-1564
5/8" Dia. Straight Shank	220-1566	220-1567
3/4" Dia. Straight Shank	220-1569	220-1570
7/8" Dia. Straight Shank	220-1572	220-1573
1" Dia. Straight Shank	220-1575	220-1576
1-1/4" Dia. Straight Shank	220-1578	220-1579
1-1/2" Dia. Straight Shank	220-1581	220-1582
2" Dia. Straight Shank	220-1584	220-1585
30 Taper	220-1590	220-1591
40 Taper	220-1593	220-1594
50 Taper	220-1596	220-1597

Precision Boring Heads-F2

精密镗头



Boring Head Diameter	Boring Bar Hole Size	Max. Offset	Grad.	Type	Thread	Order No.
2-1/8	1/2	5/16	.001"	F2	1-5/8"-16	220-1208
54	12	8	.01mm	F2	1-5/8"-16	220-1054

Boring Combo Sets

成套镗头



2" Boring Combo Set

- 2" Boring head Order No. 220-1210.
- R8 shank (7/8"-20 TPI) Order No. 220-1560.
- 1/2" Boring bar set Order No. 375-1202(C2) or 375-1206(C6).

Order No. 220-1600

3" Boring Combo Set

- 3" Boring head Order No. 220-1300.
- R8 shank (1-1/2"-18 TPI) Order No. 220-1561.
- 3/4" Boring bar set Order No. 375-1602(C2) or 375-1606(C6).

Order No. 220-1800

Economy Spindle Taper Wipers

主轴清洁棒

- All purpose plastic handle
- Maintains spindle accuracy and improves contact
- Taper type: NT, MAS, BT, CAT, DIN69 871-A DAT

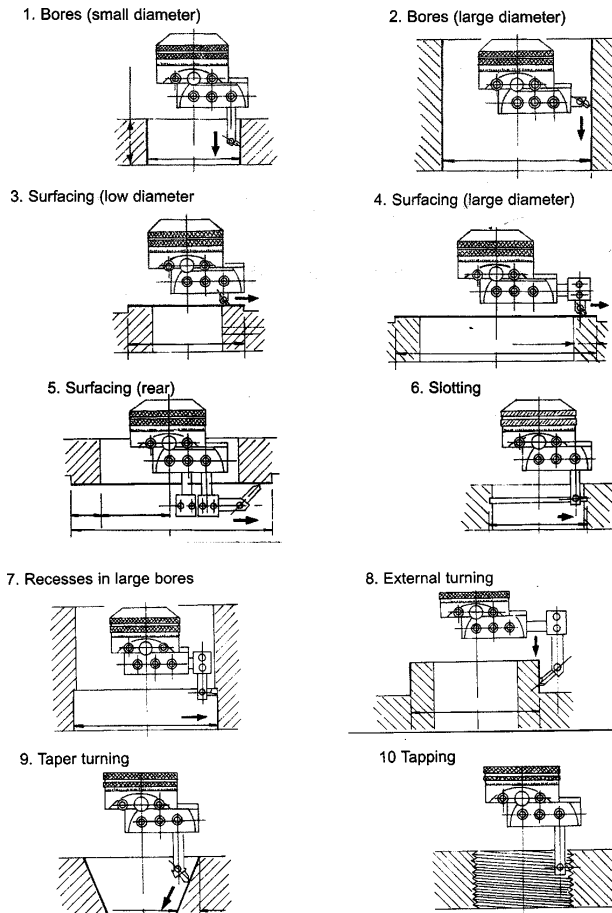


Desc.	Order No.
30# Taper Cotton	292-6330
40# Taper Cotton	292-6340
50# Taper Cotton	292-6350

NEW

Universal Facing And Boring Head Sets

万能精密镗头



The facing and boring head is a major accessory of Boring Machine, Milling Machine, CNC Machine etc. It also can carry out such operations as facing, outside & inside boring, boring step and inner and outside groove cutting featuring manual fine feed, rapid adjustment, various velocities for radial automatic feed and overload protection.



Type of taper shanks available for the boring heads are as following:
R8, MT3-MT6, MW3-MW6, TZIO, ISO30, 40, 45, 50, etc.

Descriptions	Order No. 220-1701	Order No. 220-1801	Order No. 220-1901
Max. facing and boring dia (mm)	150	350	450
Dia. of tool post holes in slide (mm)	18	22	22
Fine feed per graduation (mm)	0.005	0.005	0.005
Weight of head without shank (kgs)	2.9	6.1	7.8
Max. stroke of slide (mm)	+/-15	+/-25	+/- 50
Self-acting feed per revolution (mm)	0.02, 0.04, 0.06, 0.08, 0.10, 0.12	0.03, 0.06, 0.09, 0.12, 0.15, 0.18	0.03, 0.06, 0.09, 0.12, 0.15, 0.18
Max. dia. of slide (mm)	90	120	168
Height of head without shank	87.5	118	118
The length of sliding block (mm)	75	105	160
The width of sliding block (mm)	70	90	90

Solid Lathe Centers

死顶尖

- Hardened and ground to the closest tolerance.
- There are three type to meet your need carbon steel, high speed steel tipped, carbide tipped



Carbon Steel and High Speed Steel

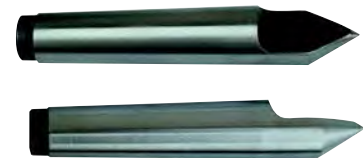


Carbide Tipped

Morse Taper	Overall Length	Carbon Steel Order No.	H.S.S. Order No.	Carbide Tipped Order No.
MT1	3-3/16"	251-3011	251-3071	251-3051
MT2	3-15/16"	251-3012	251-3072	251-3052
MT3	4-15/16"	251-3013	251-3073	251-3053
MT4	6-5/16"	251-3014	251-3074	251-3054
MT5	7-7/8"	251-3015	251-3075	251-3055
MT6	11"	251-3016	251-3076	251-3056
MT7	14"	251-3017	251-3077	251-3057

Half-Notched Lathe Centers

半缺顶尖



Morse Taper	Order No.
MT1	251-3801
MT2	251-3802
MT3	251-3803
MT4	251-3804
MT5	251-3805
MT6	251-3806
MT7	251-3807

Bull Nose Live Centers

伞型活顶尖



Morse Taper	Small End Dia.	Large End Dia.	Order No.
MT2	1/2"	2-7/16"	251-3702
MT3	3/4"	3"	251-3703
MT3	1-1/4"	4"	251-3704
MT3	1-1/2"	5"	251-3705
MT4	1-3/8"	5"	251-3706
MT4	2"	6"	251-3707
MT5	1-3/8"	6"	251-3708
MT5	2-1/8"	8"	251-3709

Precision Live Centers 精密活顶尖

Light Duty



Morse Taper	Accuracy	Order No.
MT1	.0004"	251-3031
MT2	.0004"	251-3032
MT3	.0004"	251-3033
MT4	.0004"	251-3034
MT5	.0004"	251-3035
MT6	.0004"	251-3036
MT7	.0004"	251-3037

Heavy Duty



Morse Taper	Accuracy	Order No.
MT1	.0003"	251-3001
MT2	.0003"	251-3002
MT3	.0003"	251-3003
MT4	.0003"	251-3004
MT5	.0004"	251-3005
MT6	.0004"	251-3006

Medium Duty



Morse Taper	Accuracy	Order No.
MT1	.0008"	251-3021
MT2	.0008"	251-3022
MT3	.0008"	251-3023
MT4	.0008"	251-3024
MT5	.001	251-3025
MT6		251-3026

Carbide Tipped Live Centers

Medium Duty

硬质合金中型活顶尖



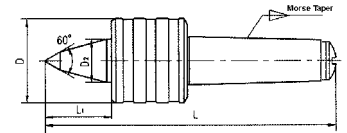
Morse Taper	Accuracy	Order No.
MT1	0.010mm	251-3091
MT2	0.010mm	251-3092
MT3	0.010mm	251-3093
MT4	0.010mm	251-3094
MT5	0.015mm	251-3095
MT6	0.015mm	251-3096

Long Nose Live Center Sets

Head-Driving Type for N/C & Copying Lathes

加长头活顶尖

- Usable at high speeds-3,000 RPM on MT3, MT4. 2,000 RPM on MT5 and 1500RPM on MT6.
- Run out with in .0002".
- Unique head-driving mechanism ensures that no dust, chips, or foreign oils can enter and destroy bearings.

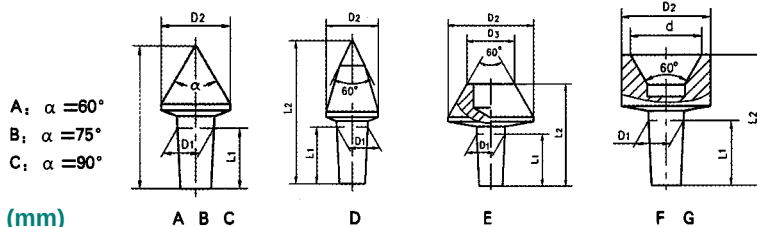


Morse Taper	L1	D	D2	L	Order No.
MT3	1.42"	1.77"	.87"	6.50"	251-3043
MT4	1.42"	1.77"	.87"	7.40"	251-3044
MT5	2.44"	3.07"	1.57"	10.55"	251-3045
MT6	2.95"	4.02"	1.97"	13.62"	251-3046

Medium Duty Multi-Purpose Live Center Sets 中型多用活顶尖

- The body of these sets is constructed similar to medium live centers.
- The sets consists of 3 large male centers, 1 female center, 4 smaller, different sized male center.

Morse Taper	Head A Order No.	Head B Order No.	Head C Order No.	Head D Order No.	Head E Order No.	Head F Order No.	Head G Order No.	SETS Order No.
MT2	251-3201	251-3202	251-3203	251-3204	251-3205	251-3206	251-3207	251-3082
MT3	251-3301	251-3302	251-3303	251-3304	251-3305	251-3306	251-3307	251-3083
MT4	251-3401	251-3402	251-3403	251-3404	251-3405	251-3406	251-3407	251-3084
MT5	251-3501	251-3502	251-3503	251-3504	251-3505	251-3506	251-3507	251-3085
MT6	251-3601	251-3602	251-3603	251-3604	251-3605	251-3606	251-3607	251-3086



Dimensions (mm)

Morse Taper	D1	L1	Head A D2	Head A L2	Head B D2	Head B L2	Head C D2	Head C L2	Head D D2	Head D L2	Head E D2	Head E D3	Head E L2	Head F D2	Head F L2	Head F d	Head G D2	Head G L2	Head G d
2	10	20	16	39	16	35.5	16	33	16	46	25	10	40	16	36	10	20	39	16
3	12	24	20	48	20	43.5	20	40.5	18	56	35	15	50	22	42	18	35	48	30
4	15	30	28	61.5	28	55.5	28	51.5	26	73	55	30	61.5	40	55	35	55	60	48
5	20	40	36	80	36	72.45	36	66.87	36	101	70	41	78	60	81	50	70	85	61
6	30	55	55	117	55	113	55	108	50	138	90	50	107.5	75	110	60	90	116	75

Key Type Drill Chucks

钻卡头-扳手锁紧

Light Duty

- The light duty is suitable for general electric drill, pneumatic, impact electric drill and light duty bench drill press.



Heavy Duty

- The heavy duty is suitable for using on heavy duty drill machine, lathe, and milling machine.



Taper Mounted

Capacity	Taper Mount	Order No.
1/64-1/4"	JT1	290-0605
1/16-3/8"	JT2	290-0615
1/16-1/2"	JT33	290-0625

Taper Mounted

Capacity	Taper Mount	Order No.
0-1/4"	JT1	290-0001
0-3/8"	JT2	290-0002
0-1/2"	JT2	290-0007
0-1/2"	JT33	290-0003
0-1/2"	JT6	290-0004
1/8-5/8"	JT3	290-0008
1/8-5/8"	JT33	290-0011
1/8-5/8"	JT6	290-0012
1/32- 5/8"	JT3	290-0005
3/16-3/4"	JT3	290-0009
3/64-3/4"	JT3	290-0006
1/32-3/4"	JT4	290-0014
3/16"-1-1/32"	JT4	290-0010

Taper Mounted

Capacity	Taper Mount	Order No.
1/64-1/4"(0.6-6mm)	B10	290-0405
1/16-3/8"(1.5-10mm)	B12	290-0409
1/16-1/2"(1.5-13mm)	B16	290-0412
1/8-5/8"(3.0-16mm)	B16	290-0416
1/8-5/8"(3.0-16mm)	B18	290-0420

Thread Mounted

Capacity	Thread Mount	Order No.
1/64-1/4"(0.6-6mm)	3/8-24UNF	290-0505
1/16-3/8"(1.5-10mm)	3/8-24UNF	290-0509
1/16-3/8"(1.5-10mm)	1/2-20UNF	290-0513
1/16-1/2"(1.5-13mm)	3/8-24UNF	290-0525
1/16-1/2"(1.5-13mm)	1/2-20UNF	290-0529
1/8-5/8"(3.0-16mm)	3/8-24UNF	290-0545
1/8-5/8"(3.0-16mm)	1/2-20UNF	290-0549
1/8-5/8"(3.0-16mm)	5/8-16UNF	290-0553
1/16-3/8"(1.5-10mm)	M10x1.0	290-0517
1/16-3/8"(1.5-10mm)	M12x1.25	290-0521
1/16-1/2"(1.5-13mm)	M12x1.0	290-0533
1/16-1/2"(1.5-13mm)	M12x1.25	290-0537
1/16-1/2"(1.5-13mm)	M14x1.0	290-0541
1/8-5/8"(3.0-16mm)	M12x1.25	290-0557

Thread Mounted

Capacity	Thread Mount	Order No.
0-1/4"	3/8"-24UNF	290-0021
1/16"-3/8"	3/8"-24UNF	290-0022
0-3/8"	3/8"-24 UNF	290-0023
5/16-1/2"	3/8"-24 UNF	290-0024
5/16-1/2"	1/2"-20 UNF	290-0025
1/8-5/8"	1/2"-20 UNF	290-0026
1/8-5/8"	5/8"-16 UNF	290-0027
6mm	M10x1	290-0030
6mm	M12x1.25	290-0031
10mm	M10x1	290-0032
10mm	M12x1.25	290-0033
1.5-13mm	M12x1.25	290-0034
3-16mm	M12x1.25	290-0035
3-16mm	M16x1.5	290-0036

Keyless Drill Chucks

Precision

精密级自紧式钻夹头

NEW



Capacity	Taper Mount	Order No.
0-3/16"	JT0	290-0100
031/4	JT1	290-0101
0-5/16	JT2	290-0102
0-3/8	JT2	290-0103
0-3/8	JT33	290-0104
1/32-1/2	JT33	290-0105
1/32-1/2	JT2	290-0106
1/32-1/2	JT6	290-0107
1/8-5/8	JT6	290-0108
0.5-6mm	B10	290-0120
0.5-8	B12	290-0121
1-10	B12	290-0122
1-13	B16	290-0123
3-16	B18	290-0124

Capacity	Thread Mount	Order No.
0-1/4"	3/8"-24	290-0210
0-5/16"	3/8"-24	290-0211
1/32-3/8"	3/8"-24	290-0212
1/32-3/8"	1/2"-20	290-0213
1/32-1/2"	3/8"-24	290-0214
1/32-1/2"	1/2"-20	290-0215
1/8-5/8"	5/8"-16	290-0216
1/8-5/8"	1/2"-20	290-0217
0.5-6mm	M10x1	290-0220
0.5-8mm	M10x1	290-0221
1-10mm	M10x1	290-0222
1-10mm	M12x1.25	290-0223
1-13mm	M10x1	290-0224
1-13mm	M12x1.25	290-0225
3-16mm	M12x1.25	290-0226
3-16mm	M16x1.5	290-0227

Keyless Drill Chucks

自紧式螺纹孔钻夹头

Light Duty Keyless Drill chuck



Thread Mounted

Capacity	Thread Mount	Dimension DxLxI	Accuracy	Order No.	Accuracy	Order No.	Accuracy	Order No.
1-10mm	M10x1	42x86x78mm	0.14mm	290-7021	0.25mm	290-7121	0.35mm	290-7221
1-13mm	M12x1.25	44x90x81mm	0.14mm	290-7025	0.25mm	290-7125	0.35mm	290-7225
3-16mm	M16x1.5mm	48x102x92mm	0.20mm	290-7029	0.25mm	290-7129	0.35mm	290-7229
1/32"-3/8"	3/8"-24UNF	42x86x78mm	0.14mm	290-7049	0.25mm	290-7149	0.35mm	290-7249
1/32"-3/8"	1/2"-20UNF	42x86x78mm	0.14mm	290-7051	0.25mm	290-7151	0.35mm	290-7251
1/32"-1/2"	1/2"-20UNF	44x90x81mm	0.14mm	290-7053	0.25mm	290-7153	0.35mm	290-7253
1/8"-5/8"	5/8"-16UNF	48x102x92mm	0.20mm	290-7059	0.25mm	290-7159	0.35mm	290-7259

Keyless Drill Chucks 自紧式螺纹孔钻夹头

Light Duty Keyless Drill chuck

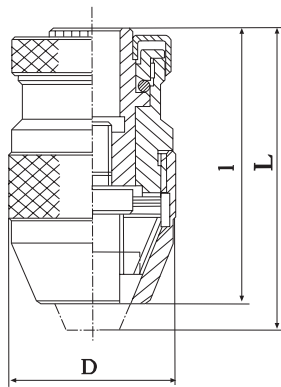


Taper Mounted

Capacity	Taper Mount	Dimension DxLxI	Accuracy	Order No.	Accuracy	Order No.	Accuracy	Order No.
1-10mm	B12	42x86x78mm	0.14mm	290-6021	0.25mm	290-6121	0.35mm	290-6221
1-13mm	B16	44x97x88mm	0.14mm	290-6025	0.25mm	290-6125	0.35mm	290-6225
3-16mm	B16	48x102x92mm	0.20mm	290-6029	0.25mm	290-6129	0.35mm	290-6229
3-16mm	B18	48x108x98mm	0.20mm	290-6031	0.25mm	290-6131	0.35mm	290-6231
1/32"-3/8"	JT2	42x86x78mm	0.14mm	290-6049	0.25mm	290-6149	0.35mm	290-6249
1/32"-1/2"	JT6	44x97x88mm	0.14mm	290-6051	0.25mm	290-6151	0.35mm	290-6251
1/32"-1/2"	JT33	44x97x88mm	0.14mm	290-6053	0.25mm	290-6153	0.35mm	290-6253
1/8"-5/8"	JT6	48x102x92mm	0.20mm	290-6055	0.25mm	290-6155	0.35mm	290-6255
1/8"-5/8"	JT3	48x108x98mm	0.20mm	290-6057	0.25mm	290-6157	0.35mm	290-6257

Heavy duty Keyless Drill chuck

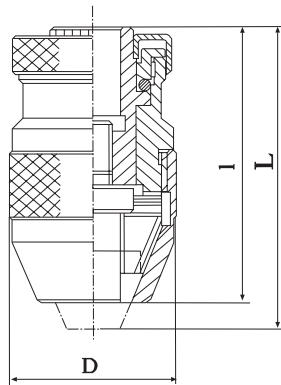
Thread Mounted



Capacity	Thread Mount	Dimension DxLxI	Accuracy	Order No.	Accuracy	Order No.	Accuracy	Order No.
0.5-8mm	M10x1	42x91x84mm	0.06mm	290-5401	0.12mm	290-5501	0.20mm	290-5601
1-10mm	M10x1	42x91x84mm	0.06mm	290-5403	0.12mm	290-5503	0.20mm	290-5603
1-13mm	M12x1.25	48x106x97mm	0.06mm	290-5405	0.12mm	290-5505	0.20mm	290-5605
1-16mm	M16x1.5	53x109x101mm	0.07mm	290-5407	0.14mm	290-5507	0.20mm	290-5607
3-16mm	M16x1.5	53x109x101mm	0.07mm	290-5409	0.14mm	290-5509	0.20mm	290-5609
1/64"-5/16"	3/8"-24UNF	42x91x84mm	0.06mm	290-5415	0.12mm	290-5515	0.20mm	290-5615
1/32"-3/8"	3/8"-24UNF	42x91x84mm	0.06mm	290-5417	0.12mm	290-5517	0.20mm	290-5617
1/32"-3/8"	1/2"-20UNF	42x91x84mm	0.06mm	290-5419	0.12mm	290-5519	0.20mm	290-5619
1/32"-1/2"	1/2"-20UNF	48x106x97mm	0.06mm	290-5421	0.12mm	290-5521	0.20mm	290-5621
1/32"-5/8"	1/2"-20UNF	53x109x101mm	0.07mm	290-5423	0.14mm	290-5523	0.20mm	290-5623
1/8"-5/8"	1/2"-20UNF	53x109x101mm	0.07mm	290-5425	0.14mm	290-5525	0.20mm	290-5625

Heavy Duty Keyless Drill Chuck

Taper mounted



Capacity	Taper Mount	Dimension DxLxI	Accuracy	Order No.	Accuracy	Order No.	Accuracy	Order No.
0.5-8mm	B12	42x91x84mm	0.06mm	290-5001	0.12mm	290-5101	0.20mm	290-5201
0.5-8mm	B16	42x91x84mm	0.06mm	290-5003	0.12mm	290-5103	0.20mm	290-5203
1-10mm	B12	42x91x84mm	0.06mm	290-5005	0.12mm	290-5105	0.20mm	290-5205
1-10mm	B16	42x91x84mm	0.06mm	290-5007	0.12mm	290-5107	0.20mm	290-5207
1-13mm	B12	48x106x97mm	0.06mm	290-5009	0.12mm	290-5109	0.20mm	290-5209
1-13mm	B16	48x106x97mm	0.06mm	290-5011	0.12mm	290-5111	0.20mm	290-5211
1-16mm	B16	53x109x101mm	0.07mm	290-5013	0.14mm	290-5113	0.20mm	290-5213
1-16mm	B18	53x109x101mm	0.07mm	290-5015	0.14mm	290-5115	0.20mm	290-5215
3-16mm	B16	53x109x101mm	0.07mm	290-5017	0.14mm	290-5117	0.20mm	290-5217
3-16mm	B18	53x109x101mm	0.07mm	290-5019	0.14mm	290-5119	0.20mm	290-5219
5-20mm	B22	62x129x119mm	0.09mm	290-5021	0.18mm	290-5121	0.20mm	290-5221
0.5-6mm	B10	35x67x61mm	0.06mm	290-5023	0.12mm	290-5123	0.20mm	290-5223
0.5-6mm	B12	35x67x61mm	0.06mm	290-5025	0.12mm	290-5125	0.20mm	290-5225
1/64"-5/16"	JT2	42x91x84mm	0.06mm	290-5029	0.12mm	290-5129	0.20mm	290-5229
1/64"-5/16"	JT33	42x91x84mm	0.06mm	290-5031	0.12mm	290-5131	0.20mm	290-5231
1/32"-3/8"	JT2	42x91x84mm	0.06mm	290-5033	0.12mm	290-5133	0.20mm	290-5233
1/32"-3/8"	JT33	42x91x84mm	0.06mm	290-5035	0.12mm	290-5135	0.20mm	290-5235
1/32"-1/2"	JT2	48x106x97mm	0.06mm	290-5037	0.12mm	290-5137	0.20mm	290-5237
1/32"-1/2"	JT33	48x106x97mm	0.06mm	290-5039	0.12mm	290-5139	0.20mm	290-5239
1/32"-1/2"	JT6	48x106x97mm	0.06mm	290-5041	0.12mm	290-5141	0.20mm	290-5241
1/32"-5/8"	JT3	53x109x101mm	0.07mm	290-5043	0.14mm	290-5143	0.20mm	290-5243
1/32"-5/8"	JT6	53x109x101mm	0.07mm	290-5045	0.14mm	290-5145	0.20mm	290-5245
1/8"-5/8"	JT3	53x109x101mm	0.07mm	290-5047	0.14mm	290-5147	0.20mm	290-5247
1/8"-5/8"	JT6	53x109x101mm	0.07mm	290-5049	0.14mm	290-5149	0.20mm	290-5249
3/16"-3/4"	JT3	62x129x119mm	0.09mm	290-5051	0.18mm	290-5151	0.20mm	290-5251
1/64"-1/4"	JT1	35x67x61mm	0.06mm	290-5053	0.12mm	290-5153	0.20mm	290-5253

Drill Chuck Arbors 钻接杆

R8 to Jacobs Taper



Jacobs Taper	R8 Shank Order No.
JT 0	290-0800
JT 1	290-0801
JT 2	290-0802
JT 3	290-0803
JT 4	290-0804
JT 5	290-0805
JT 6	290-0806
JT 33	290-0833

MT Shank to Jacobs Taper



Jacobs Taper	MT0 Order No.	MT1 Order No.	MT2 Order No.	MT3 Order No.	MT4 Order No.	MT5 Order No.	MT6 Order No.
JT 0	290-1000	290-1100	290-1200	290-1300	290-1400	290-1500	290-2700
JT 1	290-1001	290-1101	290-1201	290-1301	290-1401	290-1501	290-2701
JT 2	290-1002	290-1102	290-1202	290-1302	290-1402	290-1502	290-2702
JT 3	290-1003	290-1103	290-1203	290-1303	290-1403	290-1503	290-2703
JT 4	290-1004	290-1104	290-1204	290-1304	290-1404	290-1504	290-2704
JT 5	290-1005	290-1105	290-1205	290-1305	290-1405	290-1505	290-2705
JT 6	290-1006	290-1106	290-1206	290-1306	290-1406	290-1506	290-2706
JT 33	290-1033	290-1133	290-1233	290-1333	290-1433	290-1533	290-2733

30, 40, 50 Shank to Jacobs Taper



Jacobs Taper	ISO 30 Order No.	ISO 40 Order No.	ISO 45 Order No.	ISO 50 Order No.
JT 0	290-2300	290-2400	290-2600	290-2500
JT 1	290-2301	290-2401	290-2601	290-2501
JT 2	290-2302	290-2402	290-2602	290-2502
JT 3	290-2303	290-2403	290-2603	290-2503
JT 4	290-2304	290-2404	290-2604	290-2504
JT 5	290-2305	290-2405	290-2605	290-2505
JT 6	290-2306	290-2406	290-2606	290-2506
JT 33	290-2333	290-2433	290-2633	290-2533

Straight Shank to Jacobs Taper



Jacobs Taper	1/2" Straight Shank Order No.	5/8" Straight Shank Order No.	3/4" Straight Shank Order No.	7/8" Straight Shank Order No.	1" Straight Shank Order No.	1-1/2" Straight Shank Order No.	1-3/4" Straight Shank Order No.
JT 0	290-1600	290-1700	290-1800	290-1900	290-2000	290-2100	290-2200
JT 1	290-1601	290-1701	290-1801	290-1901	290-2001	290-2101	290-2201
JT 2	290-1602	290-1702	290-1802	290-1902	290-2002	290-2102	290-2202
JT 3	290-1603	290-1703	290-1803	290-1903	290-2003	290-2103	290-2203
JT 4	290-1604	290-1704	290-1804	290-1904	290-2004	290-2104	290-2204
JT 5	290-1605	290-1705	290-1805	290-1905	290-2005	290-2105	290-2205
JT 6	290-1606	290-1706	290-1806	290-1906	290-2006	290-2106	290-2206
JT 33	290-1633	290-1733	290-1833	290-1933	290-2033	290-2133	290-2233

Straight Shank to Threaded Shank



Size	Order No.
straight shank 1/2" to 3/8"-24	290-2902
straight shank 1/2" to 1/2"-20	290-2904

MT to Threaded Shank



Size	Order No.
MT2 to 3/8"-24	290-2910
MT2 to 1/2"-20	290-2912
MT2 to 5/8"-16	290-2914
MT3 to 1/2"-13	290-2916
MT3 to 5/8"-16	290-2918

Vertical 5C Angle Collet Fixture

5C 卡头座 A 型

Model A

Base Size: 2-1/2"x7-3/4"

Height: 4"

Order No. 235-6090



H/V 5C Angle Collet Fixture

5C 卡头座 B 型

Model B

Base Size: 4-1/4"x4-1/4"

Height: 4"-1/4"

Order No. 235-6095



H/V 5C Angle Collet Fixture

5C 夹具

Model C



Base In	Height In	Base In	Height In	
Horizontal	Horizontal	Vertical	Vertical	Order No.
5x4"	3-5/8"	5x3-5/8"	4"	235-6080

H/V 5C Angle Collet Fixture

5C 夹具

Model D



Base	Height	Order No.
5x3-5/8"	3-3/4"	235-6085

5C Collet Index Fixture

5C 立卧弹簧分度 100B

- Threaded spindle is hardened and ground (2-1/4"-8TPI).
- Single lever action activates the indexing mechanism.
- Precision ground index plate has 24 indexing locations in fifteen degree.
- 15° increments, any of which can be masked for greater versatility.



Order No. 235-6200

Specifications	Maximum Variation
Dividing spindle concentricity	.004"
Cylinder center bore (per 1") concentricity	.008"
Lateral offset of center slot of dividing spindle	.008"
Center slot to dividing spindle concentric	.008"
Spindle center line parallelism	.008"

5C Spin Index Fixtures

5C 简易分度带尾座

- Hardened and precision ground spindle.
- Direct indexing in ten steps, graduated in 5° increments.
- Applicable to all milling machines, surface grinders and inspection equipment.
- Precision ground 36 position index plate.
- .0004" T.I.R spindle accuracy.
- Super time saver.



Descriptions	Order No.
5C Spin Index Fixture Only	235-6011
5C Spin Index Fixture(235-6011) & Tailstock(200-1104)	235-6012

End Mill Grinding Fixture

5C 立卧弹簧分度 100B

- The fixture uses 5C collects (no more bushings to lose) which means any shank-size end mill from 1/16" to 1-1/8" can be ground. Shell mills can easily be held with straight shank arbors.
- Grinds 2,3,4,6,8 & 12 fluted end mills and shell mills. Faces only!
- Clearance and relief angles are built into base.
- Solid 2-1/2" x 4-1/2" base ground on bottom for sure contact with magnet.
- Black oxide finish.



Order No. 287-6000

5C Collet Index Fixture

5C 简易分度

Great for drilling, milling, grinding and locating angles.
Precision ground spindle
Plate can be bolted to top of drill bushing
Use in vertical position with angle plate
Model 5C complete with 24 space ring and 5C draw nut.

NEW



Order No. 235-6081



Order No. 235-6082

Blade Resharpener Fixture

刀片修整器(磨刀座)

This fixture accommodates all APT MULTI-TOOL blade diameters and thicknesses. The correct end tooth relief angle is built into the fixture marking resharpener simple, accurate and inexpensive on any surface grinder.



Order No. 209-9012

End Mill Cutters/Sharpener

Type 287 287 型磨刀器

- Designed to accomplish all sharpening need.
- Diameter of shank of end mill is 3/8, 1/2", 5/8".
- It may be equally divided to 2,3,4,6,8.



Order No. 231-0287

Universal Sharpener

万向磨刀器

NEW

This unit be used for precision grinding of square tools with any direction, easy to operate.

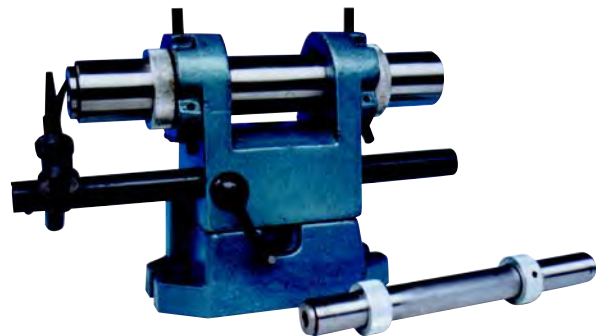


Order No. 287-6520

End Mill Sharpener

磨刀器

- Designed to accomplish all sharpening needs. No need to send out tools. Specials as standards can be sharpened.
- Spindles and bushings to cover the full range of 3/16" up to 1-1/4"
- Shank end-mills are supplied. Will accept cutters with diameters up to 12", and even larger with the use of "riser blocks".
- Quickly sharpens cutters and end-mills right on your tool or surface grinder.
- Two spindles and four bushings cover the full range of 3/16", 3/8", 1/2", 5/8", 3/4", 7/8", 1" and 1-1/4" shank end-mills.
- Accept double end, end-mills



Order No. 287-6530

Specifications	Maximum Variation
Spindle center line to base parallelism (per 12"	0.0024"
Body to stand concentricity	0.0012"
Repeat accuracy	0.0012"

Vertical Horizontal Tool Holder Device

刀柄锁刀座



Taper of Tool	Outsize	Ordr No.
BT30	205x98.5x128	287-6021
BT40	205x98.5x128	287-6022
BT50	275x150x198	287-6023
DIN69871.30	205x98.5x128	287-6024
DIN69871.40	205x98.5x128	287-6025
DIN69871.50	275x150x198	287-6026
CAT30	205x98.5x128	287-6027
CAT40	205x98.5x128	287-6028
CAT50	275x150x198	287-6029

Universal Dividing Heads 分度头

The dividing head is designed as an accessory for milling machine and other machine tools which help the machining on dividing the workpieces into any desired angles. Moreover, with the help of the dividing head, grooves, slots, gears, helical gears, Archimedes cams and helical curves can be achieved on the machines.



Accessories: Tailstock, Gear Bracket, Change Gear Jack, Center, Carrier, Dividing Plate, Flange, Vernier Dial, 3 Jaw Chuck

Specifications	Order No. 235-6008	Order No. 235-6100	Order No. 235-6125	Order No. 235-6160
Center Height	80mm/3.15"	100mm/3.94"	125mm/4.92"	160mm/6.30"
Tilting Angle of The Spindle	>=95°; >=5°	>=95°; >=5°	>=95°; >=5°	>=95°; >=5°
Rotating Angle of the Spindle for One Complete Revolution of the Dividing Handle	9°	9°	9°	9°
Graduation	10 Second	10 Second	10 Second	10 Second
Worm Gear Ratio	1:40	1:40	1:40	1:40
Diameter of Spindle Register Taper	36.541mm/1.441"	41.275mm/1.63"	53.975mm/2.13"	53.975mm/2.13"
Spindle Taper	MT3	MT3	MT4	MT4
Width of The Locating Key	14mm/.55"	14mm/.55"	18mm/.71"	18mm/.71"
Module of Change Gears	1.5mm/0.06"	1.5mm/0.06"	2mm/0.08"	2mm/0.08"
Hole Number of Dividing Plate for All (First Face)	24,25,28,30,34,37,38,39,41,42,43			
Hole Number of Dividing Plate for All (Second Face)	46,47,49,51,53,54,57,58,59,62,66			
Teeth Number of Change Gears for All	25,25,30,35,40,50,55,60,70,80,90,100			
Individual Indexing Error of the spindle for one complete revolution of dividing handle	60 Second	+/-45 Second	+/-45 Second	+/-45 Second

Horizontal/Vertical Indexing Fixtures

立卧等分分度头(带花盘和卡盘)

- Designed for milling, drilling, jig boring, and many other shop applications.
- Hardened and ground 24 position index plate (15 degree increments).
- 360 degree satin chrome grauated ring with 5 minute adjustable vernier plate insures accurate readings.
- Fast and simple indexing of 2,3,4,6,8,12 divisions.

Specifications

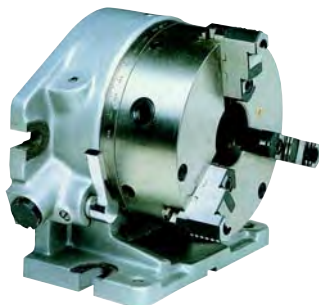
Indexing unit complete with 3 jaw Chuck and 6 masking plate.

Squareness (table base to chuck).....0.0008"

Parallelism (face to face).....0.0006"

Concentricity(mounting flange).....0.0008"

Concentricity (chuck).....0.0012"



Indexing Fixtures

Size of Chuck	Thru Hole Dia.	Order No.
6"	1-23/32"	200-2006
8"	2-15/32"	200-2008

Optional Face Plates

Description	Order No.
For 6" Indexing Fixture	200-2016
For 8" Indexing Fixture	200-2018

Super Horizontal/Vertical Indexing Fixtures

立卧等分分度头(带花盘和卡盘)

- Designed for milling, drilling, jig boring, and many other shop applications.
- Hardened and ground 24 position index plate (15 degree increments).
- 360 degree satin chrome grauated ring with **10 SECOND** adjustable vernier plate insures accurate readings.
- Fast and simple indexing of 2,3,4,6,8,12 divisions.

Specifications

Indexing unit complete with 3 jaw Chuck and 6 masking plate and face plate

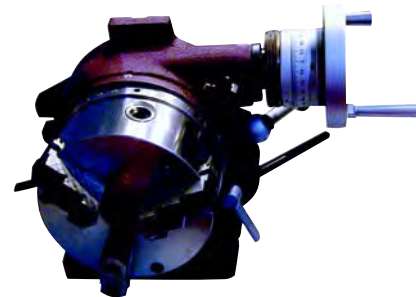
Vernier Reading.....10 seconds

Squareness (table base to chuck).....0.0008"

Parallelism (face to face).....0.0004"

Concentricity(mounting flange).....0.0008"

Concentricity (chuck).....0.0012"



Indexing Fixtures

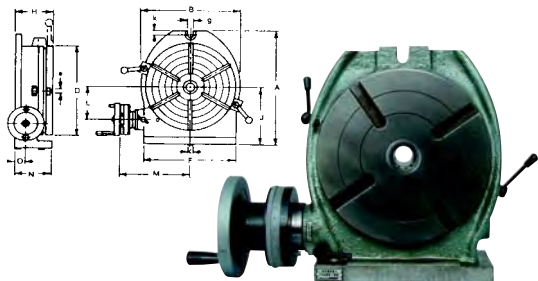
Size of Chuck	Thru Hole Dia.	Order No.
6"	1-23/32"	200-2106
8"	2-15/32"	200-2108

Optional Face Plates

Description	Order No.
For 6" Indexing Fixture	200-2016
For 8" Indexing Fixture	200-2018

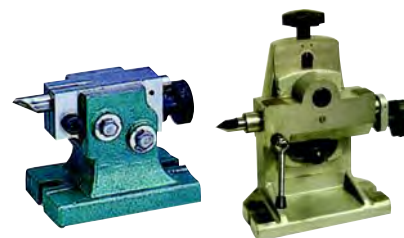
High Precision Horizontal/Vertical Rotary Tables 回转工作台

- Extra deep coolant channel.
- Dual positive action locks.



Optional Dividing Plates

- Graduated 360°
- Low profile.
- 10 second vernier reading.



200-1098

Optional Tailstock

- Gear drive immersed in oil.
- Optional dividing plates and tailstock.
- Gear Ratio 90:1.

Specification

Specifications	Maximum Variation (inches/second)
Clamping surface flatness(concave)	.0006"
Cylindrical center bore concentricity	.0008"
Taper center bore concentricity	.0008"
Surface to base parallelism	.0008"
Surface to angle face squareness	.0004"
Surface to center slot squareness	.0008"

Optional Accessories

Descriptions	Order No.
Dividing Plate (fits all except 6")	200-1096
Adjustable Tailstock for 8" & 10"	200-1098
Adjustable Tailstock for 12"	200-1100

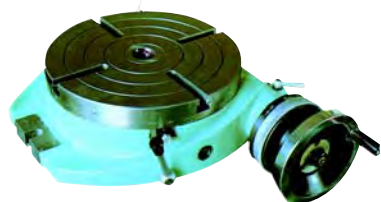
H/V Rotary Tables

Descriptions	Order No.
8" Horizontal & Vertical Table (YUASA TYPE)	200-1143
10" Horizontal & Vertical Table (YUASA TYPE)	200-1153
12" Horizontal & Vertical Table (YUASA TYPE)	200-1163
4" Horizontal & Vertical Table	200-1089
6" Horizontal & Vertical Table	200-1090
8" Horizontal & Vertical Table	200-1091
10" Horizontal & Vertical Table	200-1093
12" Horizontal & Vertical Table	200-1095
16" Horizontal & Vertical Table	200-1097

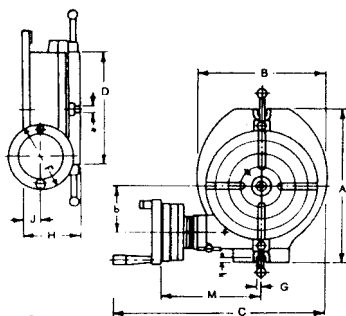
Dimensions

Table Dia.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	T-Slot Width	Net Weight	Shipping Weight	Order No.
8"	11.200	9.400	0.650	7.827	3MT	8.203	0.570	3.944	5.985	0.610	3.700	7.830	3.880	1.900	0.465	64lbs	95lbs	200-1143
10	12.900	11.300	0.552	9.800	3MT	9.960	0.562	4.330	6.750	0.562	4.100	8.625	4.175	1.900	0.465	94lbs	135lbs	200-1153
12	16.125	14.250	0.710	15-5/8	4MT	12.625	0.725	4.750	8.250	0.725	5.250	10.250	4.640	1.900	0.545	209lbs	250lbs	200-1163

High Precision Horizontal Rotary Tables 回转工作台



- Extra deep coolant channel.
- Dual positive action locks.
- Gear ratio 90:1.



Special design features include:

- Graduated 360°
- Low profile.
- Satin chrome dials.

Specification

Specifications	Maximum Variation (inches/second)
Clamping surface flatness(concave)	.0006"
Cylindrical center bore concentricity	.0008"
Taper center bore concentricity	.0008"
Surface to base parallelism	.0008"
Surface to angle face squareness	.0004"
Surface to center slot squareness	.0008"



Optional Dividing Plate(Order No. 200-1096)

- Gear drive immersed in oil.
- 10 second vernier reading.
- Fits all tables except 6".

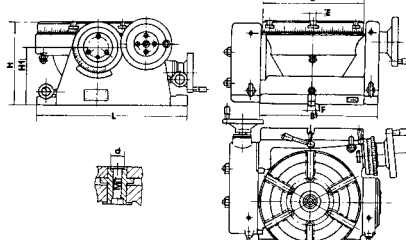
Rotary Tables

Descriptions	Order No.
6" Horizontal	200-1076
8" Horizontal	200-1078
10" Horizontal	200-1080
12" Horizontal	200-1082

Dimensions

Table Dia.	A	B	C	D	E	F	G	H	J	K	L	M	T-Slot Width	Net Weight	Shipping Weight	Order No.
6"	10-1/4	7-3/4	13-1/16	6-19/64	2MT	4-15/16	0.224	3-5/64	1	45/64	3	5	0.39	36lbs	48lbs	200-1076
8	11-7/6	9-5/16	14-1/4	7-7/8	3MT	4-15/16	9/32	3-7/32	1	13/16	3-1/2	5-11/16	0.456	50lbs	61lbs	200-1078
10	13	11-1/4	16-5/8	9-15/16	3MT	4-15/16	9/32	3-11/16	1	13/16	3-7/8	9-1/2	0.465	82lbs	93lbs	200-1080
12	16-1/8	14-3/16	19-9/16	12-5/8	4MT	4-15/16	0.354	4-1/16	1-3/8	1	4-1/4	12-5/16	0.545	153lbs	167lbs	200-1082

Precision Inclineable Rotary Tables 回转工作台



- Satin chrome dials.
- Gear ratio 90:1.
- Low profile.
- Gear drive immersed in oil.
- 10 second vernier reading.
- Optional dividing plates and tailstock.
- Dual positive action locks.
- Extra deep coolant channel.

Rotary Tables

Descriptions	Order No.
10" inclineable rotary table	200-1915
12" inclineable rotary table	200-1917

Dimensions

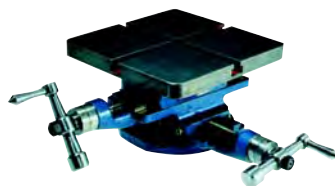
Table OuterDia. D	Table Height H	Center Height H1	Base Dia. B	Base Dia. L	Width of T-slot E	Locating Key F	Centering Hole D	Center Taper Hole	Weight	Order No.
9.81	8.07	5.51	10.24	12.2	0.47	0.55	1.2	MT-3	172	200-1915
12.6	10.04	6.89	13.07	14.96	0.55	0.71	1.6	MT-4	293	200-1917

Specification

Specifications	Maximum Variation (inches/second)
Clamping surface flatness(concave)	.0006"
Cylindrical center bore concentricity	.0008"
Taper center bore concentricity	.0008"
Surface to base parallelism	.0008"
Surface to angle face squareness	.0004"
Surface to center slot squareness	.0008"

Milling & Drilling Table 十字T形槽工作台

Suitable for all kinds of precision machining operations. Easy to read dials are graduated in .001". Dovetail slides have adjustable steel gibs to compensate for wear. T-slots are 5/8" wide x 7/16" deep.



Order No.	201-2524
Size	7x7(Rotatable 360°)
Height	4-1/8"
Travel	4 on each axis
Base Size	4-5/8" diameter
Mounting	1-1/8" Long Base Bolt
Weight	35 lbs

Single slide table 单向工作台

A heavy, rugged slide used in all kinds of positioning, milling, drilling, microscope viewing and staging, adjustable bases for heavy loads, small jig boring, precision cut-off.

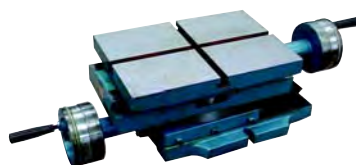


Order No.	200-2539
Table	5-1/2" x 12"
T-Slots	4 on 2-1/2" centers
Height	3-3/4"
Travel	8"
Weight	35 lbs

Compound Sliding Table

复合工作台(手轮和转盘带刻线)

with Calibrated Wheels and Calibrated Swivel Table

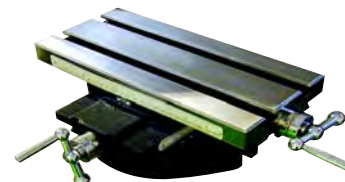


Description	Order No. 200-2707	Order No. 200-2708
Size of Table	11-13/16x7-7/8	7-7/8x7-7/8
Height Overall	5-1/2	6-7/8
Length Overall	20-3/32	13-25/32
Size of Slots	7/16	3/8
Sliding	7-7/8	4-29/32
Graduation	.001"	.001"
Weight (Approx.)	84lbs	44lbs

Compound Slide Tables

复合工作台

A heavy, rugged slide used in all kinds of positioning, milling, drilling, microscope viewing and staging, adjustable bases for heavy loads, small jig boring, precision cutter.



Order No.200-2536

Desc.	Size
Table	5-1/2"x12"
T-Slot Size	5/8"
Height	4-1/2"
Travel	6-1/2"/4-1/3"
Base Size	9"x8"

Adjustable Angle Plates

可调工作台, 带蜗轮蜗杆

Heavy machined casting. Adjustable 45 in either direction. Crank handle for easy and precise adjustment.

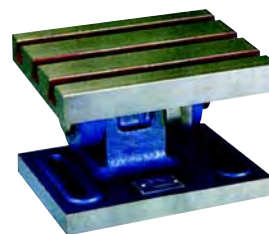


Plate Size (In)	Height (In)	T-Slot (In)	Order No.
5 x 7"	3-7/8"	3/8"	200-1105
7 x 10	5-3/16	7/16	200-1110
9 x 12	6-7/16	1/2	200-1112
10 x 15	7-3/8	9/16	200-1115
12 x 24	8-1/8	11/16	200-1124

Swivel Angle Tables

可倾角工作台

- Adjustable heavy castings.
- Rugged construction.
- Machined "T" slots.
- SAVES job set-up time in operation.
- Graduated for 90 tilt.
- Accuracy of table surface

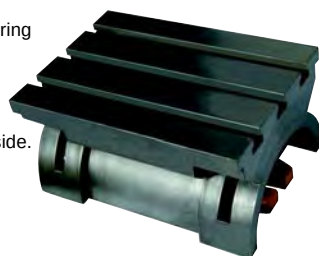


Size	Height	T-Slot	Order No.
5 x 6"	4-1/2"	3/8"	200-1305
6 x 8	5	3/8	200-1306
8 x 10	6-1/2	7/16	200-1308
10 x 12	8	1/2	200-1310
12 x 15	9	9/16	200-1312

Swivel Angle Plates

可倾工作台

- Perfect for setting work at any angle during milling or other operations.
- Heavy rugged graded casting.
- Machined "T" slots.
- Graduated 90° for setting 45° on each side.
- Accuracy of table surface 0.0005mm



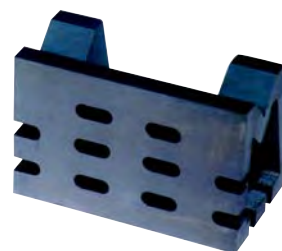
Size	Height	T-Slot	Order No.
5 x 7"	3-3/4"	3/8"	200-1205
7 x 10"	5"	1/2"	200-1207
10 x 15"	6-3/4"	9/16"	200-1210

Vee Angle Plates

V 型角板

The V-Angle is manufactured from a high grade cast iron that is fully stress relieved to give stability through out its working life.

The V-Angle has many more clamping positions than an ordinary angle plate. Its design allows almost any shape to be clamped securely, and all types of clamps to be used.



Size	Order No.
3 x 3 x 5"	418-4905
4 x 4 x 6"	418-4906
5 x 5 x 7"	418-4907
6 x 6 x 8"	418-4908

Working Table

工作台

NEW



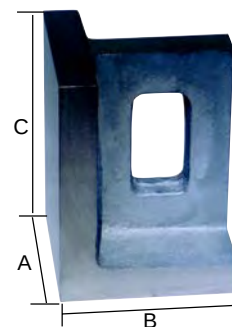
Table Size(mm)	X Travel(mm)	Y Travel(mm)	Graduation	Order No.
185x100	85	55	0.01	200-2501
225x175	105	90	0.01	200-2502
330x220	190	100	0.01	200-2503
430x240	230	150	0.02	200-2504
600x240	400	150	0.02	200-2505

Universal Right Angle Plates

Machined or Precision Ground

直角靠铁

Made of finest quality, close grained semi-steel castings, stress relieved against distortion by annealing after seasoning. All outside surfaces closely finished for square and parallel references: Machined Square and parallel within 0.002" per 6". Precision ground: Square within 0.0005" per 6". Parallel within 0.00025" per 6".



Working Table

工作台

NEW



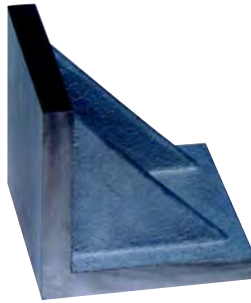
Table Size(mm)	X Travel(mm)	Y Travel(mm)	Graduation	Order No.
225x175	105	70	0.01	200-2511
330x220	170	90	0.02	200-2512
425x240	225	135	0.02	200-2513
600x240	400	135	0.02	200-2514

A	B	C	Machine Finished Order No.	Ground Finished Order No.
3-3/4"	4"	5"	418-4105	418-4205
4"	4"	6"	418-4110	418-4210
4"	5"	6"	418-4115	418-4215
4-1/2"	5"	8"	418-4120	418-4220
5"	8"	12"	418-4125	418-4225
5-1/2"	7"	10"	418-4130	418-4230
5-1/2"	8"	10"	418-4135	418-4235
6"	6"	8"	418-4140	418-4240
8"	10"	12"	418-4145	418-4245
8"	9"	16"	418-4150	418-4250
10"	12"	16"	418-4155	418-4255
12	12"	24"	418-4160	418-4260

Plain Angle Plates 无槽带筋角板

Machined or Precision Ground

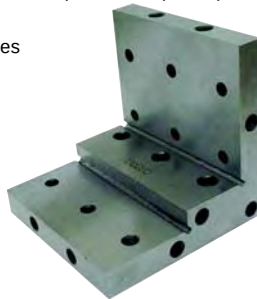
- Made from high tensile cast iron normalized and stress relieved.
- Machined: Flat and square within 0.002" per 6" for general work.
- Precision ground: flat and square within 0.0005" per 6" for layout and inspection or precision machine.



Size	No. of Ribs	Machined Order No.	Ground Order No.
2 x 2 x 2"	1	418-4310	418-4410
3 x 3 x 3"	1	418-4315	418-4415
4 x 4 x 4"	2	418-4320	418-4420
5 x 5 x 5"	2	418-4325	418-4425
6 x 6 x 6"	2	418-4330	418-4430
8 x 8 x 8"	2	418-4335	418-4435
10 x 10 x 10"	2	418-4340	418-4440
12 x 12 x 12"	2	418-4345	418-4445

Stepped Angle Plates 梯级角板

- Manufactured from a single piece of hardened tool steel.
- Precision ground, square and parallel.
- A convenient step of 1-1/4"(32mm) down from the top and 1/2"(12mm) seat allows for use with smaller work pieces.
- 24 Tapped holes allow for fastening to fixtures and clamping work to the angle plate.
- Ground flat, square & parallel within .0002".

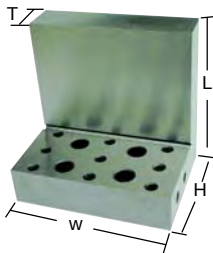


Dimensions Inch/Metric	Thread of Tapped Holes	Order No.
3x3x3"(75x75x75mm)	1/4"-20	418-4978
4x4x4(100x100x100)	5/16"-18	418-4980
4x4x4(100x100x100)	1/4"-20	418-4981

Precision Steel Angle Plates 精密钢角板

精密钢角板

- Solid 1 piece steel construction for longer life.
- Hardened to RC 58-62.
- Ground flat, square & parallel within .0002".
- Tapped holes are either 1/4-20 or 3/8-16 to use standard clamping accessories.

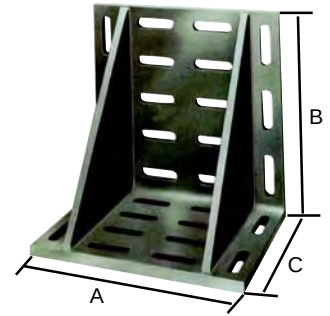


L	w	H	T	Tapped Holes	Order No.
3"	3"	4"	1"	(13)1/4"-20	418-4970
3	4	4	1-1/8	(31)1/4"-20	418-4972
4	4	4	1-1/4	(13)1/4"-20	418-4974
4	4	6	1-1/4	(14)3/8-16	418-4976
4	6	6	1-1/4	(33)1/4"-20	418-4982

Giant Slotted Angle Plates 带筋大尺寸角板

带筋大尺寸角板

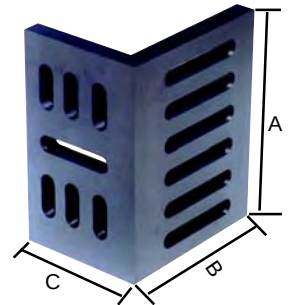
- Made from high tensile cast-iron normalized and stress relieved.
- Machined flat and square within 0.002" per 6" for general work.



Dimensions			Order No.
A	B	C	
16"	12"	9"	418-4916
20"	16"	12"	418-4920
24"	24"	18"	418-4924
36"	24"	24"	418-4936

Slotted Angle Plates 带槽角板

- Made of high tensile cast iron properly seasoned against distortion.
- webbed style accurately machined, square parallel on outside faces and ends.
- Open end style accurately machined square and parallel on a II faces.



Dimensions			Webbed Machined	Webbed Ground	Open end Machined	Open end Ground
A	B	C	Order No.	Order No.	Order No.	Order No.
3"	2-1/2"	2"	418-4510	418-4612	418-4710	418-4812
3-1/2"	3"	2-1/2"	418-4515	418-4617	418-4715	418-4817
4-1/2"	3-1/2"	3"	418-4520	418-4622	418-4720	418-4822
6"	5"	4-1/2"	418-4525	418-4627	418-4725	418-4827
7"	5-1/2"	4-1/2"	418-4530	418-4632	418-4730	418-4832
8"	6"	5"	418-4535	418-4637	418-4735	418-4837
9"	7"	6"	418-4540	418-4642	418-4740	418-4842
10"	8"	6"	418-4545	418-4647	418-4745	418-4847
12"	9"	8"	418-4550	418-4652	418-4750	418-4752

Compound Angle Plate 复合角板

复合角板

- Solid one piece construction.
- Made of steel, hardened to PC 58-62, and ground flat.
- Square and parallel within .0002".
- Features ground vees for convenient holding of small round parts.
- Includes one clamp.



Dimensions	Tapped Holes	Order No.
6"long x 4"high x 1" thick	(16)1/4"-20	418-4910

Precision Sine Plates 正弦板

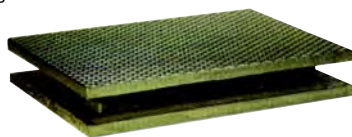
- Squareness & Parallelism: 0.0002".
- Hardened steel.



Size	Order No.
4x4x2"	647-7580
6x6x2-1/4"	647-7590

Lapping Bench Plate 铸铁平板

- Precision ground on one side, ground on the other side.
- Made of casting iron.
- Size: 10"x14"x2-3/4"



Size	Order No.
Size: 10"x14"x2-3/4"	640-0000

Portable Magnetizer/Demagnetizer

退磁器

- Quickly magnetizes or demagnetizes drills, punches, dies, screwdrivers, simply by passing them through or near the loop.
- No physical contact needed.
- Portable and easy to used.
- Electrically & thermally protected.
- Operates on 110V AC 60 cycle with push button control.



Order No. 285-2700

Magnetizer & Demagnetizer

充退磁器

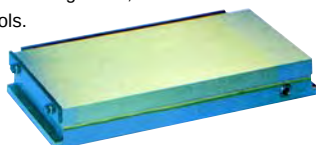


Order No. 625-0000

Dense Permanent Magnetic Chucks 磁性吸盘

磁性吸盘

Dense permanent magnetic chuck can be used for processing various magnetic conduction work pieces, especially thin and small pieces, in surface grinder, tools grinder and electric sparks machine tools.



Dimensions	Order No.
4 x 7"	285-0160
5 x 10"	285-0170
6 x 12"	285-0180
6 x 18"	285-0190
8 x 24"	285-0200

Magnetic Sine Plates 磁性正弦板

Using ceramic permanent magnets which cannot be demagnetized, these magnetic Sine Plates are designed for the precise angular positioning and holding of small or odd-shaped workpieces. Fine pole division permits more uniform magnetic holding. Sine plate angles lock rigidly with locking strap. Removable handle included for on-off.



Dimension	Center dist. of Rolls	Order No.
4x4x4-5/8"	3" Within .0002"	647-5544
6x6x4-5/8"	5" Within .0002"	647-5566

Demagnetizers 退磁器

- Demagnetize dies, punches, cutters, or any tools that have become magnetized.
- Operates on 115/220V AC with on/off switch.



Volt	Table Size	Order No.
110V	6-3/4" x 4-1/4"	285-2505
220V	170mm x 108mm	285-2605

Demagnetizers

退磁器



Volt	Table Size	Order No.
110V	190x120mm	285-2805
220V	190x120mm	285-2808
110V	210x152mm	285-2815
220V	210x152mm	285-2818

Powerful Permanent Magnetic Chucks 磁性吸盘

磁性吸盘

Powerful permanent magnetic chuck has a magnetic strength of 12 - 15 kg/cm, suitable for powerful milling and grinding.

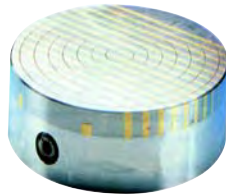


Dimensions	Order No.
4 x 7"	285-0300
6 x 12"	285-0310
8 x 20"	285-0370
10 x 15"	285-0390

Circular Permanent Magnetic Chucks

磁性吸盘

Circular permanent magnetic chuck is used for holding work pieces in grinder, lathe and bench work.



Dia.	Order No.
5"	285-1205
6"	285-1206
8"	285-1208
10"	285-1210
12"	285-1211

Big Type Punch Formers

大型冲子成型器

One-Way 单向

- This Punch Former is applicable on surface grinder or universal grinder to clamp puncher within diameter 70mm for grinding various shapes.

Main Parameters:

Center height: 150mm
Clamping diameter in V-slot: 70mm
Travel of V-block: 25mm
Quantity of teeth: 24

OrderNo.287-6812



Two-Way 双向

- This Punch Former is applicable on surface grinder or universal grinder to clamp puncher within diameter 70mm for grinding various shapes.
- It can shape quickly and precisely, with the moving function and fixing block for oval grinding.
- The fine tuning function can adjust center accurately. Using the fixing block and folding down the screw when mouse much, can grind oval workpiece conveniently.

Main Parameters:

Center height: 150mm
Clamping diameter in V-slot: 70mm
Travel of V-block: 35mm
Transverse travel of slide: +/-35mm
Quantity of teeth: 24

OrderNo.287-6813



2-Jaw Self-Centering Chucks

二爪自定心卡盘

- Standard Accuracy.
- Semi-Steel Body.
- Soft two piece hard reversible jaws.
- Shape to Fit work pieces.
- 1 Chuck wrench.

Chuck Dia.	Thru Hole	Order No.
6"	1.65"	428-7106
8	2.16	428-7108
10	2.99	428-7110
12	4.05	428-7112



Collet Punch Former ER夹头冲子成型器

- Clamping diameter: 2-20mm
- Supply ER32 collete size: 4, 6, 8, 10, 12, 16, 20, 7Pcs in total
- For workpiece diameter smaller than 4mm, use shank 20mm/ER16 collet chuck
- It clamps workpiece quickly and steadily when processing without checking the center



OrderNo.287-6808

3-Jaws Punch Former

三爪冲子成型器

This Punch Former is attached with 3 jaws which can hold workpieces quickly and conveniently. It can also adjust center of 3 jaws.

Main Parameters:

3 jaws hole diameter 16mm
Min clamping diameter 2mm
Max clamping diameter 70mm



OrderNo.287-6807

4-Jaw Independent Shank Type Self-Centering Chucks

4 Jaw independent direct flat back chucks come with 5C, R8 Mounting Shank.

四爪卡盘

Chuck Dia.	R8 Shank Order No.	5C Shank Order No.
3	230-6113	230-6103
4	230-6114	230-6104
5	230-6115	230-6105
6	230-6116	230-6106



5C Shank

3-Jaw Shank Type Self-Centering Chucks

三爪卡盘

Scroll type chucks come with attached 5C, R8 or MT Mounting Shank, 2 set of solid jaws and one chuck wrench.



5C Shank



R8 Shank

Chuck Dia.	5C Shank Order No.	R8 Shank Order No.	MT2 Shank Order No.
3"	230-6003	230-6013	230-6023
4	230-6004	230-6014	230-6024
5	230-6005	230-6015	
6	230-6006	230-6016	

3-Jaw Plain Back Self-Centering Chucks

3 爪短圆柱型自定心卡盘 (正反两副爪)

- Self-Centering 0.003" T.I.R.
- Semi-Steel Body.
- 2 sets solid jaws.
- 2 Pc. hard reversible jaws.
- 1 Chuck wrench.



Chucks with 2 sets solid jaws

Chuck Dia.	Thru Hole	Order No.
3"/80mm	.630"/16mm	429-3003
4"/100mm	.866"/22mm	429-3004
5"/125mm	1.181"/30mm	429-3005
6"/150mm	1.575"/40mm	429-3006
8"/200mm	2.559"/65mm	429-3008
10"/250mm	3.150"/80mm	429-3010
12"/325mm	3.937"/100mm	429-3012
15"/380mm	4.000"/135mm	429-3015

Chucks with 2 piece reversible jaws

Chuck Dia.	Thru Hole	Order No.
6"/160mm	1.575"/40mm	428-7006
8"/200mm	2.36"/60mm	428-7008
10"/250mm	3.150"/80mm	428-7010
12"/325mm	3.937"/100mm	428-7012
15"/380mm	5.32"/135mm	428-7015
16"/400mm	5.11"/130mm	428-7016
20"/508mm		428-7020



3-Jaw Direct Mounting D Series Chucks

Universal

3 爪 D 型短锥自定心卡盘 (拉杆, 凸轮锁紧连接)

the advantage of using a direct mount chuck is extra working capacity on the lathe due to a shorter overall length with the integral camlock mount.

- Self-Centering .
- Semi-Steel body.
- Camlock spindle "D" Series.



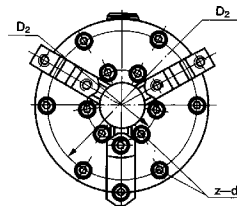
Chuck Dia.	To Fit Spindle	Thru Hole	Order No.
6"/160mm	D1-3	1.575"/40mm	429-3063
6"/160mm	D1-4	1.575"/40mm	429-3064
6"/160mm	D1-5	1.575"/40mm	429-3065
8"/200mm	D1-4	1.969"/50mm	429-3084
8"/200mm	D1-5	1.969"/50mm	429-3085
8"/200mm	D1-6	1.969"/50mm	429-3086
10"/250mm	D1-5	2.756"/70mm	429-3105
10"/250mm	D1-6	2.756"/70mm	429-3106
10"/250mm	D1-8	2.756"/70mm	429-3108
12"/325mm	D1-11	3.937"/100mm	429-3121
12"/325mm	D1-6	3.937"/100mm	429-3126
12"/325mm	D1-8	3.937"/100mm	429-3128
15"/380mm	D1-11	5.11"/130mm	429-3151
15"/380mm	D1-8	5.11"/130mm	429-3158
16"/406mm	D1-11	4.95"/125mm	429-3161

Precision Adjustable Scroll Chucks

3-Jaw

3 爪可调自定心卡盘

This series chucks are made of high quality materials with precision machining, and the bodies enjoy nice rigidity. What is more, the chucks have a high repeatable concentric precision. With suitable adjustment the chuck's clamping precision can reach 0.013mm.



Chuck Dia.	D	D1	D2	D3	H	H1	h	z-d	Order No.
6"/160mm	6	3.125	5.343	1.535	3.882	2.323	0.689	6-1/4-20	429-3600
8"/200	8.27	4.75	7.5	2.264	5.206	3.122	0.752	6-3/8-16	429-3825
10"/250	10	6.374	4.375	2.835	6.056	3.492	0.803	6-7/16-14	429-3910
12"/315	12	7.905	5.25	3.268	6.569	3.980	0.803	6-1/2-13	429-3912

6-Jaw 6 爪可调自定心卡盘



Chuck Dia.	D	D1	D2	D3	H	H1	h	z-d	Order No.
6"/160mm	6	3.125	5.343	1.535	3.882	2.323	0.689	6-1/4-20	429-6600
8-1/4"/200	8.27	4.75	7.5	2.264	5.206	3.122	0.752	6-3/8-16	429-6825
10"/250mm	10	6.374	4.375	2.835	6.056	3.492	0.803	6-7/16-14	429-6910
12"/315mm	12	7.905	5.25	3.268	6.569	3.980	0.803	6-1/2-13	429-6912

4-Jaw Independent Direct Mounting Lathe Chucks

4 爪短锥 D 型单动卡盘 (拉杆, 凸轮锁紧连接)

- Self-Centering .
- Cast iron body.
- Camlock spindle "D" Series.
- 1Set solid reversible jaws.
- 1Set of mounting Screws.
- 1 Chuck Wrench.



Chuck Dia.	To Fit Spindle	Thru Hole	Order No.
8"/200mm	D1-4	2.165"/55mm	429-4084
8"/200mm	D1-5	2.165"/55mm	429-4085
10"/250mm	D1-4	2.756"/70mm	429-4104
10"/250mm	D1-5	2.953"/75mm	429-4105
10"/250mm	D1-6	2.953"/75mm	429-4106
12"/325mm	D1-6	3.740"/95mm	429-4126
12"/325mm	D1-8	3.740"/95mm	429-4128
16"/406mm	D1-6	4.921"/125mm	429-4166
16"/406mm	D1-8	4.921"/125mm	429-4168

4-Jaw Independent Plain Back Chucks

4爪单动直止口卡盘

The chuck body is made of cast iron. The reversible jaws and operation screw are made of high quality carbon steel jaws and are hardened precision ground.



Chuck Dia.	Hole Circle	Thru Hole	Order No.
3"/75mm	2.59"/66mm	.86"/22mm	429-4003
6"/145mm	3.81"/97mm	1.77"/45mm	429-4006
8"/200mm	4-9/67"/107mm	1-15/16"/56mm	429-4008
10"/250mm	4-3/4"/120mm	3"/75mm	429-4010
12"/325mm	5-3/8"/134mm	3"/75mm	429-4012
16"/380mm	5-9/16"/141mm	4-15/16"/125mm	429-4016
20"/508mm	6-1/4"/160mm	6-1/4"/160mm	429-4020

4-Jaw Plain Back Self-Centering Chucks

4 爪自定心卡盘

Chuck Dia.	Thru Hole	Order No.
5"/127mm	1.181"/30mm	428-8205
6"/160mm	1.575"/40mm	428-8206
8"/200mm	2.559"/65mm	428-8208
10"/250mm	3.150"/80mm	428-8210
12"/325mm	3.937"/100mm	428-8212
15"/380mm	4.000"/101mm	428-8215
20"/508mm	6.25"/159mm	428-8220

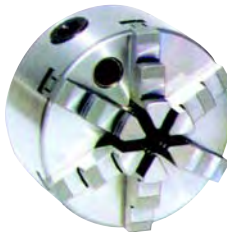
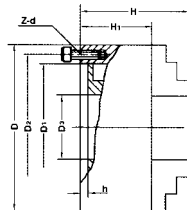


6-Jaw Self-Centering Scroll Chucks

6爪盘丝型自定心卡盘

These chucks are suitable for clamping and machining the thin-walled workpieces, especially the handle-cutting tools. By using this series of chucks, the deformation can be reduced or avoided when the workpieces are gripped and the grinding states can be improved owing to their evenbearing

- Plain back
- Cast iron body.
- 1Set of two Pc. hardened reversible jaws.
- 1Set of mountingScrews.
- 1 Chuck Wrench.

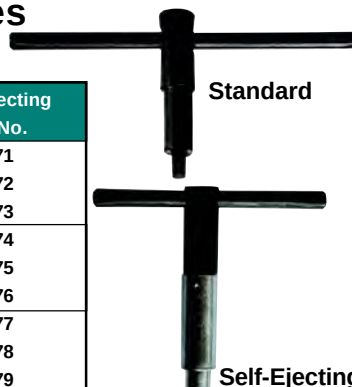


Chuck Dia.	D1	D2	D3	H	H1	h	Order No.
4"/100mm	2.83"	3.31"	1.02"	2.87"	2.11"	0.14"	429-6004
5"/130mm	3.94	4.53	1.38	3.39	2.36	0.14	429-6005
6"/165mm	5.12	5.71	1.65	3.80	2.62	0.18	429-6006
8"/200mm	6.50	7.09	2.56	4.29	2.95	0.20	429-6008

Chuck Wrenches

卡盘手把

Size	Standard Order No.	Self-Ejecting Order No.
1/4"	290-1171	290-1071
5/16"	290-1172	290-1072
3/8"	290-1173	290-1073
7/16"	290-1174	290-1074
1/2"	290-1175	290-1075
9/16"	290-1176	290-1076
5/8"	290-1177	290-1077
11/16"	290-1178	290-1078
3/4"	290-1179	290-1079



Mounting Plates 法兰盘



L Series Back Plates for Adjustable Chucks 长锥型连接法兰盘

Chuck Size	Spindle	Order No.
6"	L-00	429-3830
6	L-0	429-3831
8-1/4	L-00	429-3832
8-1/4	L-0	429-3833
10	L-00	429-3834
10	L-0	429-3835
10	L-1	429-3836
12	L-0	429-3837
12	L-1	429-3838

"D" Series Back Plates for Adjustable Run-True Chucks

可调自定心卡盘法兰盘

"D" Series Adapters for 3 Jaw Self-Centering Plain Chucks 三爪自定心平背卡盘法兰盘

Chuck Size	Spindle	Order No.
6"	D4	429-3901
8	D3	429-3902
8	D4	429-3903
8	D6	429-3905
10	D6	429-3907
10	D8	429-3909
12	D8	429-3911
15	D11	429-3913

Chuck Size	Spindle	Order No.
6"	D3	429-3716
6	D4	429-3719
6	D5	429-3720
8	D3	429-3722
8	D4	429-3725
8	D5	429-3728
8	D6	429-3731
10	D4	429-3734
10	D5	429-3737
10	D6	429-3740
10	D8	429-3743
12	D6	429-3746
12	D8	429-3749
12	D11	429-3752
15	D11	429-3754

"A" Series Back Plates for Adjustable Chucks A型连接法兰盘

Chuck Size	Spindle	Order No.
6"	A4	429-3764
6	A5	429-3765
6	A6	429-3766
8-1/4	A5	429-3785
8-1/4	A6	429-3786
10	A6	429-3806
10	A8	429-3808
12	A6	429-3826
12	A8	429-3828

Thread Back Plates 螺纹型连接法兰盘

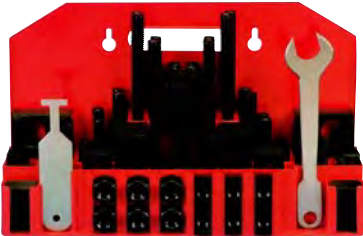
Chuck Size	Spindle Threads	Order No.
6"	1-1/2"-8	429-3840
6	1-3/4"-8	429-3841
6	2-1/4"-8	429-3842
6	2-3/8"-6	429-3843
8	2-1/4"-8	429-3844
8	2-3/8"-6	429-3845
10	2-1/4"-8	429-3846
10	2-3/8"-6	429-3847
10	2-3/4"-8	429-3848
12	2-3/8"-6	429-3849
12	2-3/4"-8	429-3850

52 Piece Deluxe Steel Clamping Kits

机床夹具

Each set contains:

- 6 T-slot nuts.
- 6 flange nuts.
- 4 coupling nuts.
- 6 step blocks.
- 6 serrated end clamps.
- 24 studs, 4 each: 3", 4", 5", 6", 7" & 8" long.
- Plastic holder with metal back



* This items have two free parts:
1 T slot cleaner.
1 nut wrench.

Stud Size	Table Slot	Order No.
5/16"-18	3/8	400-3375
3/8-16	7/16	400-3437
3/8-16	1/2	400-3501
3/8-16	9/16	400-3456
1/2-13	9/16	400-3562
1/2-13	5/8	400-3626*
1/2-13	11/16	400-3639
5/8-11	11/16	400-3740
5/8-11	3/4	400-3750
5/8-11	13/16	400-3759

38 Piece T-Nut & Stud Sets

套装机床夹具螺栓螺母

Each set contains:

- 4 flange nuts.
- 4 T-slot nuts.
- 4 coupling nuts.
- 1T-slot cleaner.
- 24 studs, 4 each:
3", 4", 5", 6", 7" & 8" long.
- 1 wooden stand.



Stud Size	Table Slot	Order No.
5/16"-18	3/8"	402-4375
3/8"-16	1/2"	402-4500
3/8"-16	7/16"	402-4437
3/8"-16	9/16"	402-4560
1/2"-13	9/16"	402-4562
1/2"-13	5/8"	402-4625
1/2"-13	11/16"	402-4680
5/8"-11	11/16"	402-4687
5/8"-11	3/4"	402-4750
5/8"-11	13/16"	402-4800
3/4"-10	13/16"	402-4812
3/4"-10	7/8"	402-4875
3/4"-10	1"	402-4900
3/4"-10	1-1/16"	402-4962

50 Piece Super Clamp Sets

机床夹具

Each set contains:

- 24 studs with flats,
4 each: 3", 4", 5",
6", 7" & 8" long.
- 4 coupling nuts.
- 4 flange nuts.
- 6 serrated end clamps.
- 4 T slot nuts.
- 6 step blocks.
- 1 T-slot cleaner.
- 1 wooden stand.



Stud Size	Table Slot	Order No.
with Standard Blocks 1"		
5/16"-18	3/8"	400-4375
3/8-16	7/16	400-4377
3/8-16	1/2	400-4379
1/2-13	9/16	400-4381
1/2-13	5/8	400-4626
1/2-13	11/16	400-4628
5/8-11	11/16	400-4630
5/8-11	3/4	400-4632
5/8-11	13/16	400-4634
with Heavy Duty Blocks 1-1/2"		
1/2-13	9/16	400-4636
1/2-13	5/8	400-4638
1/2-13	11/16	400-4640
5/8-11	11/16	400-4642
5/8-11	3/4	400-4644
5/8-11	13/16	400-4646
3/4-10	13/16	400-4648
3/4-10	7/8	400-4650
3/4-10	1	400-4652

Economy Adjusta-Clamp Kit

套装沟槽压板

Better Performance with just 21 pieces

Each set contains:

- 2 forged Adjusta-Clamps .
- 8 T slot bolts, two each of 2,4,5 & 6".
- 4 Rotary T slot bolts 3,4,5 & 6".
- 2 springs.
- 4 flange nuts.
- 1 sturdy holder.

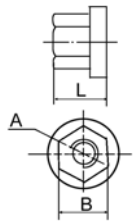


Order No. 400-8032

52 Piece Metric Clamping Kits 机床夹具

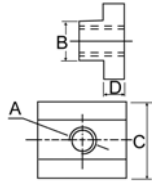
Each set contains:

- 6 T-slot nuts.
- 6 flange nuts.
- 4 coupling nuts.
- 6 step blocks.
- 6 serrated end clamps.
- 24 studs, 4 each: 76, 102, 127, 152, 178 & 203mm long.



Flanged Nuts

A	L	B	Order No.
M10	12	17	407-5010
M12	17	19	407-5012
M14	17	19	407-5014
M16	20	24	407-5016



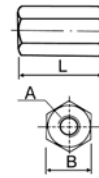
Clamping Kits

Size	Order No.
M10	400-3010
M12	400-3012
M14	400-3014
M16	400-3016



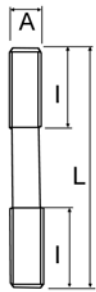
Coupling Nuts

A	L	B	Order No.
M10	30	16	407-4110
M12	36	18	407-4112
M14	42	21	407-4114
M16	48	24	407-4116



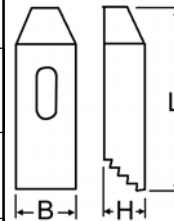
Double End Bolts

A	L	I	Order No.	A	L	I	Order No.
M10	76	28	407-8005	M14	76	28	407-8065
M10	102	32	407-8010	M14	102	38	407-8070
M10	127	32	407-8015	M14	127	38	407-8075
M10	152	32	407-8020	M14	152	38	407-8080
M10	178	32	407-8025	M14	178	38	407-8085
M10	203	32	407-8030	M14	203	38	407-8090
M12	76	28	407-8035	M16	76	28	407-8095
M12	102	38	407-8040	M16	102	45	407-8100
M12	127	38	407-8045	M16	127	45	407-8105
M12	152	38	407-8050	M16	152	45	407-8110
M12	178	38	407-8055	M16	178	45	407-8115
M12	203	38	407-8060	M16	203	45	407-8120



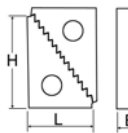
Step Clamps

For Bolt	L	B	H	Order No.
M10	63.5	25	12	407-8205
M10	101.6	25	15	407-8210
M10	152.4	28	19	407-8215
M12	63.5	28	12	407-8220
M12	101.6	31	19	407-8225
M12	152.4	31	22	407-8230
M14	63.5	28	12	407-8235
M14	101.6	31	19	407-8240
M14	152.4	31	22	407-8245
M16	101.6	38	19	407-8250
M16	152.4	38	22	407-8255



Step Blocks

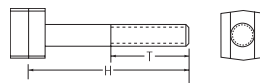
L	H	B	Order No.
19.05	27.30	25	407-6210
26.99	39.60	25	407-6220
63.50	96.00	25	407-6230
50.80	77.30	27	407-6240
76.20	115	27	407-6250



T Slot Bolts

T 形头螺栓

- Black Oxide finish.
- RC 36-40 Heat Treated
- 2A-UNC Thread.



Thread and Head Sizes

Thread	Head Size
3/8"-16	11/16"W x 3/16"
1/2-13	7/8W x 1/4
5/8-11	1-1/8W x 11/32
3/4-10	1-1/4W x 7/16

Length Under Head	Thread Length	Thread 3/8"-16 Order No.	Thread 1/2"-13 Order No.	Thread 5/8"-11 Order No.	Thread 3/4"-10 Order No.
1"	3/4"	407-3001			
1-1/2	1	407-3002	407-3022	407-3042	
2	1-1/2	407-3003	407-3023	407-3043	
2-1/2	1-1/2	407-3004	407-3024	407-3044	407-3064
3	1-1/2	407-3005	407-3025	407-3045	407-3065
3-1/2	2	407-3006	407-3026	407-3046	407-3066
4	2	407-3007	407-3027	407-3047	407-3067
4-1/2	2			407-3048	407-3068
5	2	407-3009	407-3029	407-3049	407-3069
5-1/2	2		407-3030	407-3050	407-3070
6	2-1/2	407-3011	407-3031	407-3051	407-3071
7	2		407-3032	407-3052	407-3072
8	2-1/2		407-3033	407-3053	407-3073
10	2-1/2			407-3054	407-3074
12	3			407-3055	407-3075

T-Slot Cleaner T型槽清洁板

A must for every machine shop



Order No. 400-0000

Adjusta Clamp 沟槽压板（铸造）

- Instant height adjustment without blocks or shims.
- One piece assembly allows quick setups and eliminates lost clamp pieces.
- Attachable brass shims protect machine table and workpiece.
- Swing clamp 90. in either direction for loading clearance.

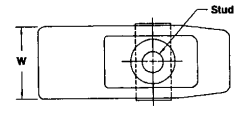
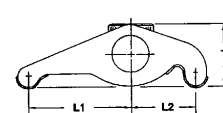
Clamp Body and Assembly

include one each of

Adjusta Clamp

Flat Washer, Spring,

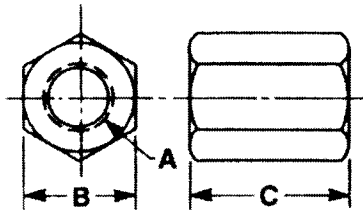
Flange Nut, T-Slot Bolt



Clamping Studs	Range	L1	L2	T	W	Body Only Order No.	Clamp Body and Assembly T Slot Bolt Order No.	Order No.
3/8"	Up to 1-3/4"	1-7/8"	1-1/8"	1"	1-1/4"	400-8050	3/8"-16x3"	400-8051
1/2	Up to 2-1/16	2-5/16	1-7/16	1-7/16	1-5/8	400-8052	1/2"-13x4"	400-8053
5/8	Up to 3	3-1/4	2"	1-7/8	1-7/8	400-8054	5/8"-11x5"	400-8055
3/4	Up to 4-1/4	3-1/2	2-1/8	2-1/4	2-5/8	400-8056	3/4"-10x6"	400-8057

Coupling Nuts 联接螺母

- Heated treated steel black oxide finished.

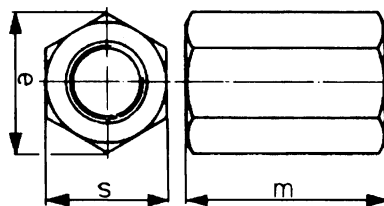


Thread Size A	Hex Size B	Length C	Order No.
1/4-20	1/2	5/8	407-4016
5/16"-18	9/16"	7/8"	407-4020
3/8-16	11/16	1	407-4024
1/2-13	7/8	1-1/4	407-4032
5/8-11	15/16	1-5/8	407-4040
3/4-10	1-1/8	1-7/8	407-4048
7/8-9	1-5/16	2-1/4	407-4056
1-8	1-5/8	2-1/2	407-4064

Metric Coupling Nuts 公制联接螺母

Material: European class 10.9 steel

For functional and safety purposes bolts (DIN 787) and/or studs (DIN 6379) to be joined should be screwed in on either side to half the length of the nut. Minimum thread reach should be 1 x diameter of thread.



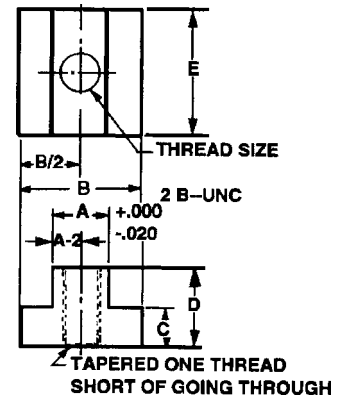
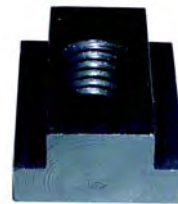
Thread Size	Hex Size S	E	Ht.	Order No.
M6	10	11.5	18	407-4106
M8	13	15.0	24	407-4108
M10	16	17.8	30	407-4110
M12	18	20.0	36	407-4112
M14	21	23.4	42	407-4114
M16	24	27.7	48	407-4116
M18	27	31.2	54	407-4118
M20	30	34.6	60	407-4120
M24	36	41.6	72	407-4124

T-Slot Nuts T 形螺母, 底部螺纹不通, 表面发黑

Medium Carbon Steel

An imperfect thread is left on the tapped T-Nut base to eliminate any danger of screwing the stud through the T-nut and damaging the table slot.

- Case Hardened
- Black oxide finish



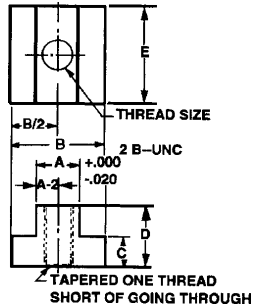
Thread Size	Table Slot A	Base W B	Slot Ht. C	OAH D	OAL E	Order No.
1/4"-20	5/16"	9/16"	3/16"	1/4"	9/16"	407-2241
1/4-20	3/8	9/16	15/64	3/8	9/16	407-2242
5/16-18	3/8	5/8	3/16	1/2	7/8	407-2202
5/16-18	7/16	11/16	7/32	1/2	7/8	407-2244
5/16-18	1/2	7/8	9/32	1/2	7/8	407-2245
3/8-16	7/16	11/16	7/32	1/2	7/8	407-2204
3/8-16	1/2	7/8	9/32	1/2	7/8	407-2206
3/8-16	9/16	7/8	11/32	5/8	1-1/8	407-2208
7/16-14	1/2	3/4	7/32	3/8	7/8	407-2249
7/16-14	1/2	7/8	9/32	1/2	7/8	407-2250
1/2-13	9/16	7/8	11/32	5/8	1-1/8	407-2210
1/2-13	5/8	1	11/32	5/8	1-1/8	407-2212
1/2-13	5/8	1-1/8	3/8	3/4	1-1/8	407-2253
1/2-13	11/16	1-1/8	7/16	3/4	1-1/4	407-2214
1/2-13	3/4	1-1/4	15/32	3/4	1-1/4	407-2255
5/8-11	11/16	1-1/8	7/16	3/4	1-1/4	407-2216
5/8-11	3/4	1-1/4	15/32	3/4	1-1/4	407-2218
5/8-11	13/16	1-1/4	9/16	1	1-1/2	407-2220
3/4-10	13/16	1-1/4	9/16	1	1-1/2	407-2222
3/4-10	7/8	1-1/2	9/16	1	1-1/2	407-2224
3/4-10	1	1-5/8	5/8	1	1-3/4	407-2226
3/4-10	1	1-3/4	3/4	1-1/2	1-3/4	407-2262
3/4-10	1-1/16	1-5/8	11/16	1-1/8	2	407-2228
7/8-9	1	1-5/8	5/8	1	1-3/4	407-2230
7/8-9	1-1/16	1-5/8	11/16	1-1/8	2	407-2265
7/8-9	1-1/8	1-3/4	3/4	1-1/2	2	407-2266
7/8-9	1-5/16	2	15/16	1-1/4	2	407-2267
1-8	1-1/16	1-5/8	11/16	1-1/8	2	407-2232
1-8	1-1/8	1-3/4	3/4	1-1/2	2	407-2269
1-8	1-1/4	2	6/8	1-1/4	2	407-2270
1-8	1-5/16	2	15/16	1-1/4	2	407-2271
1-1/4-7	1-3/8	2-1/2	1/1/8	1-3/4	2-1/2	407-2272

Metric T-Slot Nuts

Table Saver Design or Tapped Thru

公制T形螺母(中碳钢, 表面硬化), 螺纹不通

- Case Hardened
- Black oxide finish
- Size to fit all standard machine tables
- Tapped last thread is incomplete to prevent
- the stud from turning into the machine table



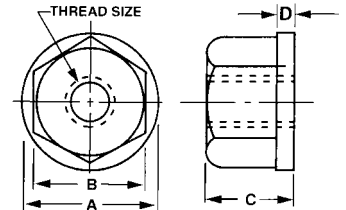
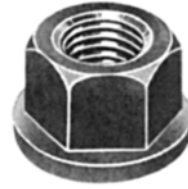
Thread Size	Table Slot A	Base W B	Slot Ht. C	OAH D	OAL E	Order No.
M6x1.0	8mm	14mm	6mm	10mm	19	407-2280
M6x1.0	10	16	6	11	22	407-2281
M8x1.25	10	16	6	11	22	407-2282
M10x1.5	12	19	7	13	22	407-2283
M10x1.5	14	22	9	16	29	407-2284
M12x1.75	14	22	9	16	29	407-2285
M12x1.75	16	25	9	16	29	407-2286
M12x1.75	17	29	11	19	32	407-2287
M16x2.0	18	29	11	19	32	407-2288
M16x2.0	20	32	14	25	38	407-2289
M20x2.5	22	35	14	25	38	407-2290
M24x3.0	27	41	18	29	51	407-2291
M24x3.0	33	51	24	32	51	407-2292

Flange Nuts

表面硬化发黑法兰螺母

- Case Hardened, Black Oxide Finish

Has a large bearing area to ensure full surface contact with clamping component. Available with choice of National Coarse or National Fine Threads.

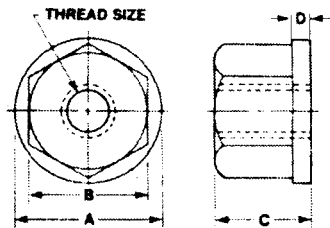


Thd. Size (In.)	Flange Dia. A(In.)	Hex Size B(In.)	Ht. C (In.)	Flange Thick D (In.)	Order No.
National Coarse					
1/4-20	5/8	1/2	5/16	3/32	407-5070
5/16-18	3/4	9/16	3/8	1/8	407-5071
3/8-16	7/8	11/16	1/2	1/8	407-5072
7/16-14	1	3/4	9/16	5/32	407-5073
1/2-13	1-1/8	7/8	11/16	3/16	407-5074
5/8-11	1-3/8	1-1/16	13/16	3/16	407-5075
3/4-10	1-5/8	1-1/4	1	1/4	407-5076
7/8-9	1-3/4	1-7/16	1-1/8	1/4	407-5077
1-8	2	1-5/8	1-1/4	1/4	407-5078
1-1/4-7	2-1/2	1-13/16	1-1/4	1/4	407-5079
National Fine					
1/4-28	5/8	1/2	5/16	3/32	407-5080
5/16-24	3/4	9/16	3/8	1/8	407-5081
3/8-24	7/8	11/16	1/2	1/8	407-5082
7/16-20	1	3/4	9/16	5/32	407-5083
1/2-20	1-1/8	7/8	11/16	3/16	407-5084
5/8-18	1-3/8	1-1/16	13/16	3/16	407-5085
3/4-16	1-5/8	1-1/4	1	1/4	407-5086
7/8-14	1-3/4	1-7/16	1-1/8	1/4	407-5087
1-14	2	1-5/8	1-1/4	1/4	407-5088

Flanged Nuts

带肩螺母

- Heat treated steel, black oxide finished.

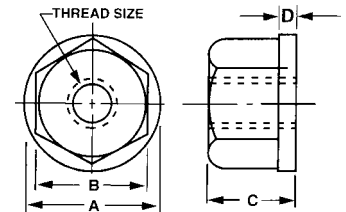


Thread Size	A	B	C	D	Order No.
5/16"-18	11/16"	9/16"	9/32"	1/8"	407-5020
3/8-16	53/64	21/32	33/64	1/8	407-5024
1/2-13	1-5/32	7/8	1/2	3/16	407-5032
5/8-11	1-5/16	15/16	5/8	3/16	407-5040
3/4-10	1-1/2	1-1/8	21/32	1/4	407-5048
7/8-9	1-3/4	1-5/16	3/4	1/4	407-5056
1-8	2	1-1/2	7/8	1/4	407-5064

Metric Flange Nuts

公制表面硬化发黑法兰螺母

- Case hardened
- Material: 12L14
- Black oxide finish



Thd. Size	Flange Dia. A(mm)	Hex Size B(mm)	Overall Ht. C (mm)	Flange Ht. D (mm)	Order No.
M6x1.00	16.0	10.0	8	2.00	407-5090
M8x1.25	19.0	13.0	10	2.50	407-5091
M10x1.50	22.0	17.0	13	3.00	407-5092
M12x1.75	27.0	19.0	17	4.00	407-5093
M16x2.00	33.0	24.0	21	5.00	407-5094
M20x2.50	40.0	30.0	25	6.00	407-5095
M24x3.0	49.0	36.0	32	7.00	407-5096

Threaded Studs 牙条

These headless externally-threaded studs are designed to provide a permanently mounted anchor. All studs have rolled thread to a commercial nut fit.

NEW

Type 18-8 Stainless Steel

- Excellent corrosion resistance
- Ideal for chemical, marine, and other environments where corrosion is a factor
- Min. tensile strength: 75,000 psi
- Can be mildly magnetic

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
2-56	1"	407-1019	10-24	3/4	407-1038	1/4-20	1-1/2	407-1052	1/2-13	2	407-1076
2-56	1-1/2	407-1020	10-24	1	407-1039	1/4-20	1-3/4	407-1053	1/2-13	2 1/2	407-1077
2-56	2	407-1021	10-24	1-1/2	407-1040	1/4-20	2	407-1054	1/2-13	3	407-1078
4-40	1/2	407-1001	10-24	2	407-1041	1/4-20	2-1/4	407-1055	1/2-13	3-1/2	407-1079
4-40	3/4	407-1022	10-24	2-1/2	407-1042	1/4-20	2-1/2	407-1056	1/2-13	4	407-1080
4-40	1	407-1023	10-24	3	407-1043	1/4-20	3	407-1057	1/2-13	4-1/2	407-1081
4-40	1-1/2	407-1024	10-24	4	407-1044	1/4-20	4	407-1058	1/2-13	5	407-1082
4-40	2	407-1025	10-24	5	407-1008	1/4-28	3/4	407-1102	1/2-13	5-1/2	407-1083
4-40	2-1/2	407-1026	10-24	6	407-1009	1/4-28	1	407-1103	1/2-13	6	407-1084
4-40	3	407-1002	10-32	3/4	407-1045	5/16-18	1	407-1059	5/8-11	5	407-1085
6-32	3/4	407-1027	10-32	1	407-1046	5/16-18	1-1/4	407-1060	5/8-11	2-1/2	407-1086
6-32	1	407-1028	10-32	1-1/2	407-1047	5/16-18	1-1/2	407-1061	5/8-11	3	407-1087
6-32	1-1/2	407-1029	10-32	2	407-1104	5/16-18	1-3/4	407-1062	5/8-11	3-1/2	407-1088
6-32	2	407-1030	10-32	2-1/2	407-1048	5/16-18	2	407-1063	5/8-11	4	407-1089
6-32	2-1/2	407-1031	10-32	1/2	407-1010	5/16-18	2-1/2	407-1064	5/8-11	4-1/2	407-1090
6-32	1/2	407-1003	10-32	3	407-1011	5/16-18	3	407-1065	5/8-11	5	407-1091
6-32	3	407-1004	10-32	4	407-1012	3/8-16	1	407-1066	5/8-11	6	407-1092
6-32	4	407-1005	10-32	5	407-1013	3/8-16	1-1/4	407-1067	5/8-11	7	407-1093
8-32	1/2	407-1006	10-32	6	407-1014	3/8-16	1-1/2	407-1068	3/4-10	2	407-1094
8-32	3/4	407-1032	1/4-28	1-1/2	407-1015	3/8-16	1-3/4	407-1069	3/4-10	3	407-1095
8-32	1	407-1033	1/4-28	2	407-1016	3/8-16	2	407-1070	3/4-10	3-1/2	407-1096
8-32	1-1/2	407-1034	1/4-28	3	407-1017	3/8-16	2-1/4	407-1071	3/4-10	4	407-1097
8-32	2	407-1035	1/4-28	3-1/2	407-1018	3/8-16	2-1/2	407-1072	3/4-10	5	407-1098
8-32	2-1/2	407-1036	1/4-20	3/4	407-1049	3/8-16	3	407-1073	3/4-10	6	407-1099
8-32	3	407-1037	1/4-20	1	407-1050	3/8-16	4	407-1074	3/4-10	7	407-1100
10-24	1/2	407-1007	1/4-20	1-1/4	407-1051	1/2-13	1-1/2	407-1075	3/4-10	8	407-1101

Type 316 Stainless Steel

- Non-magnetic material with Molybdenum
- Better corrosion resistance than type 18-8 Stainless Steel withstands many industrial chemicals and solutions
- Even pitting caused by chlorides is virtually eliminated
- Minimum tensile strength is 75,000 psi

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
10-32	3/4"	407-1201	1/4-20	2	407-1210	3/8-16	2	407-1219	1/2-13	6	407-1228
10-32	1	407-1202	5/16-18	1	407-1211	3/8-16	2-1/2	407-1220	5/8-11	3-1/2	407-1229
10-32	1-1/4	407-1203	5/16-18	1-1/4"	407-1212	3/8-16	3	407-1221	5/8-11	4	407-1230
10-32	1-1/2	407-1204	5/16-18	1-1/2	407-1213	1/2-13	2	407-1222	5/8-11	5	407-1231
10-32	2	407-1205	5/16-18	2	407-1214	1/2-13	2-1/2	407-1223	5/8-11	6	407-1232
1/4-20	3/4.	407-1206	3/8-16	1	407-1215	1/2-13	3	407-1224	3/4-10	3-1/2	407-1233
1/4-20	1	407-1207	3/8-16	1-1/4	407-1216	1/2-13	3-1/2	407-1225	3/4-10	4	407-1234
1/4-20	1-1/4	407-1208	3/8-16	1-1/2	407-1217	1/2-13	4	407-1226	3/4-10	5	407-1235
1/4-20	1-1/2	407-1209	3/8-16	1-3/4	407-1218	1/2-13	5	407-1227	3/4-10	6	407-1236

Alumimum

- Excellent resistance to corrosion from rain, sunlight and atmosphere
- Ideal for exterior use
- 1/3 the weight of plain steel
- Minimum tensile strength ranges from 42,000-55,000 psi

[illegible]

Threaded Studs Continued 牙条

Plain Steel, Zine Plated Steel

- Plain Steel, Class 5.8 Steel, Zine Plated Steel**
- Minimum tensile strength is 60.000 psi
 - AISI C-1010 to C-1020 Steel,
 - Zine plating retards corrosion

NEW



Plain Steel

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
2-56	1"	407-1529	10-24	3-1/2"	407-1617	1/4-20	7"	407-1645	3/8-24	1"	407-1672
2-56	1-1/2	407-1530	10-24	4	407-1618	1/4-20	8	407-1646	3/8-24	2	407-1673
2-56	2	407-1531	10-24	5	407-1619	1/4-28	3/4	407-1647	3/8-24	3	407-1556
2-56	3	407-1501	10-24	6	407-1620	1/4-28	1	407-1648	7/16-14	1-1/2	407-1674
4-40	1/2	407-1603	10-24	7	407-1511	1/4-28	1-1/2	407-1649	7/16-14	2	407-1675
4-40	3/4	407-1604	10-24	8	407-1512	1/4-28	2	407-1650	7/16-14	2-1/2	407-1676
4-40	1	407-1605	10-32	1/2	407-1621	1/4-28	2-1/4	407-1651	7/16-14	3	407-1677
4-40	1-1/2	407-1606	10-32	3/4	407-1622	1/4-28	2-1/2	407-1652	7/16-14	3-1/2	407-1678
4-40	2	407-1607	10-32	1	407-1623	1/4-28	3	407-1653	1/2-13	1	407-1679
4-40	2-1/2	407-1532	10-32	1-1/2	407-1624	5/16-18	3/4	407-1654	1/2-13	1-1/4	407-1680
4-40	3	407-1502	10-32	2	407-1625	5/16-18	1	407-1655	1/2-13	1-1/2	407-1681
6-32	1/2	407-1503	10-32	2-1/2	407-1626	5/16-18	1-1/4	407-1656	1/2-13	1-3/4	407-1557
6-32	3/4	407-1533	10-32	3	407-1627	5/16-18	1-1/2	407-1657	1/2-13	2	407-1565
6-32	1	407-1534	10-32	3-1/2	407-1628	5/16-18	2	407-1658	1/2-13	2-1/2	407-1559
6-32	1-1/2	407-1535	10-32	4	407-1629	5/16-18	2-1/4	407-1659	1/2-13	3	407-1567
6-32	2	407-1536	10-32	5	407-1513	5/16-18	2-1/2	407-1660	1/2-13	3-1/2	407-1518
6-32	2-1/2	407-1608	10-32	6	407-1514	5/16-18	3	407-1661	1/2-13	4	407-1561
6-32	3	407-1609	10-32	7	407-1515	5/16-18	3-1/2	407-1662	1/2-13	4-1/2	407-1519
6-32	4	407-1504	10-32	8	407-1516	5/16-18	4	407-1663	1/2-13	5	407-1557
6-32	5	407-1505	12-24	1-1/2	407-1544	5/16-18	5	407-1664	1/2-13	6	407-1563
6-32	6	407-1506	12-24	2	407-1545	5/16-18	6	407-1665	5/8-11	1-1/2	407-1520
8-32	1/2	407-1507	12-24	3	407-1546	5/16-18	7	407-1666	5/8-11	2	407-1521
8-32	3/4	407-1537	1/4-20	1/2	407-1630	5/16-18	8	407-1667	5/8	2-1/2	407-1522
8-32	1	407-1538	1/4-20	3/4	407-1631	3/8-16	3/4	407-1668	5/8-11	2-3/4	407-1564
8-32	1-1/2	407-1539	1/4-20	1	407-1632	3/8-16	1	407-1669	5/8-11	3	407-1560
8-32	2	407-1540	1/4-20	1-1/4	407-1633	3/8-16	1-1/4	407-1670	5/8-11	3-1/2	407-1566
8-32	2-1/2	407-1610	1/4-20	1-1/2	407-1634	3/8-16	1-1/2	407-1671	5/8-11	4	407-1562
8-32	3	407-1611	1/4-20	2	407-1635	3/8-16	2	407-1547	5/8-11	6	407-1568
8-32	4	407-1612	1/4-20	2-1/4	407-1636	3/8-16	2-1/4	407-1548	3/4-10	1-1/2	407-1523
8-32	5	407-1613	1/4-20	2-1/2	407-1637	3/8-16	2-1/2	407-1549	3/4-10	2	407-1524
10-24	1/2	407-1510	1/4-20	2-3/4	407-1638	3/8-16	2-3/4	407-1550	3/4-10	2-1/2	407-1525
10-24	3/4	407-1541	1/4-20	3	407-1639	3/8-16	3	407-1551	3/4-10	3	407-1526
10-24	1	407-1542	1/4-20	3-1/2	407-1640	3/8-16	3-1/2	407-1552	3/4-10	4	407-1527
10-24	1-1/2	407-1543	1/4-20	4	407-1641	3/8-16	4	407-1553	3/4-10	6	407-1528
10-24	2	407-1614	1/4-20	4-1/2	407-1642	3/8-16	5	407-1554			
10-24	2-1/2	407-1615	1/4-20	5	407-1643	3/8-16	6	407-1555			
10-24	3	407-1616	1/4-20	6	407-1644	3/8-16	7	407-1517			

Zine Plated Steel

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
8-32	1/2"	407-1801	10-24	3"	407-1810	1/4-20	3"	407-1815	3/8-16	3"	407-1822
8-32	3/4	407-1802	10-24	4	407-1811	5/16-18	1	407-1833	3/8-16	4	407-1823
8-32	1	407-1803	10-24	5	407-1812	5/16-18	1-1/4	407-1816	3/8-16	6	407-1824
8-32	1-1/2	407-1804	10-24	6	407-1813	5/16-18	1-1/2	407-1817	3/8-16	8	407-1825
8-32	2	407-1805	1/4-20	1	407-1830	5/16-18	2	407-1818	3/8-16	10	407-1826
8-32	2-1/2	407-1806	1/4-20	1-1/4	407-1831	5/16-18	3	407-1819	1/2-13	2	407-1827
8-32	3	407-1807	1/4-20	1-1/2	407-1832	3/8-16	1-1/2	407-1820	1/2-13	3	407-1828
10-24	1	407-1808	1/4-20	2	407-1814	3/8-16	2	407-1821	1/2-13	4	407-1829
10-24	2	407-1809									

Metric Plain Steel

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
M5x.8	16	407-1569	M6x1	50	407-1590	M12x1.75	30	407-1599	M16x2	80	407-1577
M5x0.8	20	407-1583	M8x1.25	25	407-1591	M12x1.75	40	407-1600	M16x2	100	407-1602
M5x0.8	25	407-1584	M8x1.25	30	407-1592	M12x1.75	50	407-1601	M20x2.5	50	407-1578
M5x0.8	30	407-1585	M8x1.25	40	407-1593	M12x1.75	60	407-1571	M20x2.5	60	407-1579
M6x1	16	407-1570	M8x1.25	50	407-1594	M12x1.75	70	407-1572	M20x2.5	70	407-1580
M6 x1	20	407-1586	M10x1.5	30	407-1595	M12x1.75	80	407-1573	M20x2.5	80	407-1581
M6x1	25	407-1587	M10x1.5	40	407-1596	M16x2	50	407-1574	M20x2.5	100	407-1582
M6x1	30	407-1588	M10x1.5	50	407-1597	M16x2	60	407-1575			
M6x1	40	407-1589	M10x1.5	60	407-1598	M16x2	70	407-1576			

Threaded Studs 牙条

Brass

- Non-magnetic material offers good corrosion resistance, especially in salt air atmosphere
- Minimum tensile strength is 60,000 psi

NEW

Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.	Thd. Sz	OAL	Order No.
2-56	3/4"	407-1401	6-32	1	407-1424	10-24	3/4	407-1431	10-32	3	407-1411
2-56	1	407-1417	6-32	1-1/2	407-1425	10-24	1	407-1432	10-32	4	407-1412
2-56	1-1/2	407-1418	6-32	2	407-1426	10-24	1-1/2	407-1433	1/4-20	1	407-1441
2-56	2	407-1444	6-32	3	407-1404	10-24	2	407-1434	1/4-20	1-1/2	407-1442
4-40	1/2	407-1402	8-32	1/2	407-1405	10-24	2-1/2	407-1435	1/4-20	2	407-1443
4-40	3/4	407-1419	8-32	3/4	407-1427	10-24	3	407-1408	1/4-20	3	407-1440
4-40	1	407-1420	8-32	1	407-1428	10-32	1/2	407-1409	1/4-20	4	407-1413
4-40	1-1/2	407-1421	8-32	1-1/2	407-1429	10-32	3/4	407-1436	5/16-18	1-1/2	407-1414
4-40	2	407-1422	8-32	2	407-1430	10-32	1	407-1437	5/16-18	2	407-1415
6-32	1/2	407-1403	8-32	3	407-1406	10-32	1-1/2	407-1438	5/16-18	3	407-1416
6-32	3/4	407-1423	10-24	1/2	407-1407	10-32	2	407-1410			

Clamping Studs 夹具螺栓

- Heat treated steel
- Black oxide finished
- Studs threaded the same on both ends



		Thread Length		Order No.
Thread	OAL	A		
1/4-20	1-1/2	1/2		407-0015
1/4-20	2	3/4		407-0020
1/4-20	2-1/2	1		407-0025
1/4-20	3	1		407-0030
1/4-20	3-1/2	1		407-0035
1/4-20	4	1		407-0040
1/4-20	4-1/2	1		407-0045
1/4-20	5	1		407-0050
1/4-20	5-1/2	1		407-0055
1/4-20	6	1		407-0060
1/4-20	6-1/2	1		407-0065
1/4-20	7	1		407-0070
1/4-20	7-1/2	1		407-0075
1/4-20	8	1		407-0080
5/16-18	1-1/2"	1/2"		407-0115
5/16-18	2	3/4		407-0120
5/16-18	2-1/2	1		407-0125
5/16-18	3	1-1/8		407-0130
5/16-18	3-1/2	1-1/8		407-0135
5/16-18	4	1-1/8		407-0140
5/16-18	4-1/2	1-1/8		407-0145
5/16-18	5	1-1/8		407-0150
5/16-18	5-1/2	1-1/8		407-0155
5/16-18	6	1-1/8		407-0160
5/16-8	6-1/2	1-1/8		407-0165
5/16-18	7	1-1/8		407-0170
5/16-18	7-1/2	1-1/8		407-0175
5/16-18	8	1-1/8		407-0180
3/8-16	1-1/2	1/2		407-0215
3/8-16	2	3/4		407-0220
3/8-16	2-1/2	1		407-0225
3/8-16	3	1-1/8		407-0230
3/8-16	3-1/2	1-1/4		407-0235
3/8-16	4	1-1/4		407-0240
3/8-16	4-1/2	1-1/4		407-0245
3/8-16	5	1-1/4		407-0250
3/8-16	5-1/2	1-1/4		407-0255
3/8-16	6	1-1/4		407-0260
3/8-16	6-1/2	1-1/4		407-0265

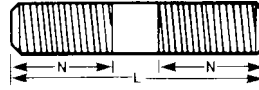
		Thread Length		Order No.
Thread	OAL	A		
3/8-16	7	1-1/4		407-0270
3/8-16	7-1/2	1-1/4		407-0275
3/8-16	8	1-1/4		407-0280
7/16-14	1-1/2	1/2		407-0815
7/16-14	2	3/4		407-0820
7/16-14	2-1/2	1		407-0825
7/16-14	3	1		407-0830
7/16-14	3-1/2	1-1/4		407-0835
7/16-14	4	1-3/8		407-0840
7/16-14	4-1/2	1-3/8		407-0845
7/16-14	5	1-3/8		407-0850
7/16-14	5-1/2	1-3/8		407-0855
7/16-14	6	1-3/8		407-0850
7/16-14	6-1/2	1-3/8		407-0865
7/16-14	7-1/2	1-3/8		407-0875
1/2-13	1-1/2"	1/2"		407-0315
1/2-13	2	3/4		407-0320
1/2-13	2-1/2	1		407-0325
1/2-13	3	1-1/8		407-0330
1/2-13	3-1/2	1-3/8		407-0335
1/2-13	4	1-1/2		407-0340
1/2-13	4-1/2	1-1/2		407-0345
1/2-13	5	1-1/2		407-0350
1/2-13	5-1/2	1-1/2		407-0355
1/2-13	6	1-1/2		407-0360
1/2-13	6-1/2	1-1/2		407-0365
1/2-13	7	1-1/2		407-0370
1/2-13	7-1/2	1-1/2		407-0375
1/2-13	8	1-1/2		407-0380
1/2-13	9	1-1/2		407-0385
1/2-13	10	1-1/2		407-0390
1/2-13	12	1-1/2		407-0392
1/2-13	14	1-1/2		407-0394
1/2-13	16	1-1/2		407-0396
5/8-11	1-1/2	1/2		407-0415
5/8-11	2	3/4		407-0420
5/8-11	2-1/2	1		407-0425
5/8-11	3	1-1/8		407-0430
5/8-11	3-1/2	1-3/8		407-0435

		Thread Length		Order No.
Thread	OAL	A		
5/8-11	4	1-5/8		407-0440
5/8-11	4-1/2	1-3/4		407-0445
5/8-11	5"	1-3/4"		407-0450
5/8-11	5-1/2	1-3/4		407-0455
5/8-11	6	1-3/4		407-0460
5/8-11	6-1/2	1-3/4		407-0465
5/8-11	7	1-3/4		407-0470
5/8-11	7-1/2	1-3/4		407-0475
5/8-11	8	1-3/4		407-0480
5/8-11	9	1-3/4		407-0485
5/8-11	10	1-3/4		407-0490
5/8-11	12	1-3/4		407-0492
5/8-11	14	1-3/4		407-0494
5/8-11	16	1-3/4		407-0495
5/8-11	18	1-3/4		407-0496
5/8-11	20	1-3/4		407-0497
5/8-11	22	1-3/4		407-0498
5/8-11	24	1-3/4		407-0499
3/4-10	3	1		407-0530
3/4-10	3-1/2	1-1/4		407-0535
3/4-10	4	1-5/8		407-0540
3/4-10	4-1/2	1-7/8		407-0545
3/4-10	5	2		407-0550
3/4-10	5-1/2	2		407-0555
3/4-10	6	2		407-0560
3/4-10	6-1/2	2		407-0565
3/4-10	7	2		407-0570
3/4-10	7-1/2	2		407-0575
3/4-10	8	1-3/4		407-0578
3/4-10	8	2		407-0580
3/4-10	9	2		407-0585
3/4-10	10	2		407-0590
3/4-10	12	2		407-0591
3/4-10	14	2		407-0592
3/4-10	16	2		407-0593
3/4-10	18	2		407-0594
3/4-10	20	2		407-0595
3/4-10	22	2		407-0596
3/4-10	24	2		407-0597

		Thread Length		Order No.
Thread	OAL	A		
7/8-9	3"	1		407-0630
7/8-9	3-1/2	1-1/4		407-0635
7/8-9	4	1-1/2		407-0640
7/8-9	4-1/2	1-3/4		407-0645
7/8-9	5	2		407-0650
7/8-9	5-1/2	2-1/4		407-0655
7/8-9	6	2-1/4		407-0660
7/8-9	6-1/2	2-1/4		407-0665
7/8-9	7	2-1/4		407-0670
7/8-9	7-1/2	2-1/4		407-0675
7/8-9	8	2-1/4		407-0680
7/8-9	9	2-1/4		407-0685
7/8-9	10	2-1/4		407-0690
7/8-9	12	2-1/4		407-0691
7/8-9	14	2-1/4		407-0692
7/8-9	16	2-1/4		407-0693
7/8-9	18	2-1/4		407-0694
7/8-9	20	2-1/4		407-0695
7/8-9	22	2-1/4		407-0696
7/8-9	24	2-1/4		407-0697
1-8	3	1		407-0730
1-8	3-1/2	1-1/4		407-0735
1-8	4	1-1/2		407-0740
1-8	4-1/2	1-3/4		407-0745
1-8	5	2		407-0750
1-8	5-1/2	2-1/4		407-0755
1-8	6	2-1/2		407-0760
1-8	6-1/2	2-1/2		407-0765
1-8	7-1/2	2-1/2		407-0775
1-8	8	2-1/2		407-0780
1-8	9	2-1/2		407-0785
1-8	10	2-1/2		407-0790
1-8	12	2-1/2		407-0791
1-8	14	2-1/2		407-0792
1-8	16	2-1/2		407-0793
1-8	18	2-1/2		407-0794
1-8	20	2-1/2		407-0795
1-8	22	2-1/2		407-0796
1-8	24	2-1/2		407-0797

Metric Studs 公制双头螺杆

- Rolled Thread
- Material: Stressproof
- Tensile Strength: 860 MPa¹/125,000 psi
- Yied Strength: 690 MPa/100,000 psi
- Black Oxide Finish
- ¹Mage Pascals



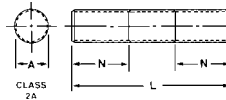
Thread Size	OAL L(mm)	Thread Length N(mm)	Order No.
M6x1.0	50	20	407-8130
M6x1.0	65	20	407-8131
M6x1.0	80	27	407-8132
M6x1.0	95	27	407-8133
M6x1.0	110	31	407-8134
M6x1.0	140	35	407-8135
M6x1.0	150	35	407-8136
M6x1.0	175	35	407-8137
M6x1.0	200	35	407-8138
M8x1.25	50	20	407-8139
M8x1.25	65	20	407-8140
M8x1.25	80	27	407-8141
M8x1.25	95	31	407-8142
M8x1.25	110	31	407-8143
M8x1.25	140	35	407-8144
M8x1.25	150	35	407-8145
M8x1.25	175	35	407-8146
M8x1.25	200	35	407-8147
M10x1.5	50	20	407-8148
M10x1.5	65	20	407-8149
M10x1.5	80	27	407-8150

Thread Size	OAL L(mm)	Thread Length N(mm)	Order No.
M10x1.5	95	31	407-8151
M10x1.5	110	35	407-8152
M10x1.5	125	35	407-8153
M10x1.5	140	35	407-8154
M10x1.5	150	35	407-8155
M10x1.5	175	35	407-8156
M10x1.5	200	35	407-8157
M12x1.75	50	20	407-8158
M12x1.75	65	20	407-8159
M12x1.75	80	27	407-8160
M12x1.75	95	31	407-8161
M12x1.75	110	39	407-8162
M12x1.75	125	39	407-8163
M12x1.75	140	39	407-8164
M12x1.75	150	39	407-8165
M12x1.75	175	39	407-8166
M12x1.75	200	39	407-8167
M16x2.0	80	27	407-8168
M16x2.0	95	31	407-8169
M16x2.0	110	47	407-8170
M16x2.0	125	47	407-8171

Thread Size	OAL L(mm)	Thread Length N(mm)	Order No.
M16x2.0	150	47	407-8172
M16x2.0	175	47	407-8173
M16x2.0	200	47	407-8174
M16x2.0	250	47	407-8175
M16x2.0	300	47	407-8176
M20x2.5	80	27	407-8177
M20x2.5	95	31	407-8178
M20x2.5	110	47	407-8179
M20x2.5	125	55	407-8180
M20x2.5	150	55	407-8181
M20x2.5	175	55	407-8182
M20x2.5	200	55	407-8183
M20x2.5	250	55	407-8184
M20x2.5	300	63	407-8185
M24x3.0	100	55	407-8186
M24x3.0	150	39	407-8187
M24x3.0	125	55	407-8188
M24x3.0	175	63	407-8189
M24x3.0	200	63	407-8190
M24x3.0	250	63	407-8191
M24x3.0	300	63	407-8192

Alloy Steel Studs 合金钢双头螺杆

- Material: Stressproof
- Tensile strength: (125,000 psi min.)
- Yield: (100,000 psi min.)
- Finish: Black oxide
- Cut thread



Thread Size A(In.)	OAL L(In.)	Thread Length N(In.)	Order No.
1/4-20	1-1/2	7/16	407-0900
1/4-20	2	11/16	407-0901
1/4-20	2-1/2	15/16	407-0902
1/4-20	3	1	407-0903
1/4-20	3-1/2	1	407-0904
1/4-20	4	1	407-0905
5/16-18	1-1/2	7/16	407-0906
5/16-18	2	11/16	407-0907
5/16-18	2-1/2	15/16	407-0908
5/16-18	3	1-1/8	407-0909
5/16-18	3-1/3	1-1/8	407-0910
5/16-18	4	1-1/8	407-0911
3/8-16	1-1/2	3/8	407-0912
3/8-16	2	5/8	407-0913
3/8-16	2-1/2	7/8	407-0914
3/8-16	3	1-1/8	407-0915
3/8-16	3-1/2	1-1/4	407-0916
3/8-16	4	1-1/4	407-0917
3/8-16	4-1/2	1-1/4	407-0918
3/8-16	5	1-1/4	407-0919
3/8-16	5-1/2	1-1/4	407-0920
3/8-16	6	1-1/4	407-0921
3/8-16	7	1-1/4	407-0922
3/8-16	8	1-1/4	407-0923
1/2-13	2	5/8	407-0924

Thread Size A(In.)	OAL L(In.)	Thread Length N(In.)	Order No.
1/2-13	2-1/2	7/8	407-0925
1/2-13	3	1-1/8	407-0926
1/2-13	3-1/2	1-3/8	407-0927
1/2-13	4	1-1/2	407-0928
1/2-13	4-1/2	1-1/2	407-0929
1/2-13	5	1-1/2	407-0930
1/2-13	5-1/2	1-1/2	407-0931
1/2-13	6	1-1/2	407-0932
1/2-13	7	1-1/2	407-0933
1/2-13	8	1-1/2	407-0934
1/2-13	9	1-1/2	407-0935
1/2-13	10	1-1/2	407-0936
1/2-13	12	1-1/2	407-0937
5/8-11	2-1/2	13/16	407-0938
5/8-11	3	1-1/16	407-0939
5/8-11	3-1/2	1-5/16	407-0940
5/8-11	4	1-9/16	407-0941
5/8-11	4-1/2	1-3/4	407-0942
5/8-11	5	1-3/4	407-0943
5/8-11	5-1/2	1-3/4	407-0944
5/8-11	6	1-3/4	407-0945
5/8-11	7	1-3/4	407-0946
5/8-11	8	1-3/4	407-0947
5/8-11	9	1-3/4	407-0948
5/8-11	10	1-3/4	407-0949

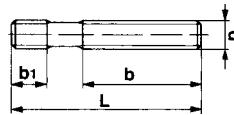
Thread Size A(In.)	OAL L(In.)	Thread Length N(In.)	Order No.
5/8-11	12	1-3/4	407-0950
3/4-10	3	5/16	407-0951
3/4-10	3-1/2	1-3/16	407-0952
3/4-10	4	1-7/16	407-0953
3/4-10	4-1/2	1-11/16	407-0954
3/4-10	5	1-15/16	407-0955
3/4-10	5-1/2	2	407-0956
3/4-10	6	2	407-0957
3/4-10	7	2	407-0958
3/4-10	8	2	407-0959
3/4-10	10	2	407-0960
3/4-10	12	2	407-0961
7/8-9	4	1-13/32	407-0962
7/8-9	5	1-29/32	407-0963
7/8-9	6	2-1/4	407-0964
7/8-9	8	2-1/4	407-0965
7/8-9	10	2-1/4	407-0966
7/8-9	12	2-1/4	407-0967
1-8	4	1-3/8	407-0968
1-8	5	1-7/8	407-0969
1-8	6	2-3/8	407-0970
1-8	8	2-1/2	407-0971
1-8	10	2-1/2	407-0972
1-8	12	2-1/2	407-0973

"Din" Metric Double-End Threaded Studs DIN标公制双头螺杆

DIN 6379 Studs

- Threads are rolled
- M6-M12 European class 10.9 steel
- M14-M42 European class 8.8 steel

Used in conjunction with DIN 508 T-slot nuts on machine tools with T-slot tables.



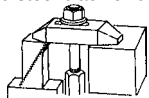
Thread Size	OAL (mm)	b (mm)	b1 (mm)	Order No.
M6x1.0	32	16	9	407-8260
M6x1.0	40	20	9	407-8261
M6x1.0	50	30	9	407-8262
M6x1.0	63	40	9	407-8263
M6x1.0	80	50	9	407-8264
M8x1.25	40	20	11	407-8265
M8x1.25	63	40	11	407-8266
M8x1.25	80	50	11	407-8267

Thread Size	OAL (mm)	b (mm)	b1 (mm)	Order No.
M8x1.25	100	63	11	407-8268
M8x1.25	160	100	11	407-8269
M10x1.50	50	25	12	407-8270
M10x1.50	80	50	13	407-8271
M10x1.50	100	75	13	407-8272
M10x1.50	160	100	13	407-8273
M12x1.75	63	32	15	407-8274
M12x1.75	80	50	15	407-8275

Thread Size	OAL (mm)	b (mm)	b1 (mm)	Order No.
M12x1.75	100	63	15	407-8276
M12x1.75	160	100	15	407-8277
M12x1.75	200	125	15	407-8278
M14x2.0	100	63	17	407-8279
M14x2.0	160	100	17	407-8280
M14x2.0	250	160	17	407-8281
M16x2.0	100	63	19	407-8282
M16x2.0	125	75	19	407-8283

Plain Clamps 平形压板

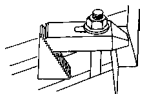
Heat treated steel black oxide finished



Bolt Size	Length	Width	Thickness	Order No.
5/16 or 3/8"	2-1/2"	1"	1/2"	410-7002
5/16 or 3/8"	4	1	5/8	410-7004
5/16 or 3/8"	6	1-1/8	3/4	410-7006
1/2	2-1/2	1-1/8	1/2	410-7008
1/2	4	1-1/4	3/4	410-7010
1/2	6	1-1/4	7/8	410-7012
5/8	2-1/2	1-1/4	5/8	410-7014
5/8	4	1-1/2	3/4	410-7016
5/8	6	1-1/2	7/8	410-7018
3/4	4	1-1/2	3/4	410-7020
3/4	6	1-1/2	1	410-7022
3/4	8	1-3/4	1-1/8	410-7024
1	6	2	1-1/4	410-7026
1	8	2	1-3/8	410-7028
1	10	2	1-1/2	410-7030

Step Clamps 台阶压板

- Step clamp teeth are matched to fit any size step blocks.
- Heat treated steel black oxide finished.
- 1/2" & 5/8" bolt size clamps forged & hardened.



Bolt Size	Length	Width	Thickness	Order No.
5/16 or 3/8"	2-1/2"	1"	1/2"	410-7702
5/16 or 3/8"	4	1	5/8	410-7704
5/16 or 3/8"	6	1-1/8	3/4	410-7706
1/2	2-1/2	1-1/8	1/2	410-7708
1/2	4	1-1/4	3/4	410-7710
1/2	6	1-1/4	7/8	410-7712
5/8	2-1/2	1-1/4	5/8	410-7714
5/8	4	1-1/2	3/4	410-7716
5/8	6	1-1/2	7/8	410-7718
3/4	4	1-1/2	3/4	410-7720
3/4	6	1-1/2	1	410-7722
3/4	8	1-3/4	1-1/8	410-7724
7/8 or 1	6	2	1-1/4	410-7726
7/8 or 1	8	2	1-3/8	410-7728
7/8 or 1	10	2	1-1/2	410-7730

Step Blocks 成对三角钢压板

- Solid in pairs only.
- Standard steel and powder casting.



Standard, 1" Wide

Capacity of Full Block	Height Of 1/2 Block	Powder Casting Order No.	Steel Order No.
3/4 to 1-1/2"	1-1/8"	407-6110	407-6010
1-1/8 to 2-1/2"	1-3/4"	407-6120	407-6020
2-1/2 to 6"	3-7/8"	407-6130	407-6030

Heavy Duty, 1-1/2" Wide

Capacity of Full Block	Height Of 1/2 Block	Powder Casting Model No	Steel Order No.
1-1/2 to 3-3/4"	2-1/2"	407-6140	407-6040
2-1/2 to 6"	3-7/8"	407-6150	407-6050
3-1/2 to 9"	5-1/2"	407-6160	407-6060

Heavy Duty, 2" Wide

Capacity of Full Block	Height Of 1/2 Block	Powder Casting Order No	Steel Order No.
1-1/2 to 3-3/4"	2-1/2"	407-6170	407-6070
2-1/2 to 6"	3-7/8"	407-6180	407-6080
3-1/2 to 9"	5-1/2"	407-6190	407-6090

Fixture Clamp 夹紧螺栓

The Fixture Clamp is made up of two simple components: a hardened steel socket cap screw with an offset head & a hexagonal washer.

- Small size allows more parts per load.
- Simple design keeps cost low.



Screw Size & Pitch	Thread Length	Hex Size	Hex Height	Total Distance of Movement	Maximum Holding Force	Key Size	Order No.
#32-8	3/8"	5/16"	.110"	.030"	205lbs	5/64"	407-0205
1/4-20	1/2	5/8	3/16	.040	800	1/8	407-0206
5/16-24	1/2	13/16	3/16	.040	750	3/16	407-0207
3/8-16	3/4	13/16	1/4	.050	2000	3/16	407-0208
1/2-13	1	1	3/8	.100	4000	5/16	407-0209
5/8-11	1-1/4	3/16	1/2	.100	6000	3/8	407-0210

T-Slot Bolts T 形螺栓

Used for setting up work on planers, shapers, milling machines or similar applications.

Heads sized to fit in table slot giving more bearing surface.

- Hot forged from C-1045 steel
- Class 3A smooth cut threads
- Cannot twist or jam in slots
- Black oxide finish



Thread Size	L under Head	Head Slot	WxH	Order No.
3/8"-16	1"	3/8"	11/16x3/16"	407-3200
3/8-16	1-1/4	3/8	11/16x3/16	407-3202
3/8-16	1-1/2	3/8	11/16x3/16	407-3204
3/8-16	1-3/4	3/8	11/16x3/16	407-3206
3/8-16	2	3/8	11/16x3/16	407-3208
3/8-16	2-1/4	3/8	11/16x3/16	407-3210
3/8-16	1-1/2	3/8	11/16x3/16	407-3212
3/8-16	2-3/4	3/8	11/16x3/16	407-3214
3/8-16	2	3/8	11/16x3/16	407-3216
3/8-16	3-1/2	3/8	11/16x3/16	407-3218
3/8-16	4	3/8	11/16x3/16	407-3220
3/8-16	4-1/2	3/8	11/16x3/16	407-3222
3/8-16	5	3/8	11/16x3/16	407-3224
3/8-16	5-1/2	3/8	11/16x3/16	407-3226
3/8-16	6	3/8	11/16x3/16	407-3228
3/8-16	7	3/8	11/16x3/16	407-3230
3/8-16	8	3/8	11/16x3/16	407-3232
3/8-16	9	3/8	11/16x3/16	407-3234
3/8-16	10	3/8	11/16x3/16	407-3236
3/8-16	12	3/8	11/16x3/16	407-3238
1/2-13	1-1/4	1/2	7/8x9/32	407-3240
1/2-13	1-1/2	1/2	7/8x9/32	407-3242
1/2-13	1-3/4	1/2	7/8x9/32	407-3244
1/2-13	2	1/2	7/8x9/32	407-3246
1/2-13	2-1/4	1/2	7/8x9/32	407-3248
1/2-13	2-1/2	1/2	7/8x9/32	407-3250
1/2-13	2-3/4	1/2	7/8x9/32	407-3252
1/2-13	3	1/2	7/8x9/32	407-3254
1/2-13	3-1/2	1/2	7/8x9/32	407-3256
1/2-13	4	1/2	7/8x9/32	407-3258
1/2-13	4-1/2	1/2	7/8x9/32	407-3260
1/2-13	5	1/2	7/8x9/32	407-3262
1/2-13	5-1/2	1/2	7/8x9/32	407-3264
1/2-13	6	1/2	7/8x9/32	407-3266
1/2-13	7	1/2	7/8x9/32	407-3268
1/2-13	8	1/2	7/8x9/32	407-3270
1/2-13	9	1/2	7/8x9/32	407-3272
1/2-13	10	1/2	7/8x9/32	407-3274
1/2-13	12	1/2	7/8x9/32	407-3276
1/2-13	14	1/2	7/8x9/32	407-3278
5/8-11	1-1/2	5/8	1-3/32x11/32	407-3280
5/8-11	2	5/8	1-3/32x11/32	407-3282
5/8-11	2-1/4	5/8	1-3/32x11/32	407-3284
5/8-11	2-1/2	5/8	1-3/32x11/32	407-3286
5/8-11	2-3/4	5/8	1-3/32x11/32	407-3288
5/8-11	3	5/8	1-3/32x11/32	407-3290
5/8-11	3-1/2	5/8	1-3/32x11/32	407-3292
5/8-11	4	5/8	1-3/32x11/32	407-3294

Thread Size	L under Head	Head Slot	WxH	Order No.
5/8"-11	4-1/2"	5/8"	1-3/32x11/32"	407-3296
5/8-11	5	5/8	1-3/32x11/32	407-3298
5/8-11	5-1/2	5/8	1-3/32x11/32	407-3300
5/8-11	6	5/8	1-3/32x11/32	407-3302
5/8-11	8	5/8	1-3/32x11/32	407-3304
5/8-11	9	5/8	1-3/32x11/32	407-3306
5/8-11	10	5/8	1-3/32x11/32	407-3308
5/8-11	12	5/8	1-3/32x11/32	407-3310
5/8-11	14	5/8	1-3/32x11/32	407-3312
5/8-11	16	5/8	1-3/32x11/32	407-3314
5/8-11	18	5/8	1-3/32x11/32	407-3316
5/8-11	20	5/8	1-3/32x11/32	407-3318
5/8-11	24	5/8	1-3/32x11/32	407-3320
5/8-11	30	5/8	1-3/32x11/32	407-3322
3/4-10	2	3/4	1-1/4x7/16	407-3324
3/4-10	2-1/2	3/4	1-1/4x7/16	407-3326
3/4-10	3	3/4	1-1/4x7/16	407-3328
3/4-10	3-1/2	3/4	1-1/4x7/16	407-3330
3/4-10	4	3/4	1-1/4x7/16	407-3332
3/4-10	4-1/2	3/4	1-1/4x7/16	407-3334
3/4-10	5	3/4	1-1/4x7/16	407-3336
3/4-10	5-1/2	3/4	1-1/4x7/16	407-3338
3/4-10	6	3/4	1-1/4x7/16	407-3340
3/4-10	7	3/4	1-1/4x7/16	407-3342
3/4-10	8	3/4	1-1/4x7/16	407-3344
3/4-10	9	3/4	1-1/4x7/16	407-3346
3/4-10	10	3/4	1-1/4x7/16	407-3348
3/4-10	12	3/4	1-1/4x7/16	407-3350
3/4-10	14	3/4	1-1/4x7/16	407-3352
3/4-10	16	3/4	1-1/4x7/16	407-3354
3/4-10	18	3/4	1-1/4x7/16	407-3356
3/4-10	20	3/4	1-1/4x7/16	407-3358
3/4-10	24	3/4	1-1/4x7/16	407-3360
3/4-10	2-1/2	7/8	1-1/2x9/16	407-3362
3/4-10	3	7/8	1-1/2x9/16	407-3364
3/4-10	3-1/2	7/8	1-1/2x9/16	407-3366
3/4-10	4	7/8	1-1/2x9/16	407-3368
3/4-10	4-1/2	7/8	1-1/2x9/16	407-3370
3/4-10	5	7/8	1-1/2x9/16	407-3372
3/4-10	5-1/2	7/8	1-1/2x9/16	407-3374
3/4-10	6	7/8	1-1/2x9/16	407-3376
3/4-10	7	7/8	1-1/2x9/16	407-3378
3/4-10	8	7/8	1-1/2x9/16	407-3380
3/4-10	9	7/8	1-1/2x9/16	407-3382
3/4-10	10	7/8	1-1/2x9/16	407-3384
3/4-10	12	7/8	1-1/2x9/16	407-3386
3/4-10	14	7/8	1-1/2x9/16	407-3388
3/4-10	16	7/8	1-1/2x9/16	407-3390

Thread Size	L under Head	Head Slot	WxH	Order No.
3/4"-10	18"	7/8"	1-1/2x9/16"	407-3392
3/4-10	20	7/8	1-1/2x9/16	407-3394
3/4-10	24	7/8	1-1/2x9/16	407-3396
3/4-10	30	7/8	1-1/2x9/16	407-3398
7/8-9	3	7/8	1-1/2x9/16	407-3400
7/8-9	4	7/8	1-1/2x9/16	407-3402
7/8-9	5	7/8	1-1/2x9/16	407-3404
7/8-9	6	7/8	1-1/2x9/16	407-3406
7/8-9	7	7/8	1-1/2x9/16	407-3408
7/8-9	8	7/8	1-1/2x9/16	407-3410
7/8-9	9	7/8	1-1/2x9/16	407-3412
7/8-9	10	7/8	1-1/2x9/16	407-3414
7/8-9	12	7/8	1-1/2x9/16	407-3416
7/8-9	14	7/8	1-1/2x9/16	407-3418
7/8-9	16	7/8	1-1/2x9/16	407-3420
7/8-9	18	7/8	1-1/2x9/16	407-3422
7/8-9	20	7/8	1-1/2x9/16	407-3424
7/8-9	24	7/8	1-1/2x9/16	407-3426
7/8-9	30	7/8	1-1/2x9/16	407-3428
7/8-9	3	1	1-3/4x5/8	407-3430
7/8-9	4	1	1-3/4x5/8	407-3432
7/8-9	5	1	1-3/4x5/8	407-3434
7/8-9	6	1	1-3/4x5/8	407-3436
7/8-9	7	1	1-3/4x5/8	407-3438
7/8-9	8	1	1-3/4x5/8	407-3440
7/8-9	9	1	1-3/4x5/8	407-3442
7/8-9	10	1	1-3/4x5/8	407-3444
7/8-9	12	1	1-3/4x5/8	407-3446
7/8-9	14	1	1-3/4x5/8	407-3448
7/8-9	16	1	1-3/4x5/8	407-3450
7/8-9	18	1	1-3/4x5/8	407-3452
7/8-9	20	1	1-3/4x5/8	407-3454
7/8-9	24	1	1-3/4x5/8	407-3456
7/8-9	30	1	1-3/4x5/8	407-3458
1-8	3	1	1-3/4x5/8	407-3460
1-8	4	1	1-3/4x5/8	407-3462
1-8	5	1	1-3/4x5/8	407-3464
1-8	6	1	1-3/4x5/8	407-3466
1-8	7	1	1-3/4x5/8	407-3468
1-8	8	1	1-3/4x5/8	407-3470
1-8	9	1	1-3/4x5/8	407-3472
1-8	10	1	1-3/4x5/8	407-3474
1-8	12	1	1-3/4x5/8	407-3476
1-8	14	1	1-3/4x5/8	407-3478
1-8	16	1	1-3/4x5/8	407-3480
1-8	18	1	1-3/4x5/8	407-3482
1-8	20	1	1-3/4x5/8	407-3484
1-8	24	1	1-3/4x5/8	407-3486

Metric T-Slot Bolts-DIN 787

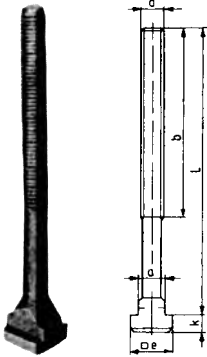
DIN 787 公制 T 形槽螺栓

Forged steel with milled T-slot guide faces and rolled thread.

T-Slot Bolts offer clamps, washers and nuts a guide for secure clamping.

Used on machine tools with T-slot tables or grooves.

- M6-M12, heat treated European class 10.9 steel
- M14-M42, heat treated European class 8.8 steel

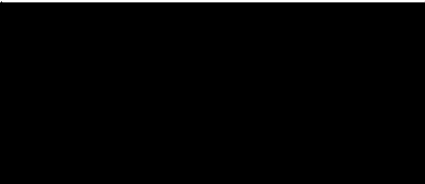


Thd. Size							Thd. Size						
Depth	Length	b	a	e	k	Order No.	Depth	Length	b	a	e	k	Order No.
M6	25	15	5.7	10	4	407-3500	M12	80	55	11.7	18	7	407-3511
M6	40	28	5.7	10	4	407-3501	M12	125	75	11.7	18	7	407-3512
M6	63	40	5.7	10	4	407-3502	M12	50	35	13.7	22	8	407-3513
M8	32	22	7.7	13	6	407-3503	M12	63	45	13.7	22	8	407-3514
M8	50	35	7.7	13	6	407-3504	M12	125	75	13.7	22	8	407-3515
M8	80	50	7.7	13	6	407-3505	M16	63	15	15.7	25	9	407-3516
M10	40	30	9.7	15	6	407-3506	M16	380	55	15.7	25	9	407-3517
M10	63	45	9.7	15	6	407-3507	M16	63	45	17.7	28	10	407-3518
M10	100	60	9.7	15	6	407-3508	M16	100	65	17.7	28	10	407-3519
M12	50	35	11.7	18	7	407-3509	M20	100	65	21.7	35	14	407-3520
M12	63	40	11.7	18	7	407-3510	M20	125	85	21.7	35	14	407-3521

T Bolts

方头 T 形螺栓

- Grade 8.
- Black Oxide finish.
- RC 36-40 Heat Treated.
- 2A-UNC Thread.

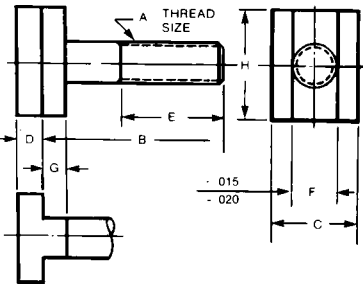


Length Under Head (L)	Thread Length (T)	Thread 3/8"-16	Thread 1/2"-13	Thread 5/8"-11	Thread 3/4"-10	Thread 1"-8
		B 1/4 C 11/16 Order No.	B 5/16 C 7/8 Order No.	B 13/32 C 1-1/8 Order No.	B 17/32 C 1-5/16 Order No.	B 11/16 C 1-11/16 Order No.
1-1/2"	1.25"	407-2450	407-2459	407-2471		
2	1.75	407-2451	407-2460	407-2472		
2-1/2	2.00	407-2452	407-2461	407-2473		
3	2.00	407-2453	407-2462	407-2474	407-2481	
3-1/2	2.00	407-2454	407-2463	407-2475	407-2482	
4	2.00	407-2455	407-2464	407-2476	407-2483	407-2484
4-1/2	2.00	407-2456	407-2465	407-2477		
5	2.00	407-2457	407-2466	407-2478		407-2485
5-1/2	2.00		407-2467			
6	2.50	407-2458	407-2468	407-2479		407-2486
8	2.50		407-2469	407-2480		407-2487
10	3.00		407-2470			407-2488
11	3.00					407-2489
12	4.00					407-2490
14	1.00					407-2491

T Slot Bolts

T 形螺栓

- Black Oxide finish.
- RC 32-36 Heat Treated.
- 2A-UNC Thread.



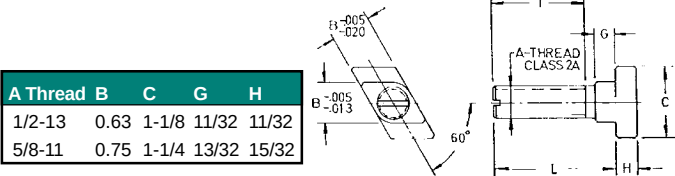
Thread	A	B	C	D	E	F	G	H	Order No.
1/2"-13	2"	7/8"	5/16"	1"	1/2"	9/32"	1-1/4"		407-2400
1/2-13	2-1/2	7/8	5/16	1-1/4	1/2	9/32	1-1/4		407-2401
1/2-13	3	7/8	5/16	1-1/2	1/2	9/32	1-1/4		407-2402
1/2-13	3-1/2	7/8	5/16	1-1/2	1/2	9/32	1-1/4		407-2403
1/2-13	4	7/8	5/16	1-1/2	1/2	9/32	1-1/4		407-2404
1/2-13	5	7/8	5/16	2	1/2	9/32	1-1/4		407-2405
1/2-13	6	7/8	5/16	2	1/2	9/32	1-1/4		407-2406
1/2-13	8	7/8	5/16	2	1/2	9/32	1-1/4		407-2407
5/8-11	2	1-1/8	3/8	1-1/4	5/8	3/8	1-1/2		407-2408
5/8-11	2-1/2	1-1/8	3/8	1-1/4	5/8	3/8	1-1/2		407-2409
5/8-11	3	1-1/8	3/8	1-1/2	5/8	3/8	1-1/2		407-2410

Thread									Order No.
A	B	C	D	E	F	G	H		
5/8-11	3-1/2	1-1/8	3/8	1-1/2	5/8	3/8	1-1/2	407-2411	
5/8-11	4	1-1/8	3/8	1-1/2	5/8	3/8	1-1/2	407-2412	
5/8-11	5	1-1/8	3/8	1-1/2	5/8	3/8	1-1/2	407-2413	
5/8-11	6	1-1/8	3/8	1-1/2	5/8	3/8	1-1/2	407-2414	
5/8-11	8	1-1/8	3/8	3	5/8	3/8	1-1/2	407-2415	
5/8-11	10	1-1/8	3/8	3	5/8	3/8	1-1/2	407-2416	
5/8-11	12	1-1/8	3/8	3	5/8	3/8	1-1/2	407-2417	
3/4"-10	2-1/2"	1-5/16"	7/16"	1-1/4"	3/4"	7/16"	1-3/4"	407-2418	
3/4-10	3	1-5/16	7/16	1-1/4	3/4	7/16	1-3/4	407-2419	
3/4-10	3-1/2	1-5/16	7/16	1-1/2	3/4	7/16	1-3/4	407-2420	
3/4-10	4	1-5/16	7/16	1-1/2	3/4	7/16	1-3/4	407-2421	
3/4-10	5	1-5/16	7/16	1-1/2	3/4	7/16	1-3/4	407-2422	
3/4-10	6	1-5/16	7/16	1-1/2	3/4	7/16	1-3/4	407-2423	
3/4-10	8	1-5/16	7/16	3	3/4	7/16	1-3/4	407-2424	
3/4-10	10	1-5/16	7/16	3	3/4	7/16	1-3/4	407-2425	
3/4-10	12	1-5/16	7/16	3	3/4	7/16	1-3/4	407-2426	
1-8	3-1/2	1-11/16	1/2	2	1	1/2	2-1/4	407-2427	
1-8	4	1-11/16	1/2	2	1	1/2	2-1/4	407-2428	
1-8	4-1/2	1-11/16	1/2	2-1/2	1	1/2	2-1/4	407-2429	
1-8	5	1-11/16	1/2	2-1/2	1	1/2	2-1/4	407-2430	
1-8	6	1-11/16	1/2	2-1/2	1	1/2	2-1/4	407-2431	
1-8	8	1-11/16	1/2	3	1	1/2	2-1/4	407-2432	
1-8	10	1-11/16	1/2	3	1	1/2	2-1/4	407-2433	
1-8	12	1-11/16	1/2	3	1	1/2	2-1/4	407-2434	

Rotary T Slot Bolts

菱形螺栓

- The Rotary T-Slot Nut give convenienc to rotate the head in the T-Slot.
- Black Oxide finish.



A Thread	B	C	G	H
1/2-13	0.63	1-1/8	11/32	11/32
5/8-11	0.75	1-1/4	13/32	15/32

Length Under Head (L)	Thread Length (T)	Thread 1/2"-13	Thread 5/8"-11
1.5"	1.0"	407-3110	407-3100
2.0"	1.5"	407-3111	407-3101
2.5"	2.0"	407-3112	407-3102
3.0"	2.5"	407-3113	407-3103
3.5"	2.0"	407-3114	407-3104
4.0"	2.5"	407-3115	407-3105
4.5"	2.5"	407-3116	
5.0"	2.5"	407-3117	407-3106
6.0"	4.5"	407-3118	407-3107

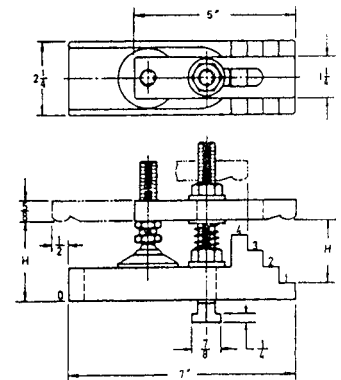
Leveling Clamp 杠杆压板

Multi-function clamp will level, locate, stop and clamp workpiece all in one stroke. All clamp parts stay together for fast setup. Fully adjustable round-tipped front strap and self-aligning rear support allow for clamping of slightly uneven workpieces. Comes complete as shown with T-Slot Bolt, no additional part required. Use two to three clamps for optimal results.

Thickness	No.0	No.1	No.2	No.3	No.4
Height					
+/- .0005	Flush	.500	1.000	1.500	2.000
Nin.H	2	1-9/16	1-1/16	9/16	Flush
Max.H	3	2-1/2	2	1-1/2	1



Order No. 410-7220

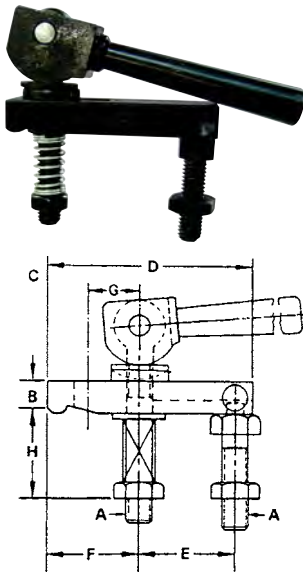


Single End Clamp Strap Assemblies 压板

CenterClamp

中心凸轮压板

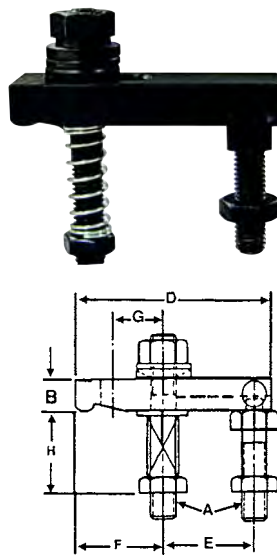
The Cam makes this assembly a quick acting clamp.



Single End Clamp

单头压板

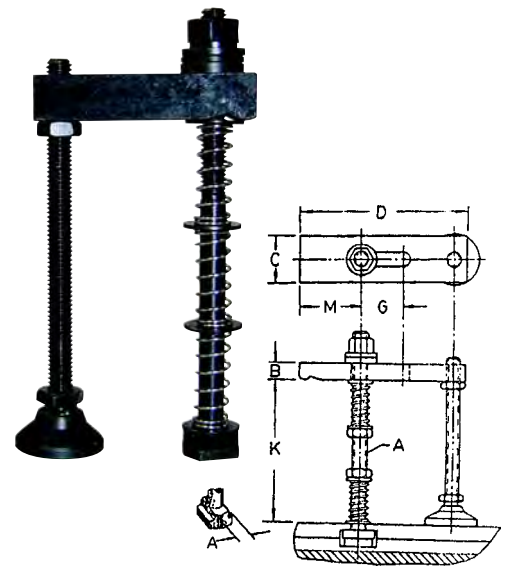
Clamp strap slides back and forth on clamp rest Good for clamps mounted on jig plates. When used on machine tables, adapter plates may easily be added.



T-Slot Bolt Swing Glamp

T型螺栓回转压板

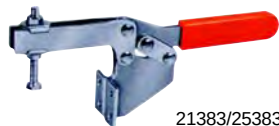
One piece T-slot bolt. The clamp strap can be swung away for easy loading. The clamp components stay together when not in use. Two springs provided as shown.



Stud A	Thickness B	Width C	Length D	E	F	H	Travel G	K	M	Center Cam Order No.	Single End Order No.	Swing Clamp Order No.
1/4-20	3/8"	5/8"	2"	15/16"	1"	5/8	1/2			410-7240	410-7230	
			2-1/2	15/16	1-3/8		1/2				410-7231	
5/16-8	1/2	1-1/4	2-3/4	1-1/4"	1-1/4	5/8	7/16			410-7241	410-7232	
			3-1/4	1-1/4	1-3/4		13/16			410-7245	410-7233	
3/8-16	5/8	1-1/4	3	1-3/8	1-1/4	1-5/8	3/4	4	9/16	410-7242	410-7234	410-7221
			4	1-7/8	1-3/4		1		13/16	410-7246	410-7235	410-7222
1/2-13	5/8	1-1/4	4	1-7/8	1-3/4	1-5/8	1	5	3/4	410-7243	410-7236	410-7223
			4-1/2	1-7/8	2-1/4		1-1/2		3/4	410-7244	410-7237	410-7224
5/8-11	7/8	1-1/2	4-1/2	2	2	1-3/4	1	6	1	410-7247	410-7238	410-7225
			5	2	2-1/2		1-1/2		1	410-7248	410-7239	410-7226

Side Mount Toggle Clamps 水平压紧把手

- Spindle and washer included.
- Red Plastic hand grip.



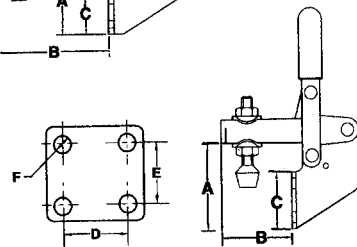
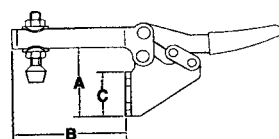
21383/25383



202-F/202-FL



101-B



Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	Spindle Size	Holding Cap.(lbs.)	Order No.
21383	2-1/32	1-1/2	1-1/4	1	25/32	M6	555	407-7383
25383	2-51/64	3-1/8	1-1/2	29/32	1-1/8	M8	621	407-7386
202-FL	2-3/8	3-9/16	1-21/32	1-3/16	1	5/16-18	500	407-7389
202-F	2-3/8	2-1/8	1-21/32	1-3/16	1	5/16-18	500	407-7392
101-B	1-3/4	1-3/8	1-1/8	25/32	35/64	1/4-20	220	407-7395

Horizontal Hold Down Action Clamps 水平压紧把手

- Low hight design is ideal for small working ares
- Clamps are available with solid or U-shaped hold down bars
Providing maximum ease for loading and unloading
- Includes spindle and washer



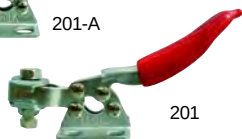
201-A



201-B



20820



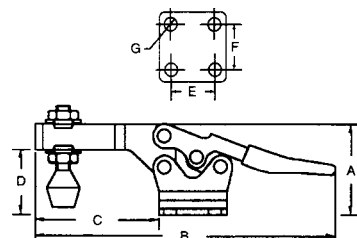
201



20235



225-D



Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	Spindle Size	Holding Cap.(lbs.)	Order No.
201-A	11/16	3-3/16	7/8	3/8	7/16X5/8	5/8	8-32	60	407-7201
201	11/16	3-3/16	3/4	5/16	7/16X5/8	5/85	8-32	60	407-7203
201-B	1-1/2	5-7/16	2-3/16	1	1X1-1/16	7/8	1/4-20	200	407-7206
20820	-	6-1/4	2-11/16	2-3/4	5/8	1	5/16-18	220	407-7212
225-D	1-13/16	6-1/2	2-3/4	1-3/8	1	7/8	5/16-18	500	407-7220
20235	2-1/2	10-3/8	4-7/32	1/3/4	1-5/8	1-5/8	3/8-16	750	407-7209

Vertical Hold Down Action Clamps 垂直压紧把手

- Spindle and washer included.



13005



101-A



12050



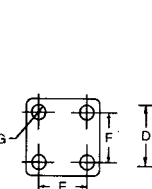
12130



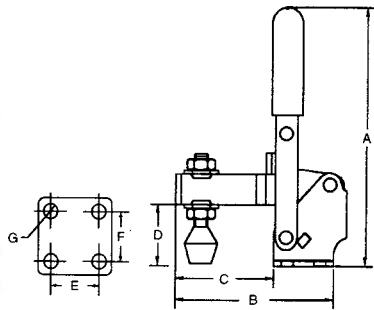
12140



12265



10247



Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	Spindle Size	Holding Cap.(lbs.)	Order No.
101-A	2-61/64	1-31/32	31/32	41/64	5/8	15/16	3/16	10-24	100	407-7250
130005	1-3/8	2-1/4	1-7/32	1/2	17/32	5/8	11/64	10-24	150	407-7253
12050*	3-3/4	2-17/32	1-5/6	29/32	1/2	1-1/16	13/64	1/4-20	200	407-7256
12130	5-1/2	4-9/16	2-13/16	1-1/4	3/4	1-1/4	5/32	5/16-18	500	407-7259
12140	5-1/2	5-1/2	3-3/4	1-1/4	3/4	1-1/4	5/32	5/16-18	500	407-7262
12265	7-1/2	5-17/32	3-19/32	1-11/16	1-1/4	1-25/32	21/64	3/8-16	750	407-7265
12275	7-1/2	5-17/32	3-19/32	1-11/16	1-1/4	1-25/32	21/64	3/8-16	750	407-7267
10247	8-7/8	6-15/16	4-15/16	2	1-1/4	1-25/32	11/32	1/2-13	1000	407-7269

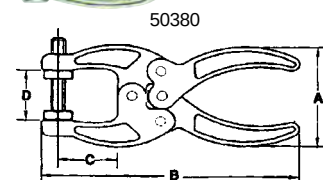
* Fixed bar

Toggle Pliers Toggle clamps 钳式压紧把手

- Squeeze one or both handles against the central position, and jaws lock automatically
- Jaws are drop-forged steel or aluminum, and supplied with adjustable pressure spindles



Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	Trigger Release	Holding Cap.(lbs.)	Order No.
50350	1-15/16	5-1/8	1-1/8	1	1/4-20	No	200	407-7363
50360	2-3/8	6-1/2	1-3/4	1-1/4	5/16-18	No	350	407-7366
50380	2-11/16	8-1/2	2-3/4	1-3/4	3/8-16	Yes	700	407-7369

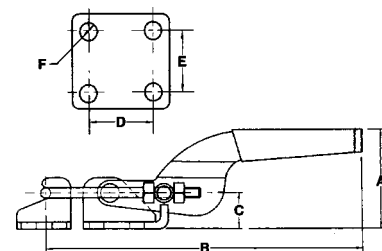


Latch Type Pull Action Clamps 门闸式拉紧把手

- Excellent for many types of latching operations
- Threaded pull bar offers convenient adjustment
- All models are supplied with red vinyl handle grip for maximum operator comfort
- Includes latch plate

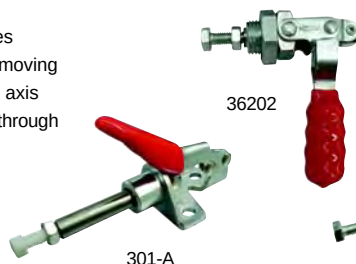


Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	Holding Cap.(lbs.)	Order No.
40323	1-5/32	3-1/2	15/32	3/4	5/8	11/64	360	407-7340
431	1-5/8	5-5/8	21/32	1-1/4	3/4	17/64	700	407-7343
40341	2-29/32	7-1/2	59/64	1-1/2	1-5/8	11/32	2000	407-7346



Push/Pull Action Clamps 水平推拉紧把手

- Clamps are available in a variety of moldes
- Push-pull handle makes operating easy by moving the plunger of the clamp in and out along its axis
- Model 36202 features threaded mounting for through hole mounting
- Includes spindle



36202



302-F



36010

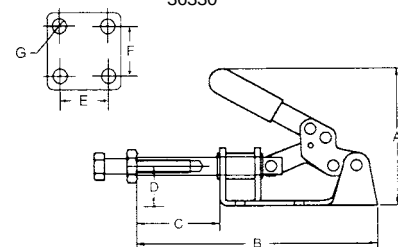


304-E



36330

Model#	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	Holding Cap.(lbs.)	Order No.
301-A	1-1/4	2-11/16	5/8	1/2	5/8	5/8	100	407-7301
36202	2-15/16	2-3/8	3/4	-	-	-	200	407-7303
302-F	3-3/8	4-7/16	1-1/4	31/32	1-3/8	1-5/8	300	407-7306
36010	4-1/16	6-3/4	1-5/8	1-3/4	1-5/8	1-5/8	800	407-7309
36330	4-27/32	7-1/32	2	13/16	1-3/8	1-5/8	2500	407-7312
304-E	3-7/8	6-1/4	1-5/8	1-1/4	1-5/8	1-5/8	850	407-7315



Accessories 零件

Adjustable Spindle Assemblies

橡胶头平头压紧螺杆



Flat Tip Bonded Neoprene Caps

Description	Order No.
10-24x1-3/8	407-7110
1/4-20x1-3/4	407-7112
1/4-20x2-1/8	407-7113
5/16-18x2-1/2	407-7115
3/8-16x3-1/2	407-7117
1/2-13x3-3/4	407-7119

标准螺杆



Hex Head Standard Adjustable

Description	Order No.
8-32x3/4(nylon)	407-7150
3/8-16x4	407-7152
1/2-13x4-1/2	407-7154

可摆动头螺杆



Swivel Foot

Description	Order No.
14-20x2-1/4	407-7162
5/16-18x2-3/4	407-7164
3/8-16x3	407-7166
1/2-13x4	407-7168

Industrial Drill Press Vises

- Versatile vises machined on four sides
- May be used on base, either side or end
- Made of high grade gray iron and are precision ground
- Ground steel jaw plates are removable



Jaw width(In.)	Jaw Opening(In.)	Jaw depth (In.)	OAL(In.)	Approx (Lbs.)	Order#
4	4	1-1/2	7-5/16	9	5428-7406
6	6	2	11-15/16	24	5428-7408

Low-Profile Drill Press Vises

- Designed for drilling, tapping and reaming operations
- Base has four 1/2" shoulder slots for quick ,easy positioning on drill press tables
- Moveable jaw is flat and the fixed jaw has a vertical and horizontal v-groove cut into it
- Replaceable jaws



Jaw width(In.)	Jaw Opening(In.)	Jaw depth (In.)	Approx(Lbs.)	Order#
3	3	1-1/8	10	5428-8461
4	4	1-1/2	15	5428-8462
6	6	2	34	5428-8464
8	8	2	54	5428-8465

Quick Release Drill Press Vises

- Made for drill press vise applications that require rapid securing and release of work
- Precision -ground guide bars and proven locking-clamp mechanism provides smooth , accurate holding
- Replaceable jaws are ground flat



Jaw width (In.)	Jaw Opening (In.)	Jaw depth (In.)	Ht.(In.)	Base Dims.(In.)	Approx (Lbs.)	Order#
3	3	1-1/16	2-3/4	7-1/4x5-3/8	9	5428-8503
4	4	1-3/8	3-9/16	11-3/16x5-3/4	19	5428-8504
6	6	1-5/8	4-5/16	14-5/8x9-3/16	34	5428-8506
8	8	1-5/8	4-1/2	18-1/2x11-3/8	59	5428-8508

Industrial Angle Vises

- Removable vises swivels 360° on base.mounting lugs in both vise and swivel base for mounting to machine table.
- Swivel base can be removed from the angle base
- Vise may be rised to 90° and faze adjustment to any angle
- Sturdy angle vise is indispensable on work that frequently requires angle setups for drilling,gapping, milling and grinding
- Bases have 5/8" keyways and two bolt slots for locating and mounting on machine table



Jaw width (In.)	Jaw Opening(In.)	Jaw depth (In.)	Approx (Lbs.)	Order#
4	4	1-1/2	37	5428-7201
6	6	2	86	5428-7202

Cradle Style Angle Vises

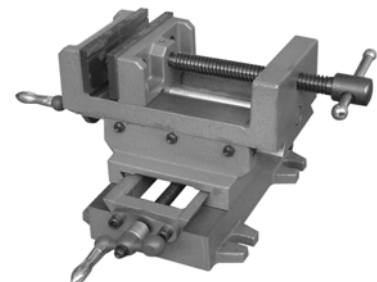
- Jaw surface is square to 0.002"
- Pin stops at 0°,15°,30°,45°,60°,75°,and 90°
- Scale indexed in 1°increments from 0°to 90°
- Two slots on each side of base for mounting to machine table
- Set to any angle position firmly with tool-less locking
- Designed for drilling,tapping or reaming operations where a vertical setup angle is required
- Cradle base has a 90° vertical scale in 1°graduations
- Quick setup at 0°,45°,60°,and 90°with positive pin stops
- Hand-tightened mechanism allows secure locking in all positions
- Base includes 1/2" shoulder slots for bolting to drill press



Jaw width (In.)	Jaw Opening(In.)	Jaw depth (In.)	Approx(Lbs.)	Order#
3	3	1-1/8	13	5428-7204
4	4	1-1/2	20	5428-7203

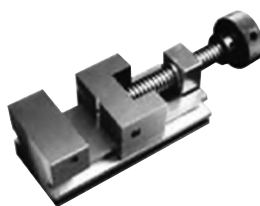
Heavy-duty cross vises

- Heavy-duty cross vise moves workpiece in both horizontal and longitudinal directions for precise centering and drilling



Jaw width(In.)	Jaw Opening(In.)	Jaw depth (In.)	Approx(Lbs.)	Order#
3	3-1/4	1-1/16	15.84	5428-8313
4	4	1-3/8	19.8	5428-8314
5	5	1-1/2	41.8	5428-8315
6	6	1-9/16	59.5	5428-8316
8	8	2	77	5428-8318

Precision Vises



Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
2"	1"	1-3/8"	3-1/2"	428-8201
2-3/4	1-1/8	3-1/8	6	428-8202
3	1-1/4	3-5/8	7	428-8203

Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
60mm	25mm	30mm	90mm	428-8260
70	30	80	160	428-8270
73	32	95	175	428-8273

Precision Sine Vises

- Made of high quality steel. Subject to rigid heat-treatment.
- Provide a close tolerance of .005mm/.0002" for both parallelism and squareness.
- Available for inspecting angles and work pieces with angle.



A Type

Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
2"	1"	2-1/2"	5-3/8"	428-9520
2-1/2	1-1/4	3-1/2	7"	428-9525
3	1-1/4	3-3/4	7-1/2"	428-9530
3-1/2	1-5/8	5	9-3/8"	428-9535
4	1-5/8	5	10"	428-9540

- Made of high quality steel. Subject to rigid heat-treatment.
- Provide a close tolerance of .005mm/.0002" for both parallelism and squareness.
- Jaw can be opened or closed without unbolting from work surface.



B Type

Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
2"	1"	2-1/2"	5-3/8"	428-9555
2-1/2	1-1/4	3-1/2	7"	428-9560
3	1-1/4	4	7-5/8"	428-9565
3-1/2	1-5/8	5	9-3/8"	428-9570
4	1-5/8	5	10"	428-9575

Precision Machine Vises

with 2 Clamping Stations

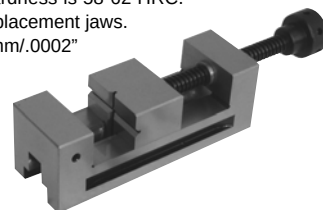
Jaw Width.....6.3(160mm)
 Jaw Height.....2" (50mm)
 Maximum Opening.....4" (100mm)
 Net Weight.....47kg
 Size.....730x280x200mm



Description	Order No.
Grey Cast Iron Vise Body	428-1261
Spheroidal Cast Iron Vise Body	428-1260

Precision Toolmakers Vises

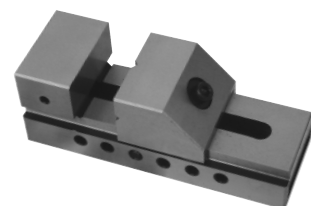
- Clamping slots and 3/8" hole in base, provide easy means of fixing to angle plate etc.
- Hardened and ground dovetail slides eliminate "left" and insure consistent accuracy, the hardness is 58-62 HRC.
- Has ground "V" way, Detachable replacement jaws.
- Vise is square and parallel to .005mm/.0002"



Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
2"	1"	2-1/2"	5-1/2"	428-9020
2-1/2	1-1/4	3-1/2	7-1/2"	428-9025
3	1-1/4	4	8-1/2"	428-9030
3-1/2	1-3/8	5	10"	428-9035
4	1-5/8	5	10-3/8"	428-9040
5	2	6-3/8	12"	428-9050
6				428-9060

Precision Toolmakers Vises

- Guaranteed tolerance within .005mm/.0002" of parallelism, flatness and squareness with the vise in any mode. Made of high carbon steel, Hardened and tempered to ensure stability and accuracy throughout the unit's working life, The hardness is 58-62 HRC.
- For high accuracy light machining, inspection or marking of precision components. Vise can be used on base, side, end or top.



Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
1"	3/8"	1"	1-5/8"	428-9210
2	1	3	5-1/2"	428-9220
2-1/2	1-3/8	3-1/2	6-3/4"	428-9225
3	1-3/8	4	7-1/2"	428-9230
3-1/2	1-5/8	5	9	428-9235
4	1-7/8	5	9-3/4"	428-9240
5	2	6-3/8	11-1/4"	428-9250
6				428-9260

All Purpose ToolMakers Sine Vises

with Screw Handle

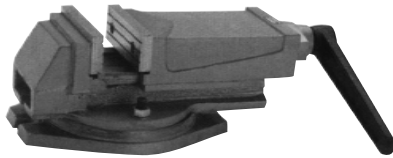
- Sine Range from 0° to 60°.
- Hardness of Jaws 50-55HRC.



Jaw Width	Jaw Depth	Jaw Opening	Vise Length	Order No.
2"	2-1/2"	1"	6"	428-9720
2-1/2	3-1/2	1-1/4	7-1/2"	428-9725
3	4	1-1/4	8-1/2"	428-9730
3-1/2	5	1-3/8	10	428-9735
4	5	1-5/8	10-3/8	428-9740
5	6-3/8	2	12	428-9750

Milling Vises With Swivel Base

- Used in milling sharpening and drilling machine.
- Fill 360° swivel base with fine, accurate graduation.
- Can be used both as stationery or swivel vise.
- Drop forged handle.



Jaw Width	Jaw Depth	Jaw Opening	Order No.
3"	1-3/8"	2-5/8"	428-8103
4	1-1/2	3-1/8"	428-8104
5	1-3/4	4"	428-8105
6	2	5"	428-8106
8	2-3/8	6-1/2"	428-8108

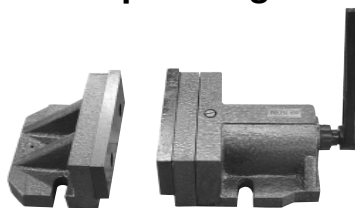
Precision Milling Machine Vises

- Two type with swivel and without swivel.
- With lock down jaw eliminates TILT.
- Provide better clamping pressure.
- Eliminates hammering.
- Removable hinged handle for fast locking.



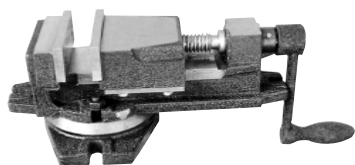
Jaw Width	Jaw Depth	Jaw Opening	With Swivel Base Order No.	Without Swivel Base Order No.
4"	1-1/4"	4-1/8"	428-7241	428-7240
5	1-3/8	4-1/2"	428-7251	428-7250
6	1-3/4	5-1/2"	428-7261	428-7260
6	1-1/2	7-1/2"	428-7267	
8	2	8-1/4"	428-7281	428-7280
6-1/4	1-1/2	8-1/8"	428-7265	428-7266

2 Piece Quick Clamp Milling Vises



Jaw Width	Jaw Depth	Key Slot Width	T-Slot Center Distance	Clamp Travel	Order No.
6"	3"	11/16"	2-1/4 to 2-3/4"	1/4"	428-3010
8	3-1/4	13/16	2-3/4 to 3-3/4	1/4	428-3012

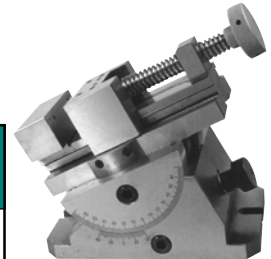
K Type Machine Vise



Jaw Width	Jaw Opening	Jaw Depth	Order No.
4"	2-1/2"	1-1/2"	428-7925
6"	4"	2"	428-7930

Precision Universal Vises

Precision Universal Vise is a newly developed fixture which is composed of two parts, namely a precision vise and a swivel plate base. With the aid of graduated swivel plate, the vise is capable of revolving 360° in a horizontal plane and 45° in a vertical plane. It is adaptable to precision grinding machine and boring machine and so on, for level and inclined face machining as well as boring at a certain degree of inclination etc.



Width of Jaw	Max. Opening of Jaws	Depth of Jaw	Order No.
2-3/4"	3-1/8"	1-1/8"	628-7020
70mm	80mm	30mm	628-7010

Tilt & Swivel Milling Vises

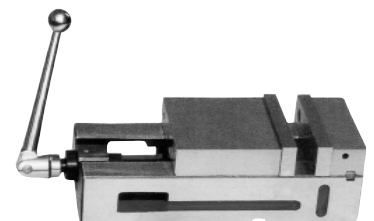
- Positive locking to withstand heavy loads.
- Horizontal swivel movement 360°, Vertical swivel movement 90°.
- Accuracy hardened and ground jaws run on precision ground.



Jaw Width	Jaw Depth	Jaw Opening	Order No.
4"	1-5/8"	2-3/4"	428-7304
5	1-7/8	4"	428-7305
6	2	5"	428-7306

Precision CNC Machine Vise

6" Jaw Width,
5-7/8" Jaw Opening,
17.5" OAL,
5" Height.



Order No. 428-9999

Machine Vises For Holding Shafts and Round

- Capacity 1/2" to 2-1/2" round parts.
- Work rests on V-block made of hardened and ground tool steel.
- Has an adjustable sliding rod to set work in proper position.
- Vise ends are ground so that it can be used vertically or horizontally.

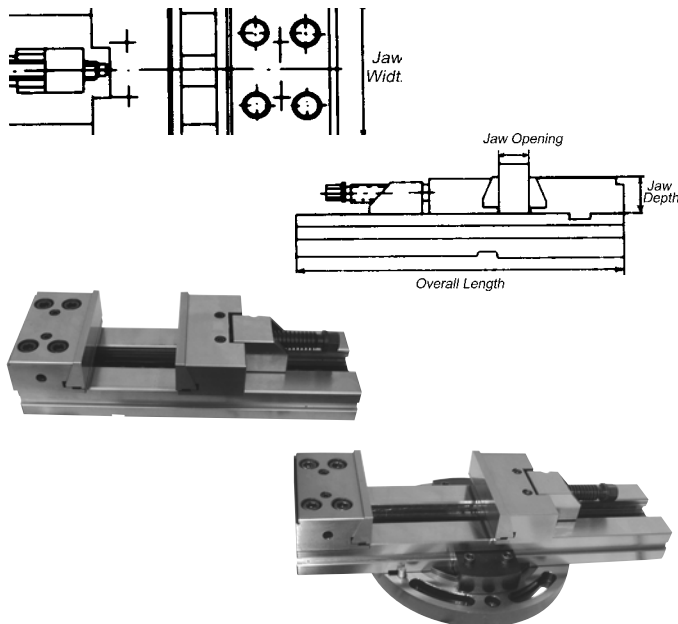


Description	Order No.
3" Jaw Width	428-3017
4" Jaw Width	428-3018

Ground flat, square, and parallel within 0.005mm (.0002")

Each Model includes:

- One each of L-Socket Wrench, T-Hex Key,
- One set Vise Holding Clamps (four pieces)
- One set Positioning Key-Nuts (two pieces)
- One Work Stop with main bolt.



Jaw Width	Jaw Depth	Jaw Opening	Overall Length	Without Swivel Base Order No.	With Swivel Base Order No.
4"/100mm	1.2"/30mm	4"/100mm	10.6"/270mm	428-0100	428-1100
5"/125mm	1.6"/40mm	6"/150mm	13.6"/345mm	428-0125	428-1125
6"/150mm	2.0"/50mm	8"/200mm	16.5"/420mm	428-0150	428-1150
6"/150mm	2.4"/50mm	12"/300mm	20.5"/520mm	428-0151	428-1151
7"/175mm	2.4"/60mm	8"/200mm	17.9"/455mm	428-0175	428-1175
7"/175mm	2.4"/60mm	12"/300mm	21.9"/555mm	428-0176	428-1176
7"/175mm	2.4"/60mm	16"/400mm	25.8"/655mm	428-0177	428-1177
7"/175mm	2.4"/60mm	20"/500mm	29.7"/755mm	428-0178	428-1178
8"/200mm	2.6"/65mm	8"/200mm	19.5"/495mm	428-0200	428-1200
8"/200mm	2.6"/65mm	12"/300mm	23.4"/595mm	428-0201	428-1201
8"/200mm	2.6"/65mm	16"/400mm	27.4"/695mm	428-0202	428-1202
8"/200mm	2.6"/65mm	20"/500mm	31.3"/795mm	428-0203	428-1203
8"/200mm	2.6"/65mm	24"/600mm	35.2"/895mm	428-0204	428-1204
12"/300mm	3.1"/80mm	12"/300mm	25.0"/635mm	428-0300	428-1300
12"/300mm	3.1"/80mm	16"/400mm	28.9"/735mm	428-0301	428-1301
12"/300mm	3.1"/80mm	20"/500mm	32.9"/835mm	428-0302	428-1302
12"/300mm	3.1"/80mm	24"/600mm	36.8"/935mm	428-0303	428-1303

Welding Angle Clamp

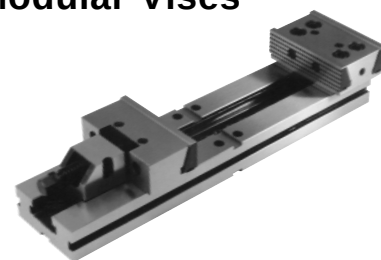
Problems solver and the time saver

- Holds two pieces of different thickness at a 90° angle.
- Has "V" jaws for holding round material.
- Up to 1-1/2" on square or rect angular material.
- Up to 1-1/2" round material.



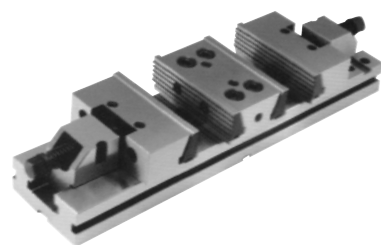
Order No. 318-0008

Long Body Modular Vises



Basic Model

Jaw Width	Jaw Open	Base Length	Weight	Order No.
4"/100mm	11"/290mm	18"/460mm	10kg	428-2100
5"/125mm	13"/320mm	20"/520mm	17kg	428-2125
6"/150mm	14"/360mm	23"/580mm	31kg	428-2150
6"/150mm	18"/460mm	27"/680mm	34kg	428-2151
7"/175mm	16"/400mm	26"/666mm	46kg	428-2181
7"/175mm	20"/500mm	30"/766mm	51kg	428-2182
7"/175mm	24"/600mm	34"/866mm	56kg	428-2183
8"/200mm	20"/500mm	32"/805mm	85kg	428-2200
8"/200mm	24"/600mm	36"/905mm	92kg	428-2201
8"/200mm	28"/700mm	40"/1005mm	99kg	428-2202

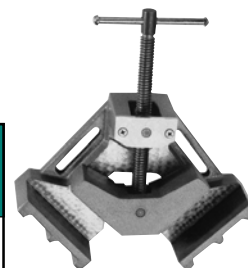


Double Lock

Jaw Width	Each Jaw Open	Base Length	Weight	Order No.
4"/100mm	3-1/2" /90mm	18"/460mm	14kg	428-3100
5"/125mm	4" /100mm	20"/520mm	21kg	428-3125
6"/150mm	4-3/10"/110mm	23"/580mm	38kg	428-3150
6"/150mm	6-3/10"/160mm	27"/680mm	42kg	428-3151
7"/175mm	4-7/10"/120mm	26"/666mm	58kg	428-3181
7"/175mm	6-7/10"/170mm	30"/766mm	63kg	428-3182
7"/175mm	8-7/10"/220mm	34"/866mm	68kg	428-3183
8"/200mm	6"/150mm	32"/805mm	95kg	428-3200
8"/200mm	8"/200mm	36"/905mm	101kg	428-3201
8"/200mm	10"/250mm	40"/1005mm	107kg	428-3202

Angle Vises

Length of Jaw	Height of Jaw	Jaw Opening	Order No.
4"	1-3/8"	2-3/8"	625-0125
5"	2-3/8"	4"	625-0130



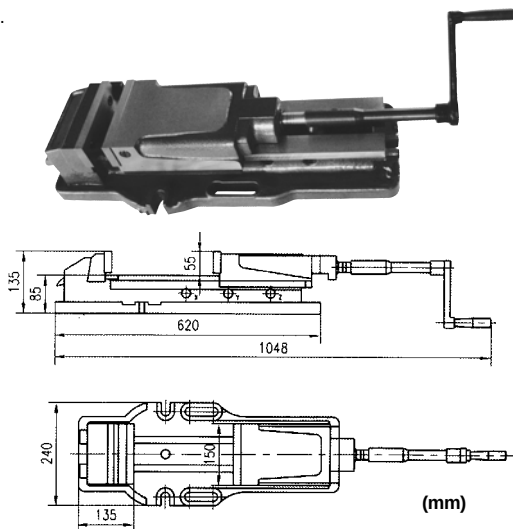
Fabricated Offset Vises

Size	Order No.
5"/125mm	426-8405
6"/150mm	426-8410



Hydraulic Power Machine Vise

- High precision and rigidity.
- Precision machined.
- The parallelism of two jaws and squareness between Jaws and vise base are within 0.01mm.
- The parallelism of vise base(leading guide to bottom surface) is within 0.01mm.
- Clamping power is much stronger than normal vise.
- The vise body is made of spheroidal cast Iron.
- Three holes one the side of base for clamping rang: X 0-100mm, Y 98-200mm, Z 195-300mm.



Jaw Width	Jaw Opening	Jaw Depth	Clamping Force	Swivel Base Order No.	Stationary Base Order No.
6"/150mm	12"/305mm	2.2"/55mm	5000kgs/11000lbs	428-6016	428-6015

Multi-Purpose Adjustable Vises

One of the most versatile vises on the market. Unique design comes equipped with 5" parallel jaw, V-shaped pipe jaws, and a solid steel anvil. Both jaws and locking base swivel 360° for the best angle on your work.



Jaw width	Parallel Jaw Opening	PipeVise Opening	Weight (kgs)	Order No.
4"	0-3.2"	.39-2"	19	428-9905
4"	0-3.2"	.39-2"	23	428-9907
5"	0-4"	.6-2.36	23	428-9910
5"	0-4"	.6-2.36"	22	428-9911
5"	0-4"	.6-2.36"	27	428-9912
5"	0-4"	0-4.7"	30	428-9913
5"	0-4"	0-4.7"	34	428-9914
6"	0-4.7"	.59-2.56"	38	428-9915
6"	0-4.7"	.59-2.56"	45	428-9916

Magnetic Vise Jaw Caps 磁性钳口保护器

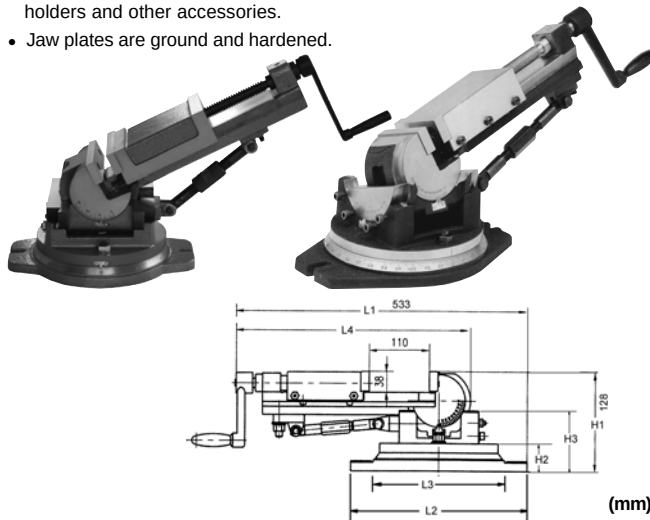
- Soft metals protect your work piece against scratching and nicking.
- 6 grooves ensure tightly hold different shapes work piece in place.
- Middle deeper VEE for clamping round work piece.
- Strong magnetic power.



Jaw Width	Aluminum Order No.	Brass Order No.
4"/101mm	427-0040	427-1040
4-1/2"/114mm	427-0045	427-1045
5"/127mm	427-0050	427-1050
5-1/2"/140mm	427-0055	427-1055
6"/152mm	427-0060	427-1060
6-1/2"/165mm	427-0065	427-1065
8"/203mm	427-0080	427-1080
10"/254mm	427-0100	427-1100
12"/305mm	427-0120	427-1120

3- Way Universal Tilt & Swivel Machine Vise

- Designed for machining complex workpiece on Milling, Grinding, Drilling Machine and Electrical Discharge Machine (EDM) etc.
- The vise body is made of high tensile close grain cast iron.
- Swiveling 360° around base, tilting 90° horizontal to vertical, rotate from center axis 45° to each side.
- Vise top surface is ground accurately to facilitate use of magnetic tool holders and other accessories.
- Jaw plates are ground and hardened.



Jaw Width	Jaw Opening	Jaw Depth	Clamping Force	Order No.
4"/110mm	4"/110mm	1-3/4"/45mm	1500kgs/3300lbs	428-6050
5"/125mm	5"/125mm	1-3/4"/45mm		428-6055

Bench Vises

- Removable hardened alloy steel jaw inserts.
- Completely enclosed center screw.
- Attractive hammered enamel finish.



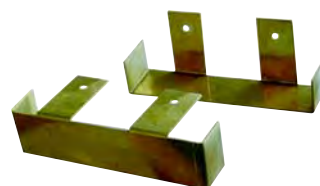
Jaw Width	Jaw Opening	Weight (kgs)	Stationary Base Order No.	Weight (kgs)	Swivel Base Order No.
4"	4"	6.5	428-7504	7	428-7604
5"	5"	12	428-7505	13	428-7605
6"	6"	20	428-7506	22	428-7606
8"	8"	32	428-7508	35	428-7608

Brass Vise Jaw Bib

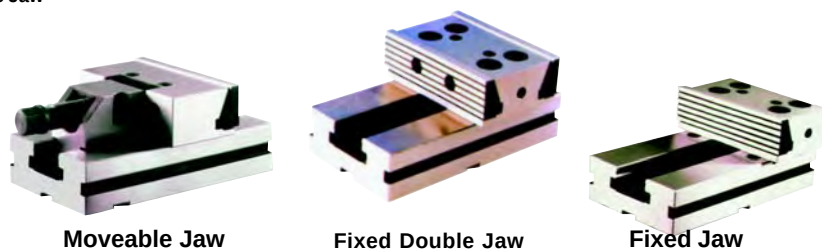
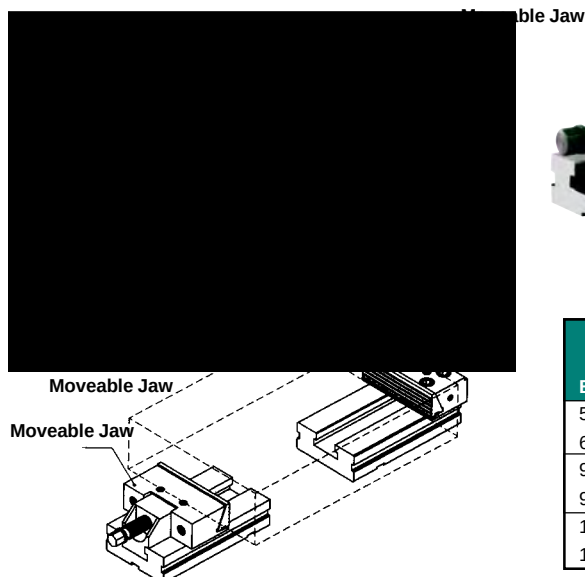
铜制钳口护板

For 4", 5", 6" Vises

Order No. 428-7500



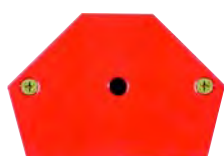
Short Body Precision Modular Vises 短身精密组合平口钳 动钳组件



Base Length	Jaw Width	Vise Height	Moveable Jaw Order No.	Fixed Jaw Order No.	Fixed Double Jaw Order No.
5-1/2"/140mm	4"/100mm	2-3/5"/65mm	428-4014	428-4114	428-4214
6-3/10"/160mm	5"/125mm	3"/80mm	428-4016	428-4116	428-4216
9"/230mm	6"/150mm	4"/100mm	428-4023	428-4123	428-4223
9-2/5"/240mm	7"/175mm	4-3/5"/118mm	428-4024	428-4124	428-4224
11-4/5"/300mm	8"/200mm	5-3/10"/135mm	428-4030	428-4130	428-4230
13-4/5"/350mm	12"/300mm	6-1/5"/158mm	428-4035	428-4135	428-4235

Magnetic Quick Clamps 磁性夹具

- Designed to enable fast & accurate holding of ferrous metals for welding & assembly jobs.
- Holds both sheet & tube at angles 90°, 75°, 60°, 45° and 30°.



2-1/2Hx4"Wx1/2TH

Order No. 625-0108



3-1/2Hx5-1/2"Wx5/8TH

Order No. 625-0109

2 Piece Set:

625-0108:2-1/2Hx4"Wx1/2TH, 625-0109:3-1/2Hx5-1/2"Wx5/8TH

Order No. 625-0111

Machinist Jack 机用千斤顶

机用千斤顶

- For use any place where leveling is necessary.
- Lifting capacity of approximately 1000lbs.
- 1" adjustment.
- 4" high when fully extended.



Order No. 827-9360

Bench Yoke Vises 管子台虎钳

管子台虎钳

- Body made of malleable cast iron.
- Hardened and milled alloy steel jaws.
- Suitable for pipe fixing in room.

Size Range	Order No.
0# 2/5" to 1-3/5" /10-40mm	428-9010
1# 2/5" to 2-2/5" /10-60mm	428-9011
2# 2/5" to 3-3/5" /10-90mm	428-9012
3# 3/5" to 4-1/2" /15-115mm	428-9013
4# 3/5" to 6-1/2" /15-165mm	428-9014

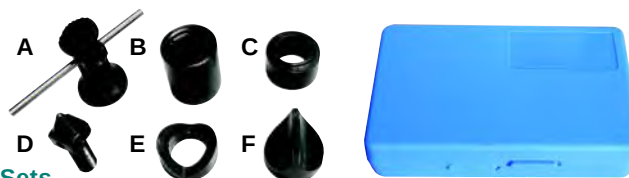


" Little Giant " Jack Screw Sets 组合千斤顶

组合千斤顶

For leveling work on planer beds, upright drills and setting up machinery

- Each kind of jack has different range as below, which can raise 1000 pounds or more.
- The extensions may be used singly or together, and when use together, Max. Height for each one is: 3-3/4 and 6-1/8.



Sets

Pieces	Range	Ability to Lift	Order No.
6	1-1/2" to 2-1/4"	1000lbs	827-9370
6	2-1/4" to 3-3/8"	1000lbs	827-9380

Individual Parts

Pieces	Name	Range 7-1/2 to 2-1/4" Order No.	Range 2-1/4 to 3-3/8" Order No.
A	Jack	827-9371	827-9381
B	Extension Base	827-9372	827-9382
C	Extension Base	827-9373	827-9383
D	Auxiliary Pointed Screw	827-9374	827-9384
E	Extension V Base	827-9375	827-9385
F	Extension Base	827-9376	827-9386

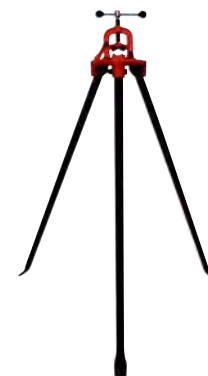
Bench Yoke Vises 管子台虎钳

With Tripod Stand

管子台虎钳

- Body made of malleable cast iron.
- Hardened and milled alloy steel jaws.
- Complete with pipe rest.
- Designed for pipe construction outdoor.

Size Range	Order No.
0# 2/5" to 1-3/5" /10-40mm	428-9000
2# 2/5" to 3-3/5" /10-90mm	428-9002
3# 3/5" to 4-1/2" /15-115mm	428-9003



Adjustable Universal Stop

组合可调定位器

- Serves as a rigid stop for milling set-ups.
- Used with vises, angle plates, jigs, etc.
- Usable as a versatile holder, as well as stop.

Column: 5/8" x 7-1/2"

Base: 3/4" x 2" x 4-1/2"

Rod: 3/8" x 9-1/2"

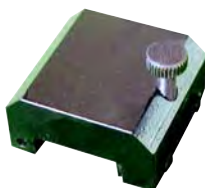
Order No. 209-9008



Vise Work Stop

虎钳定位器

- To fit angle lock type vises
- Single thumbscrew tightens clamp to vise jaw.
- Two ground -pins on both sides of clamp.
- Easily mounts to the top of most vise jaws.
- 1pc. Clamping screw.
- 7/8" capacity.



Order No. 209-9007

Quick Clamp

快速夹

- Fits all milling machine vises with 3/8" to 3/4" vise jaws.
- Hardened steel body. 1" wide and two steel guide pins for positive clamping.
- Clamps quickly and easily to the Top of hard or soft jaws.



Order No. 209-9006

Mechanics' Sonarscope

工业听诊器

- Effective whenever trouble can be traced by sound.
- Can easily locate and isolate trouble in engines, motors and other moving parts.



Order No. 606-0250

Draw Bars 卡头拉杆

Fits All Mills



Order No. 209-9021



Order No. 209-9022

OAL(IN)	HEX(IN)	THREAD SIZE(INCH)	Order No.
26 1/2	7 1/4	7/16-20x2(2life)	209-9021
20 3/4	1 1/2	7/16-20x2(2life)	209-9022

Milling Vise Work Stop

平口钳定位器

Permits fast completely accurate positioning of repetitive work.

Descriptions	Order No.
For 3" or 4" Vise	209-9013
For 6"	209-9010



Speed Handle

台钻定位器

For Machine Visers. Fits 6 curt angle lock vises

- Vises can be completely opened in a few seconds.
- Saves time and increases production.
- Assures more precise feel of clamping pressure 3/4" hex.



Order No. 428-9705

Quill Stop

台钻定位器

- For Bridgeport Type Mills.
- Quick action clip.
- Top or bottom positioning.
- 0.020" fine adjustment.
- Easily installed, quickly moved.
- Clips on quill easily for rapid depth setting.



Order No. 209-9003

Quick Indexing Quill Feed Handle

快进手柄

Eliminates removing quill feed resetting or repositioning. Quick flick of the wrist retracts index plate pin of quill allowing you to move the handle into any position. Spring loaded pin activates quill feed. Speeds up all operations. Heavy Duty, will not bend or break.

For Your Mill With 1" Die. Hub.



Order No. 209-9002

Knurled Knobs 滚花手柄

Black Oxide Finish

- For adjusting, clamping or locating applications.
- Knurled head assures nonslip finger gripping.



Thread Size	Head Dia.	Hub Dia.	Overall Height	Head Thickness	Order No.
10-24NC	3/4	7/16	5/8	1/4	401-0005
1/4-20NC	1	5/8	3/4	1/4	401-0010
3/8-16NC	1-1/4	3/4	1-1/8	1/2	401-0015
1/2-13NC	1-1/2	1	1-1/4	1/2	401-0020
5/8-11NC	2	1-1/4	1-3/4	5/8	401-0025

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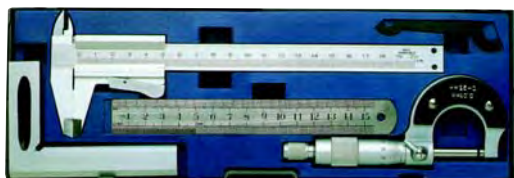
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套装量具



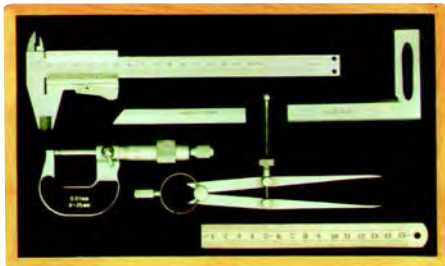
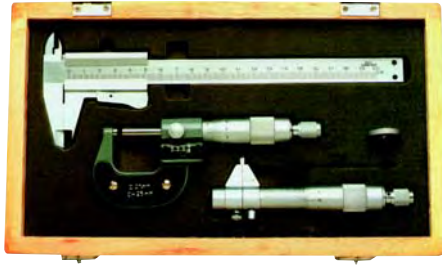
No. of Pieces	Specification	Individual Order No.	Set Order No.
4Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - Plastic case	817-0905 601-5025 638-1215 638-8205 13P-4012	135-4001
4Pcs/set	- One 6" Vernier Caliper Graduation 1/128" - One 0-1" Outside Micrometer - One 90° Knife Edge Square DIN875/1,100x70mm - One 150mm/6" Stainless Steel Ruler - Plastic case	817-0905 601-0111 638-1215 638-8205 13P-4012	135-4002
4Pcs/set	- One 0-150mm Electronic Digital caliper - One 0-25mm Electronic Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - Plastic case	600-8001 638-1215 638-8205	135-4005

No. of Pieces	Specification	Individual Order No.	Set Order No.
4Pcs/set	- One 0-150mm Dial Caliper, Graduation .02mm - One 0-25mm Outside Micrometer, Grad.: 0.01mm, Chrome-Plated. - One 90° Knife Edge Square DIN 875/1,100x70mm - One 150mm/6" Stainless Steel Ruler - Plastic case	20W-S210 600-5025 638-1215 638-8205 13P-4034	135-4003
4Pcs/set	- One 6" Dial Caliper Graduation: 0.001" - One 0-1" Outside Micrometer, Grad.:0.0001", Chrome-Plated. - One 90° Knife Edge Square DIN 875/1,100x70mm - One 150mm/6" Stainless Steel Ruler - Plastic case	10W-S006 601-0111 638-1215 638-8205 13P-4034	135-4004

No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 90° Knife Edge Square DIN 875/1, 100x70mm - Wooden case	817-0905 638-1215 13W-2012	135-2001
2Pcs/set	- One 6" Vernier Caliper Graduation:1/128" - One 90° Knife Edge Square DIN 875/1, 100x70mm - Wooden case	403-1503 638-1215 13W-2012	135-2002

No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	- One 6" Vernier Caliper Graduation:1/128" - One 0-1" Outside Micrometer ,Grad. 0.0001" - Chrome-Plated - Wooden case	403-1503 601-0001 13W-2034	135-2003
2Pcs/set	- One 0-150mm Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Outside Micrometer Grad.:0.01mm, Chrome-Plated - Wooden case	817-0905 601-5025 13W-2034	135-2004

套装量具



No. of Pieces	Specification	Individual Order No.	Set Order No.
3Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Outside Micrometer Chrome-Plated - One 5-30mm Inside Micrometer, Grad.: 0.01mm - Wooden case	817-0905 601-5025 600-4005 13W-3012	135-3001
3Pcs/set	- One 0-6" Vernier Caliper Graduation: 1/128" - One 0-1" Outside Micrometer - One .2"-1.2" Inside Micrometer - Wooden case	817-0905 601-0111 600-5005 13W-3012	135-3002

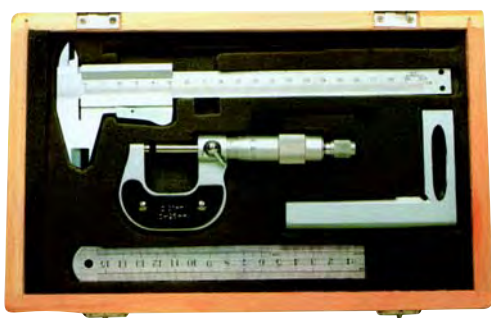
No. of Pieces	Specification	Individual Order No.	Set Order No.
5Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Digital Readout Outside Micrometer - One 0-200mm Depth Gauge Graduation .05mm - One 90° Knife Edge Square DIN 875/1, 100x70mm - One Straight Edge Ruler DIN 874/0, 100mm - Wooden case	817-0905 600-3025 112-0202 638-1215 639-7110 13W-5012	135-5001
5Pcs/set	- One 0-6" Vernier Caliper Graduation 1/128" - One 0-1" Digital Readout Outside Micrometer - One 0-8" Depth Gauge Graduation 1/128" - One 90° Knife Edge Square DIN 875/1, 100x70mm - One Straight Edge Ruler DIN 874/0, 100mm - Wooden case	403-1503 600-3011 112-0086 638-1215 638-7110 13W-5012	135-5002

No. of Pieces	Specification	Individual Order No.	Set Order No.
6Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - One Steel Divider - Wooden case	817-0905 601-5025 638-1215 638-8205 109-0904 13W-6012	135-6001
6Pcs/set	- One 0-6" Vernier Caliper Graduation: 1/128" - One 0-1" Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - One Steel Divider - Wooden case	403-1503 601-0111 638-1215 638-8205 109-0904 13W-5034	135-6002
6Pcs/set	- One 0-25mm Ele. Outside Micrometer - One 0-150mm (.05mm) Ele. Digital caliper - One 90° Knife Edge Square (638-1215) DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - One Steel Divider (109-0904) - Wooden case (13W-5034)	600-8001 135-5006	135-6003

套装量具



No. of Pieces	Specification	Set Order No.
2Pcs/set	- One 0-6"/150mm Electronic Caliper Graduation: 0.0005"/0.001mm - One 0-1"/25mm Ele. Outside Micrometer, Graduation: 0.00005"/0.001mm - Plastic Case	135-0050
2Pcs/set	- One 0-6"/150mm Electronic Caliper Graduation: 0.0005"/0.01mm - One 0-1"/25mm Ele. Outside Micrometer, Graduation: 0.00005"/0.001mm - Plastic Case	135-0051



No. of Pieces	Specification	Set Order No.
5Pcs/set	- One 0-150mm Vernier Caliper Mono-Block, Thumb lock, .05mm - One 0-25mm Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - Wooden case	135-5003
5Pcs/set	- One 0-6" Vernier Caliper 1/128" - One 0-1" Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - Wooden case	135-5004
5Pcs/set	- One 0-150mm Electronic Digital caliper - One 0-25mm Electronic Outside Micrometer - One 90° Knife Edge Square DIN 875/1, 100x70mm - One 150mm/6" Stainless Steel Ruler - One Steel Scriber - case	135-5005



No. of Pieces	Specification	Set Order No.
2Pcs/set	0-6" White face Dial caliper 0-6" White face Dial caliper - Plastic case	10W-0612
2Pcs/set	0-6" Black face Dial caliper 0-6" Black face Dial caliper - Plastic case	10B-0612



No. of Pieces	Specification	Set Order No.
2Pcs/set	- Indicator: 0-1" - Flexible stem holder almost 360 degrees, Length: 350mm 7" Locking plier for holding and clamping objects regardless of shape or size. - Fixing block - Finished in fitted plastic case - Flexible stem holder with Locking plier	135-0090

套装量具



No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	0-1" White face Dial indicator 60kg Magnetic base W/fine adj. - Plastic case	6605-4070 6625-0341 135-CP02	135-0002
2Pcs/set	0-1" Black face Dial indicator 60kg Magnetic base W/fine adj. - Plastic case	605-4080 625-0341 135-CP02	135-0005



No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	0-2" White face Dial indicator 60kg Magnetic base W/fine adj. - Plastic case	6605-4025 6625-0341 135-CP13	135-2005



No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	.03x.0005" White face test indicator 1-7/8" Test indicator holder - Plastic case	605-4710 6625-8522 135-CP14	135-0014
2Pcs/set	.03x.0005" Black face test indicator 1-7/8" Test indicator holder - Plastic case	605-4709 6625-8522 135-CP14	135-0015



No. of Pieces	Specification	Individual Order No.	Set Order No.
3Pcs/set	- White face 1" dial indicator 22-pc Indicator point set - Mighty Magnetic Base - Plastic case	6605-4070 605-0022 625-0450 135-CP10	135-0010
3Pcs/set	- Black face 1" Dial indicator 22-pc Indicator point set - Mighty Magnetic Base - Plastic case	6605-4080 605-0022 625-0450 135-CP10	135-0011



No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	0-4" Black face Dial caliper 0-1" Black face Dial indicator - Plastic case	10B-S004 6605-4080 135-CP01	135-0001
2Pcs/set	0-4" White face Dial caliper 0-1" White face Dial indicator - Plastic case	10W-S004 6605-4070 135-CP01	135-0004
2Pcs/set	0-6" Black face Dial caliper 0-1" Black face Dial indicator - Plastic case	10B-S006 6605-4080 135-CP16	135-0016
2Pcs/set	0-6" White face Dial caliper 0-1" White face Dial caliper - Plastic case	10W-S006 6605-4070 135-CP16	135-0017

套装量具



No. of Pieces	Specification	Individual Order No.	Set Order No.
3Pcs/set	0-1" White face dial indicator 60kg Magnetic Base W/fine adj. 22-pc Indicator point set - Plastic case	6605-4070 6625-0341 605-0022 135-CP02	135-0006
3Pcs/set	0-1" Black face Dial indicator 60kg Magnetic Base W/fine adj. 22-pc Indicator point set - Plastic case	6605-4080 6625-0341 605-0022 135-CP02	135-0007



No. of Pieces	Specification	Individual Order No.	Set Order No.
6Pcs/set	0-6" White face Dial caliper 0-1" White face Dial indicator .03x.0005" White face test indicator 0-1x.0001" Outside micrometer 60kgs Magnetic base W/fine adj. 22-pc Indicator point set - Plastic case	10W-S006 6605-4070 605-4710 601-0111 6625-0341 605-0022 135-CP12	135-0012
6Pcs/set	0-6" Black face Dial caliper 0-1" Black face Dial indicator .03x.0005" Black face test indicator 0-1x.0001" Outside micrometer 60kgs Magnetic base W/fine adj. 22-pc Indicator point set - Plastic case	10B-S006 605-4080 605-4709 601-0111 6625-0341 605-0022 135-CP12	135-0013



No. of Pieces	Specification	Individual Order No.	Set Order No.
6Pcs/set	0-6" White face Dial caliper 0-1x.0001" Outside micrometer - Square head - Protractor head - Center head 12" Blade 4R - Plastic case	10W-S006 601-0111 638-7759 638-7757 638-7758 638-7752 135-CP18	135-0018
6Pcs/set	0-6" Black face Dial caliper 0-1x.0001" Outside micrometer - Square head - Protractor head - Center head 12" Blade 4R - Plastic case	10B-S006 601-0111 638-7759 638-7757 638-7758 638-7752 135-CP18	135-0019



No. of Pieces	Specification	Individual Order No.	Set Order No.
3Pcs/set	0-6" Black face Dial caliper .03x.0005" Black face test indicator 0-1x.0001" Outside micrometer - Plastic case	10B-S006 605-4709 601-0111 135-CP08	135-0008
3Pcs/set	0-6" White face Dial caliper .03x.0005" White face test indicator 0-1x.0001" Outside micrometer - Plastic case	10W-S006 605-4710 601-0111 135-CP08	135-0009

套装量具



No. of Pieces	Specification	Individual Order No.	Set Order No.
4Pcs/set	81pc Grade B steel rectangular gage block 12x18x3" B-0 Granite surface plate 12" Vernier height gage .03x.0005" White face test indicator	630-4115 640-0120 622-8512 605-4710	135-5030
4Pcs/set	81pc Grade B steel rectangular gage block 12x18x3" B-0 Granite surface plate 12" Vernier height gage .03x.0005" Black face test indicator	630-4115 640-0120 622-8512 605-4709	135-5031
2Pcs/set	0-12"/300mm Vernier height gage 12x18x3" B-0 Granite surface plate	622-8512 640-0120	135-9999



No. of Pieces	Specification	Individual Order No.	Set Order No.
2Pcs/set	0-1" White face Dial indicator 60kg Flexible Arm Magnetic base - Plastic case	6605-4070 625-1060 135-CP02	135-0038



Electronic Micrometer and Base Sets

Pieces	Specifications	Individual Order No.	Set Order No.
2 Pcs/set	0-1"/0-25mm 2keys Ele. Micrometer Adj. Micrometer Stand	600-8001 600-0105	135-2012
2 Pcs/set	0-1"/0-25mm 5keys Ele. Micrometer Adj. Micrometer Stand	600-8005 600-0105	135-2015
2 Pcs/set	0-1"/0-25mm 7keys Ele. Micrometer Adj. Micrometer Stand	600-8031 600-0105	135-2017



Dial Test Indicator Sets

Set Includes:

- Large size dial test indicator
- Axial support
- Height gage bar with clamp
- Universal holder
- Adaptor sleeve
- Contact point case
- Contact point wrench
- Finished in fitted plastic case

Total Range	Grad.	Dial Diameter	Set Order No.
0.060"	0.0005"	1-1/2"	605-4870

Horizontal Type

Set Includes:

- Test indicator:
- Dial reasing: 0-15-0
- Two contact points
- 3/8" & 1/4" dovetail stems
- contact point wrench
- Height gage bar
- Universal Dovetail clamp
- Finished in fitted plastic case



Total Range	Grad.	Face	Sets Order No.
0.030"	0.0005"	White	605-4707
0.030"	0.0005"	Black	605-4708

Vernier Calipers 游标卡尺

Basic Type

- 4 Way measurement.
- Under 125mm without step measurement.
- Made of carbon steel or stainless steel.



Range	Graduation	Carbon Steel	Stainless Steel
		Order No.	Order No.
0-150mm/6"	.02mm/.001"	103-1501	403-1501
0-200mm/8"	.02mm/.001"	103-2001	403-2001
0-300mm/12"	.02mm/.001"	103-3001	403-3001
0-6"	.001"/1/128"	103-1503	403-1503
0-150mm/6"	.05mm/.001"	103-1509	403-1509
0-200mm/8"	.05mm/.001"	103-2009	403-2009
0-150mm/6"	.05mm/1/128"	103-1508	403-1508
0-200mm/8"	.05mm/1/128"	103-2008	403-2008
0-300mm/12"	.05mm/1/128"	103-3008	403-3008

Range	Grad.	Carbon Steel	Stainless Steel
		Order No.	Order No.
0-100mm	.02mm	103-1002	403-1002
0-125mm	.02mm	103-1252	403-1252
0-150mm	.02mm	103-1502	403-1502
0-200mm	.02mm	103-2002	403-2002
0-300mm	.02mm	103-3002	403-3002
0-100mm	.05mm	103-1005	403-1005
0-125mm	.05mm	103-1255	403-1255
0-150mm	.05mm	103-1505	403-1505
0-200mm	.05mm	103-2005	403-2005
0-300mm	.05mm	103-3005	403-3005

Fine Adjustment Type

- 4 Way measurement.
- Upper 300mm/12" without depth measurement.
- Made of carbon steel or stainless steel.

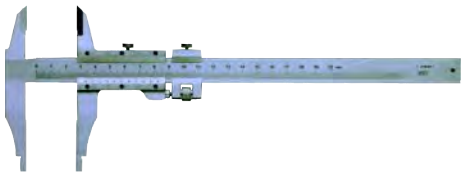


Range	Graduation	Carbon Steel	Stainless Steel
		Order No.	Order No.
0-150mm/6"	.02mm/.001"	104-1501	404-1501
0-200mm/8"	.02mm/.001"	104-2001	404-2001
0-300mm/12"	.02mm/.001"	104-3001	404-3001
0-150mm/6"	.05mm/.001"	104-1503	404-1503
0-150mm/6"	.05mm/1/128"	104-1508	404-1508
0-200mm/8"	.05mm/1/128"	104-2008	404-2008
0-300mm/12"	.05mm/1/128"	104-3008	404-3008

Range	Grad.	Carbon Steel	Stainless Steel
		Order No.	Order No.
150mm	.02mm	104-1502	404-1502
200mm	.02mm	104-2002	404-2002
300mm	.02mm	104-3002	404-3002
150mm	.05mm	104-1505	404-1505
200mm	.05mm	104-2005	404-2005
300mm	.05mm	104-3005	404-3005

Fine Adjustment & Upper Scriber Jaws

- With upper scriber jaws.
- With circular inside jaws.
- 2 way measurement.
- Made of carbon steel.



Range	Graduation	Jaw Length		Order No.
0-200mm/8"	.02mm/.001"	60mm		102-1202
0-200mm/8"	.02mm/.001"	90mm		102-1203
0-300mm/12"	.02mm/.001"	60mm		102-1302
0-300mm/12"	.02mm/.001"	90mm		102-1303
0-200mm/8"	.05mm/1/128"	60mm		102-1205
0-200mm/8"	.05mm/1/128"	90mm		102-1206
0-300mm/12"	.05mm/1/128"	60mm		102-1305
0-300mm/12"	.05mm/1/128"	90mm		102-1306

Range	Grad.	Jaw Length		Order No.
0-200mm	.02mm	60mm		102-0202
0-200mm	.02mm	90mm		102-0203
0-300mm	.02mm	60mm		102-0302
0-300mm	.02mm	90mm		102-0303
0-200mm	.05mm	60mm		102-0205
0-200mm	.05mm	90mm		102-0206
0-300mm	.05mm	60mm		102-0305
0-300mm	.05mm	90mm		102-0306

Auto Clamp Type

- 4 Way measurement.
- Made of carbon steel or stainless steel.



Range	Graduation	Carbon Steel	Stainless Steel
		Order No.	Order No.
0-150mm/6"	.02mm/.001"	105-1501	405-1501
0-200mm/8"	.02mm/.001"	105-2001	405-2001
0-300mm/8"	.02mm/.001"	105-3001	405-3001
0-150mm/6"	.05mm/1/128"	105-1508	405-1508
0-200mm/8"	.05mm/1/128"	105-2008	405-2008
0-300mm/8"	.05mm/1/128"	105-3008	405-3008

Range	Grad.	Carbon Steel	Stainless Steel
		Order No.	Order No.
0-150mm	.02mm	105-1502	405-1502
0-200mm	.02mm	105-2002	405-2002
0-300mm	.02mm	105-3002	405-3002
0-150mm	.05mm	105-1505	405-1505
0-200mm	.05mm	105-2005	405-2005
0-300mm	.05mm	105-3005	405-3005

Mono-Block Vernier Calipers 游标卡尺

Mono-Block with Screw Lock, Rivet Half-Round Handle

- 4 way measurement.
- Made of stainless steel.



Range	Graduations	Order No.	Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	817-0801	0-150mm	.02mm	817-0802
0-200mm/8"	.02mm/.001"	817-0821	0-200mm	.02mm	817-0822
0-150mm/6"	.05mm/1/128"	817-0808	0-150mm	.05mm	817-0805
0-200mm/8"	.05mm/1/128"	817-0828	0-200mm	.05mm	817-0825

Mono-Block with Screw Lock, Square Mono Block Handle

- 4 way measurement.
- Made of stainless steel.



Range	Graduations	Order No.	Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	817-0901	0-150mm	.02mm	817-0902
0-200mm/8"	.02mm/.001"	817-0921	0-200mm	.02mm	817-0922
0-150mm/6"	.05mm/1/128"	817-0908	0-150mm	.05mm	817-0905
0-200mm/8"	.05mm/1/128"	817-0928	0-200mm	.05mm	817-0925

Mono-Block with Screw Lock, Half-Round Mono Block Handle

- 4 way measurement.
- Made of stainless steel.



Range	Graduations	Order No.	Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	817-4001	0-150mm	.02mm	817-4002
0-200mm/8"	.02mm/.001"	817-4021	0-200mm	.02mm	817-4022
0-150mm/6"	.05mm/1/128"	817-4008	0-150mm	.05mm	817-4005
0-200mm/8"	.05mm/1/128"	817-4028	0-200mm	.05mm	817-4025

Mono-Block, with Lower Screw Lock

- 4 way measurement.
- Made of stainless steel.



Range	Graduations	Order No.	Range	Graduations	Order No.
150mm/6"	0.02mm/0.001"	817-5151	150mm	0.02mm	817-5152
150mm/6"	0.05mm/1/128"	817-5158	150mm	0.05mm	817-5155

Mono-Block, with Upper Screw Lock

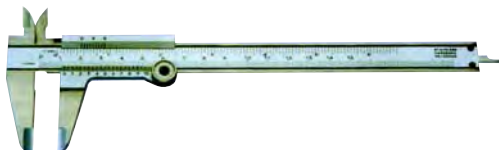
- 2 way measurement.
- Made of carbon steel.



Range	Graduations	Order No.
0-200mm	.02mm	827-0202
0-200mm	.05mm	827-0205

Mono-Block, with Plane Looking

- 4 way measurement.
- Made of stainless steel.



Range	.02mm/.001"	.05mm/1/128"	Range	.02mm	.05mm
	Order No.	Order No.		Order No.	Order No.
0-150mm/6"	817-1501	817-1508	0-150mm	817-1502	817-1505
0-200mm/8"	817-2001	817-2008	0-200mm	817-2002	817-2005
0-300mm/12"	817-3001	817-3008	0-300mm	817-3002	817-3005

Mono-Block, with Roll-wheel

- 4 way measurement.
- Made of stainless steel.



Range	Graduations	Order No.	Range	Graduations	Order No.
150mm/6"	0.02mm/0.001"	818-4151	150mm	0.02mm	818-4152
150mm/6"	0.05mm/1/128"	818-4158	150mm	0.05mm	818-4155



Mono-Block Vernier Calipers continued 游标卡尺

Mono-Block with Auto Clamp, Small Size Handle

- 4 way measurement.
- Made of stainless steel.

Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	818-1151
0-200mm/8"	.02mm/.001"	818-1201
0-150mm/6"	.05mm/1/128"	818-1158
0-200mm/8"	.05mm/1/128"	818-1208

Range	Graduations	Order No.
0-150mm	.02mm	818-1152
0-200mm	.02mm	818-1202
0-150mm	.05mm	818-1155
0-200mm	.05mm	818-1205

Mono-Block with Auto Clamp, Large Size Handle

- 4 way measurement.
- Made of stainless steel.

Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	818-0151
0-200mm/8"	.02mm/.001"	818-0201
0-150mm/6"	.05mm/1/128"	818-0158
0-200mm/8"	.05mm/1/128"	818-0208

Range	Graduations	Order No.
0-150mm	.02mm	818-0152
0-200mm	.02mm	818-0202
0-150mm	.05mm	818-0155
0-200mm	.05mm	818-0205

Mono-Block, Self-locking, Black Small Handle

- 4 way measurement.
- Made of stainless steel.

Range	Graduations	Order No.
150mm/6"	0.02mm/0.001"	818-2151
150mm/6"	0.05mm/1/128"	818-2158

Range	Graduations	Order No.
150mm	0.02mm	818-2152
150mm	0.05mm	818-2155

Mono-Block, Self-locking with Small Lock Handle & Round Depth Bar

- 4 way measurement.
- Made of stainless steel.

Range	Graduations	Order No.
150mm/6"	0.02mm/0.001"	818-3151
150mm/6"	0.05mm/1/128"	818-3158

Range	Graduations	Order No.
150mm	0.02mm	818-3152
150mm	0.05mm	818-3155

Mono-Block, No parallax Error

Range	Graduations	Order No.
0-150mm/6"	.02mm/.001"	815-1905
0-150mm/6"	.05mm/1/128"	815-1908

Range	Graduations	Order No.
0-150mm	.02mm	815-1901
0-150mm	.05mm	815-1902

Parallax Free Caliper 无视差不锈钢卡尺

Basic Model

- 4 way measurement.
- Made of stainless steel.

Range	Graduations	Auto Clamp Order No.
0-150mm/6"	.02mm/.001"	815-1601
0-150mm/6"	.05mm/1/128"	815-1608

Range	Graduations	Auto Clamp Order No.
0-150mm	.02mm	815-1602
0-150mm	.05mm	815-1605

Range	Graduations	Screw Lock Order No.
0-150mm/6"	.02mm/.001"	815-1501
0-150mm/6"	.05mm/1/128"	815-1508

Range	Graduations	Screw Lock Order No.
0-150mm	.02mm	815-1502
0-150mm	.05mm	815-1505

Mono-Block Type

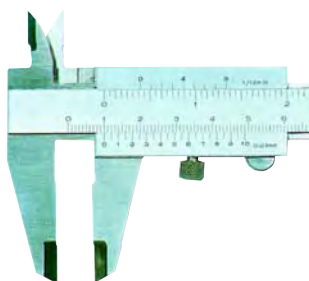
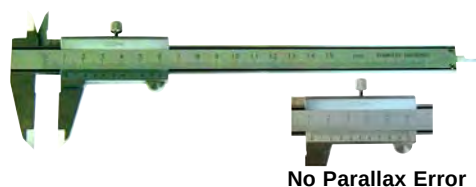
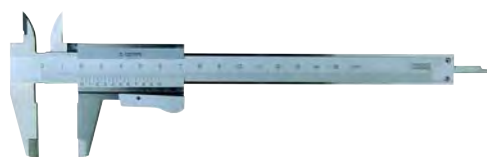
Range	Graduations	Screw Lock Order No.
0-150mm/6"	.02mm/.001"	815-1701
0-150mm/6"	.05mm/1/128"	815-1708

Range	Graduations	Screw Lock Order No.
0-150mm	.02mm	815-1702
0-150mm	.05mm	815-1705

Mono-Block & Double Prism Type

Range	Graduations	Screw Lock Order No.
0-150mm/6"	.02mm/.001"	815-1801
0-150mm/6"	.05mm/1/128"	815-1808

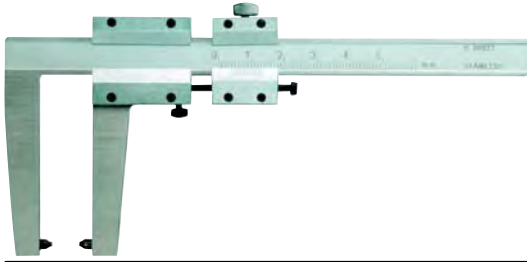
Range	Graduations	Screw Lock Order No.
0-150mm	.02mm	815-1802
0-150mm	.05mm	815-1805



Disc Brake Vernier Calipers

尖头式游标卡尺（制动片）

- Fine adjustment.
- Made of stainless steel.

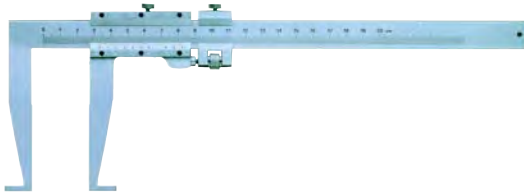


Range	Graduations	Length of Jaws	Order No.
0-60mm	.1mm	55mm	610-5501
0-60mm	.1mm	80mm	610-5502
0-90mm	.1mm	120mm	610-5503

Inside Groove Vernier Calipers

内沟槽游标卡尺

- Prolongation jaws.
- Fine adjustment.
- Made of stainless steel.

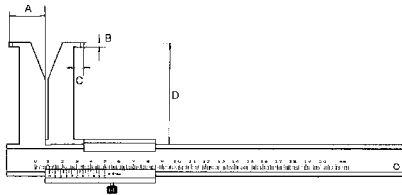


Range	Graduations	Size of Jaw	Order No.
40-340mm/0-300mm	0.02mm	95x40mm	610-6302
60-560mm/0-500mm	0.02mm	150x60mm	610-6502
40-340mm/0-300mm	0.05mm	95x40mm	610-6305
60-560mm/0-500mm	0.05mm	150x60mm	610-6505

Inside Groove Vernier Calipers

内沟槽游标卡尺

- Mono-Block.
- With upper jaws.
- Made of stainless steel.

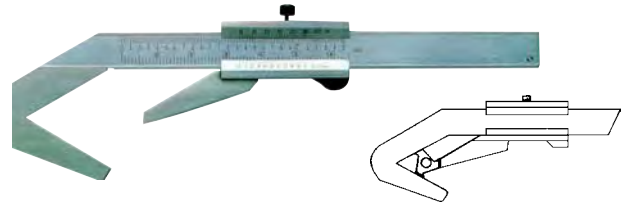


Range	Graduations	A	B	C	D	Order No.
10-160mm	0.05mm	10mm	2mm	3mm	30mm	610-7160
26-200mm	0.05mm	25mm	3mm	7mm	70mm	610-7200

Anvil Vernier Calipers

三勾卡尺

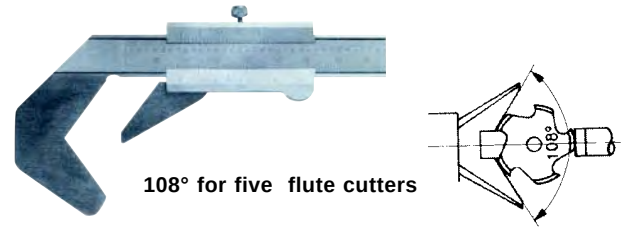
Used for measurements of 3 or 5 flute cutting heads.



60° for three flute cutters

60° Type

Range	Graduations	Order No.
5-40mm	.05mm	102-2040
20-75mm	.05mm	102-2075



108° for five flute cutters

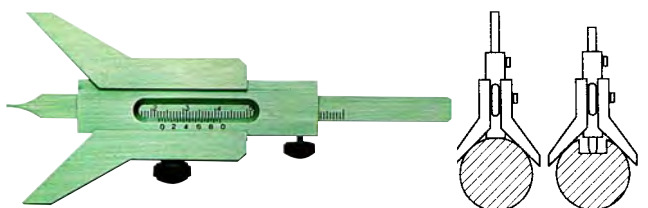
108° Type

Range	Graduations	Order No.
1-40mm	.05mm	102-2140
2-40mm	.05mm	102-2141

Spline Gages

不锈钢键槽规

- Made of stainless steel.

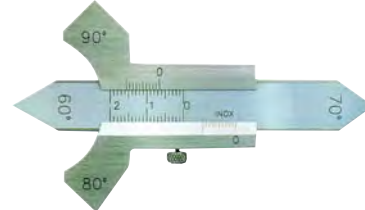


Range	Graduations	Order No.
5-80mm	0.05mm	102-9105
6-120mm	0.05mm	102-9106
7-160mm	0.05mm	102-9107
8-200mm	0.05mm	102-9108

Welding Seam Gage

焊缝规

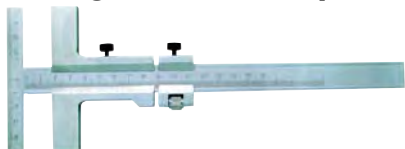
- Made of stainless steel.



Specification	Graduations	Order No.
60°, 70°, 80° and 90°	0.1mm	102-5500

T- Type Marking Vernier Calipers

T 型划线卡尺



Range	Graduation	Order No.
0-150mm	.05mm	102-3150
0-250mm	.05mm	102-3250
0-300mm	.05mm	102-3300
0-400mm	.05mm	102-3400
0-500mm	.05mm	102-3500

Steel Marking Gages

机床标尺, 带双针

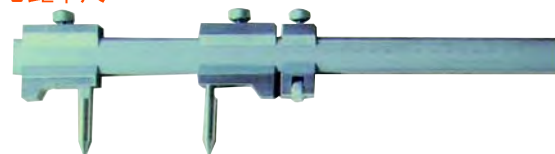
- Double needles
- Made of Stainless Steel



Range	Graduation	Order No.
500mm	0.1mm	102-9020
1000mm	0.1mm	102-9040

Center Distance Calipers

中心距卡尺



Range	Graduation	Stainless Steel Order No.	CarbonSteel Order No.
300mm	0.1mm	102-9001	102-9011
500mm	0.1mm	102-9002	102-9012
1000mm	0.1mm	102-9003	102-9013
1500mm	0.1mm	102-9004	102-9014
2000mm	0.1mm	102-9005	102-9015
3000mm	0.1mm	102-9006	102-9016

Range	Graduation	Stainless Steel Order No.	CarbonSteel Order No.
300mm/12"	0.1mm/1/128"	102-9021	102-9031
500mm/20"	0.1mm/1/128"	102-9022	102-9032
1000mm/40"	0.1mm/1/128"	102-9023	102-9033
1500mm/60"	0.1mm/1/128"	102-9024	102-9034
2000mm/80"	0.1mm/1/128"	102-9025	102-9035
3000mm/120"	0.1mm/1/128"	102-9026	102-9036

Steel Marking Gages

机床标尺, 带圆形杆, 带微调

- Round rod.
- Fine adjustment.



Range	Graduation	Order No.
200mm	0.1mm	102-8200
300mm	0.1mm	102-8300
400mm	0.1mm	102-8400
500mm	0.1mm	102-8500

Marking Vernier Calipers

带针平行划线卡尺



Range	Graduation	Order No.
0-200mm	.05mm	102-4200
0-200mm	.1mm	102-4201
0-200mm/8"	.1mm/1/128"	102-4202
0-400mm	.1mm	102-4400
0-400mm/16"	.1mm/1/128"	102-4402

Steel Marking Gages

- Round rod.

机床标尺, 带圆形杆



Range	Graduation	Order No.
200mm	0.1mm	102-7200
300mm	0.1mm	102-7300
400mm	0.1mm	102-7400
500mm	0.1mm	102-7500

Steel Marking Gages

机床标尺

- Flat pattern.
- Hardened lay-out edge.
- Satin chrome finish.



Range	Graduation	Order No.
200mm	0.1mm	102-5200
250mm	0.1mm	102-5250
300mm	0.1mm	102-5300
8"	0.005"	102-5008
10"	0.005"	102-5010
12"	0.005"	102-5012



Range	Order No.
8"/200mm	102-5108
12"/300mm	102-5112

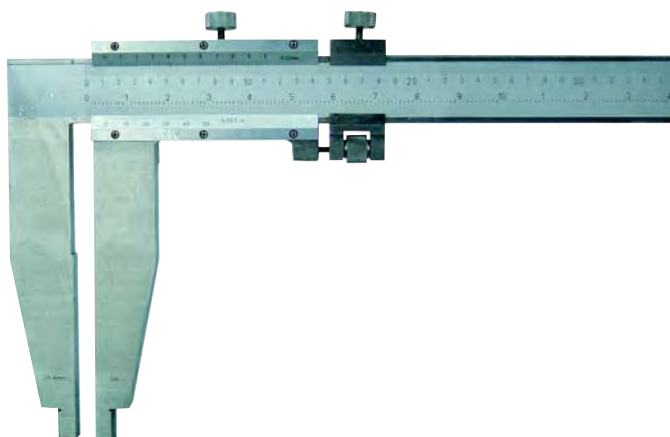
Steel Marking Compasses

划线卡尺



Range	Graduation	Order No.
150mm	0.1mm	102-6150
200mm	0.1mm	102-6200
250mm	0.1mm	102-6250
300mm	0.1mm	102-6300

重型游标卡尺



Heavy Duty Vernier Calipers

Basic Model

- Long 50-division vernier scales (Not available on 611-5612) have wide spread easy to read, clear engraved crisp black graduations in 0.001".
- Longer jaws permit greater accessibility and simpler measurement of larger work pieces.
- With fine adjustment.

Jaw			Carbon Steel	Stainless Steel
Range	Length	Graduation	Order No.	Order No.
0-12"	3"	.001"	611-5212	611-5112
0-18"	4"	.001"	611-5218	611-5118
0-20"	4"	.001"	611-5220	611-5120
0-24"	4"	.001"	611-5224	611-5124
0-40"	5"	.001"	611-5240	611-5140
0-60"	7"	.001"	611-5260	611-5160
0-80"	7"	.001"	611-5280	

Jaw		Vernier Scale		Carbon Steel	Stainless Steel
Range	Length	Lower	Upper	Order No.	Order No.
0-12"	3"	.02mm	.001"	611-5812	611-5712
0-18"	4"	.02mm	.001"	611-5818	611-5718
0-20"	4"	.02mm	.001"	611-5820	611-5720
0-24"	4"	.02mm	.001"	611-5824	611-5724
0-40"	5"	.02mm	.001"	611-5840	611-5740
0-60"	8"	.02mm	.001"	611-5860	611-5760*
0-80"	8"	.02mm	.001"	611-5880	611-5780*

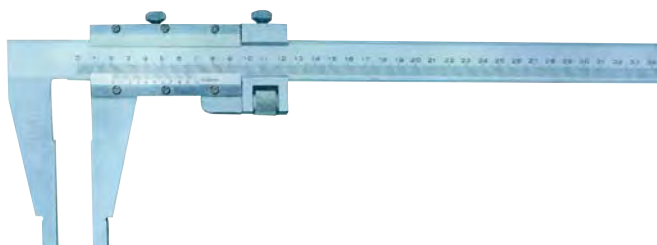
* 7" Jaw Length

Jaw		Vernier Scale		Carbon Steel	Stainless Steel
Range	Length	Lower	Upper	Order No.	Order No.
0-12"	3"	.001"	.02mm	611-5612	611-5512
0-18"	4"	.001"	.02mm	611-5618	611-5518
0-20"	4"	.001"	.02mm	611-5620	611-5520
0-24"	4"	.001"	.02mm	611-5624	611-5524
0-40"	5"	.001"	.02mm	611-5640	611-5540
0-40"	6-1/2"	.001"	.02mm	611-5641	611-5541
0-60"	8"	.001"	.02mm	611-5660	611-5560
0-80"	8"	.001"	.02mm	611-5680	611-5580

Jaw		Carbon Steel	Stainless Steel
Range	Length	Order No.	Order No.
0-300mm	75mm	611-5305	611-5405
0-450mm	100mm	611-5310	611-5410
0-500mm	100mm	611-5315	611-5415
0-600mm	100mm	611-5320	611-5420
0-1000mm	125mm	611-5325	611-5425
0-1500mm	200mm	611-5330	611-5430
0-2000mm	200mm	611-5335	

Jaw		Carbon Steel	Stainless Steel
Range	Length	Order No.	Order No.
0-300mm	75mm	611-5306	611-5406
0-450mm	100mm	611-5311	611-5411
0-500mm	100mm	611-5316	611-5416
0-600mm	100mm	611-5321	611-5421
0-1000mm	125mm	611-5326	611-5426
0-1500mm	200mm	611-5331	611-5431
0-2000mm	200mm	611-5336	611-5436

加长爪重型游标卡尺



Heavy Duty Vernier Calipers

Long Jaws

- Long 50-division vernier scales have wide spread easy to read, clear engraved crisp black graduations in 0.001".
- Longer jaws permit greater accessibility and simpler measurement of larger work pieces.
- With fine adjustment.
- Made of stainless steel.

Range	Jaw Length	Graduation	Order No.
0-12"	3.5"	.001"	611-5012
0-20"	7.8"	.001"	611-5020
0-30"	7.8"	.001"	611-5030
0-40"	7.8"	.001"	611-5040

Range	Jaw Length	Graduation	Order No.
0-300mm/12"	3.5"	.001"	611-6012
0-500mm/20"	7.8"	.001"	611-6020
0-750mm/30"	7.8"	.001"	611-6030
0-1000mm/40"	7.8"	.001"	611-6040

Heavy Duty Vernier Calipers 加长爪重型卡尺

Mono-Block, Long Jaw Type

- Without upper jaws.
- With fine adjustment.
- Made of carbon steel or stainless steel



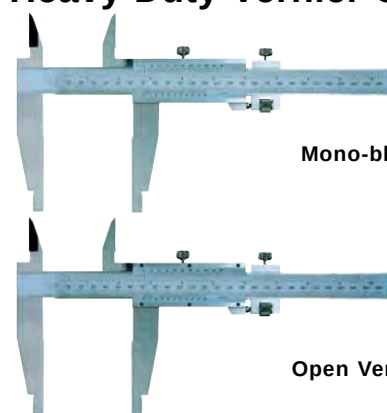
Range	Grad.	Jaw Length	Carbon Steel Order No.	Stainless Steel Order No.
0-450mm	.02mm	150mm	611-0204	611-1204
0-500mm	.02mm	150mm	611-0205	611-1205
0-600mm	.02mm	150mm	611-0206	611-1206
0-1000mm	.02mm	150mm	611-0210	611-1210

Range	Grad.	Jaw Length	Carbon Steel Order No.	Stainless Steel Order No.
0-450mm	.05mm	150mm	611-0504	611-1504
0-500mm	.05mm	150mm	611-0505	611-1505
0-600mm	.05mm	150mm	611-0506	611-1506
0-1000mm	.05mm	150mm	611-0510	611-1510

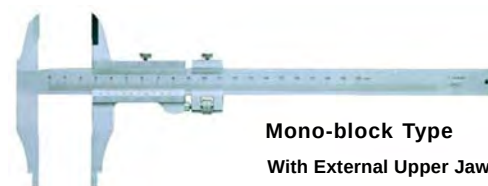
Range	Vernier Scale		Jaw Length	Carbon Steel Order No.	Stainless Steel Order No.
	Lower	Upper			
0-300mm/12"	.02mm	001"	90mm	611-0218	611-1212
0-450mm/18"	.02mm	001"	150mm	611-0220	611-1220
0-500mm/20"	.02mm	001"	150mm	611-0224	611-1224
0-600mm/24"	.02mm	001"	150mm	611-0232	611-1232
0-800mm/32"	.02mm	001"	150mm	611-0240	611-1240
0-1000mm/40"	.02mm	001"	150mm		611-1260
0-1500mm/60"	.02mm	001"	200mm		611-1280
0-2000mm/80"	.02mm	001"	200mm		

Range	Vernier Scale		Jaw Length	Carbon Steel Order No.	Stainless Steel Order No.
	Lower	Upper			
0-300/12"	.05mm	1/128"	90mm	611-0518	611-1512
0-450mm/18"	.05mm	1/128"	150mm	611-0520	611-1520
0-500mm/20"	.05mm	1/128"	150mm	611-0524	611-1524
0-600mm/24"	.05mm	1/128"	150mm	611-0532	611-1532
0-800mm/32"	.05mm	1/128"	150mm	611-0540	611-1540
0-1000mm/40"	.05mm	1/128"	150mm		611-1560
0-1500mm/60"	.05mm	1/128"	200mm		611-1580
0-2000mm/80"	.05mm	1/128"	200mm		

Heavy Duty Vernier Calipers 带上爪重型游标卡尺



Mono-block Type



Mono-block Type
With External Upper Jaws

- Made of stainless steel
- With fine adjustment.
- Open vernier type and mono-block vernier type for choice.

Range	Jaw Length		Grad.	Open Vernier Order No.	Mono-block Order No.
	Length	Grad.			
0-400mm	100mm	.05mm		610-0165	610-2165
0-450mm	100mm	.05mm		610-0185	610-2185
0-500mm	100mm	.05mm		610-0205	610-2205
0-500mm	150mm	.05mm		610-0206	610-2206
0-600mm	100mm	.05mm		610-0245	610-2245
0-600mm	150mm	.05mm		610-0246	610-2246
0-750mm	150mm	.05mm		610-0305	610-2305
0-1000mm	150mm	.05mm		610-0405	610-2405
0-1500mm	200mm	.05mm		610-0605	610-2605
0-2000mm	200mm	.05mm		610-0805	610-2805

Range	Jaw Length	Vernier Scale		With Internal Upper Jaws		With External Upper Jaws
		Lower	Upper	Open Vernier Order No.	Mono-block Order No.	Mono-block Order No.
0-300mm/12"	90mm	.02mm	001"	610-1162	610-3160	610-3158
0-400mm/16"	100mm	.02mm	001"	610-1182	610-3162	610-3163
0-450mm/18"	100mm	.02mm	001"	610-1202	610-3182	
0-500mm/20"	100mm	.02mm	001"	610-1203	610-3202	610-3169
0-500mm/20"	150mm	.02mm	001"	610-1242	610-3203	
0-600mm/24"	100mm	.02mm	001"	610-1243	610-3242	
0-600mm/24"	150mm	.02mm	001"	610-1244	610-3243	610-3171
0-750mm/30"	150mm	.02mm	001"	610-1302	610-3302	610-3172
0-1000mm/40"	150mm	.02mm	001"	610-1402	610-3402	610-3173
0-1500mm/60"	200mm	.02mm	001"	610-1602	610-3602	610-3174
0-2000mm/80"	200mm	.02mm	001"	610-1802	610-3802	610-3175

Range	Jaw Length		Grad.	Open Vernier Order No.	Mono-block Order No.
	Length	Grad.			
0-400mm	100mm	.02mm		610-0162	610-2162
0-450mm	100mm	.02mm		610-0182	610-2182
0-500mm	100mm	.02mm		610-0202	610-2202
0-500mm	150mm	.02mm		610-0203	610-2203
0-600mm	100mm	.02mm		610-0242	610-2242
0-600mm	150mm	.02mm		610-0243	610-2243
0-750mm	150mm	.02mm		610-0302	610-2302
0-1000mm	150mm	.02mm		610-0402	610-2402
0-1500mm	200mm	.02mm		610-0602	610-2602
0-2000mm	200mm	.02mm		610-0802	610-2802

Range	Jaw Length	Vernier Scale		With Internal Upper Jaws		With External Upper Jaws
		Lower	Upper	Open Vernier Order No.	Mono-block Order No.	Order No.
0-300mm/12"	90mm	.05mm	1/128"	610-1165	610-3161	610-3180
0-400mm/16"	100mm	.05mm	1/128"	610-1185	610-3165	610-3183
0-450mm/18"	100mm	.05mm	1/128"	610-1205	610-3185	
0-500mm/20"	100mm	.05mm	1/128"	610-1206	610-3205	
0-500mm/20"	150mm	.05mm	1/128"	610-1245	610-3206	610-3188
0-600mm/24"	100mm	.05mm	1/128"	610-1246	610-3245	
0-600mm/24"	150mm	.05mm	1/128"	610-1305	610-3246	610-3190
0-750mm/30"	150mm	.05mm	1/128"	610-1405	610-3305	610-3192
0-1000mm/40"	150mm	.05mm	1/128"	610-1605	610-3405	610-3193
0-1500mm/60"	200mm	.05mm	1/128"	610-1805	610-3605	610-3194
0-2000mm/80"	200mm	.05mm	1/128"		610-3805	610-3195

Precision Dial Calipers 不锈钢带表卡尺, 螺钉固定齿条

- Stainless steel with satin chrome finish.
- Outside, inside and depth measurements.
- Supplied in plastic case.
- With thumb roll.
- 12"~40" without Upper Jaw



Inch ,Stainless Steel, Dial 0-100

Range	Grad.	Range Per/Rev.	Black Face Order No.	White Face Order No.
0-4"	.001"	0.1"	10B-S004	10W-S004
0-6"	.001	0.1	10B-S006	10W-S006
0-8"	.001	0.1	10B-S008	10W-S008
0-12"	.001	0.1	10B-S012	10W-S012

Inch ,Stainless Steel, Dial 0-100-0

Range	Grad.	Range Per/Rev.	Black Face Order No.	White Face Order No.
0-6"	.001"	0.2"	20B-S006	20W-S006
0-8"	.001	0.2	20B-S008	20W-S008
0-12"	.001	0.2	20B-S012	20W-S012

Inch ,Carbon Steel, Dial 0-100

Range	Grad.	Range Per/Rev.	Black Face Order No.	White Face Order No.
0-4"	.001"	0.1"	10B-C004	10W-C004
0-6"	.001	0.1	10B-C006	10W-C006
0-8"	.001	0.1	10B-C008	10W-C008
0-12"	.001	0.1	10B-C012	10W-C012

Inch ,Carbon Steel, Dial 0-100-0

Range	Grad.	Range Per/Rev.	Black Face Order No.	White Face Order No.
0-4"	.001"	0.2"	20B-C004	20W-C004
0-6"	.001	0.2	20B-C006	20W-C006
0-8"	.001	0.2	20B-C008	20W-C008
0-12"	.001	0.2	20B-C012	20W-C012

Metric ,Stainless Steel, Dial 0-100

Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.	Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.	Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.
0-100mm	.01mm	1mm	20W-S110	20B-S110	.02mm	2mm	20W-S210	20B-S210	.05mm	5mm	20W-S510	20B-S510		
0-150mm	.01mm	1mm	20W-S115	20B-S115	.02mm	2mm	20W-S215	20B-S215	.05mm	5mm	20W-S515	20B-S515		
0-200mm	.01mm	1mm	20W-S120	20B-S120	.02mm	2mm	20W-S220	20B-S220	.05mm	5mm	20W-S520	20B-S520		
0-300mm	.01mm	1mm	20W-S130	20B-S130	.02mm	2mm	20W-S230	20B-S230	.05mm	5mm	20W-S530	20B-S530		

Metric ,Carbon Steel, Dial 0-100

Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.	Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.	Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.
0-100mm	.01mm	1mm	20W-C110	20B-C110	.02mm	2mm	20W-C210	20B-C210	.05mm	5mm	20W-C510	20B-C510		
0-150mm	.01mm	1mm	20W-C115	20B-C115	.02mm	2mm	20W-C215	20B-C215	.05mm	5mm	20W-C515	20B-C515		
0-200mm	.01mm	1mm	20W-C120	20B-C120	.02mm	2mm	20W-C220	20B-C220	.05mm	5mm	20W-C520	20B-C520		
0-300mm	.01mm	1mm	20W-C130	20B-C130	.02mm	2mm	20W-C230	20B-C230	.05mm	5mm	20W-C530	20B-C530		

Heavy Duty Dial Calipers

Long Jaws 重型带表卡尺, 螺钉固定齿条

- Stainless Steel, Large dial steel with fine adjustment, double scale
- without Upper Jaw



Range	Grad.	Inside Range	Jaw Length	Order No.
0-450mm	0.02mm	20-450mm	100mm	102-0845
0-500mm	0.02mm	20-450mm	100mm	102-0850
0-600mm	0.02mm	20-450mm	100mm	102-0860
0-1000mm	0.02mm	20-1000mm	120mm	102-0890
0-12"	0.01"	0.4-12"	4"	10W-S013
0-18"	0.01"	0.5-18"	4"	10W-S018
0-20"	0.01"	0.5-20"	4"	10W-S020
0-24"	0.01"	0.5-24"	4"	10W-S024
0-40"	0.01"	0.8-40"	5"	10W-S040

"Swiss Style" Dial Calipers

带塑料盖不锈钢带表卡尺, 螺钉固定齿条

- 4 way measurement.
- One revolution reading, dial 0-100.
- Made of stainless steel .



Range	Grad.	Range Per/Rev.	White Face Order No.	Black Face Order No.
0-6"	.001"	0.1"	102-0006	102-1006
0-8"	.001	0.1	102-0008	102-1008
0-12"	.001	0.1	102-0012	102-1012

Range	Grad.	Range Per/Rev.	Order No.	Range	Grad.	Range Per/Rev.	Order No.
0-150mm	.01mm	1mm	102-0115	.02mm	2mm		102-0215
0-200mm	.01mm	1mm	102-0120	.02mm	2mm		102-0220
0-300mm	.01mm	1mm	102-0130	.02mm	2mm		102-0230

Dial Caliper 不锈钢带表卡尺 (彩色表盘)

Stainless steel, Colour Face



Range	Grad.	Range Per/Rev.	Dial Face Color	Order No.
0-6"	.001"	0.1"	Red	102-1026
0-6"	.001"	0.1"	Yellow	102-1036
0-6"	.001"	0.1"	Green	102-1046

Inch & Metric Dial Calipers

不锈钢双针带表卡尺 (白表面), 螺钉固定齿条

- Outside/inside and depth measurements.
- Hardened stainless steel finish.
- Dial 0-100.

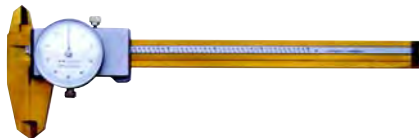


Range	Graduation	Range Per/Rev.	Order No.
0-6"/0-150mm	.001"/.02mm	0.1"/2mm	10W-1506
0-8"/0-200mm	.001"/.02mm	0.1"/2mm	10W-2008
0-12"/0-300mm	.001"/.02mm	0.1"/2mm	10W-3012

TiN-Coated Dial Caliper

不锈钢涂钛带表卡尺 (白表面), 螺钉固定齿条

- Stainless steel
- White face
- Dial 0-100



Range	Graduation	Order No.
0-6"	0.001"	10W-S007

4 Key Digital Calipers 四键不锈钢电子卡尺

- Four-key type : TOL-key, on/off Key, Inch/mm Key, Zero Key.
- Enter high/low dimensional limits-out of limits Δ & ∇ will flash on display.
- Same features as Basic Model.



TOL-Key Type

Range	Jaw Length	Order No.
150mm/6"	40mm	101-4506
200mm/8"	50mm	101-4508
300mm/12"	60mm	101-4512

- Four-key type : ABS-key, on/off Key, Inch/mm Key, Zero Key.
- Absolute button allow return to the absolute.
- Same features as Basic Model.



ABS-Key Type

Range	Jaw Length	Order No.
150mm/6"	40mm	101-4706
200mm/8"	50mm	101-4708
300mm/12"	60mm	101-4712

Two Direction Shock Proof Dial Calipers

双向防震表卡, 螺钉固定齿条

- Two direction shock proof system ensure stable and easy reading.
- Hardened and polished measuring faces. Dial 0-100.
- Made of Stainless Steel.



Range	Graduation	Order No.	Graduation	Order No.
0-150 mm	0.01mm	102-0501	0.02mm	102-0511
0-200 mm	0.01mm	102-0502	0.02mm	102-0512
0-300 mm	0.01mm	102-0503	0.02mm	102-0513

Range	Grad.	Face	Order No.	Face	Order No.	Cover	Order No.
0-6"	0.001"	Black	102-0505	White	102-0506	Metal	102-0507

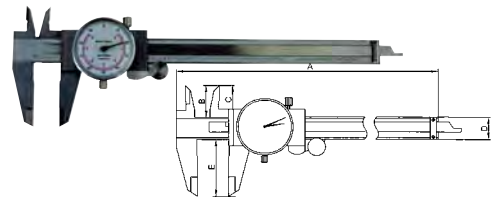
E-Z Reading Dial Calipers

White face, Dual Reading

全读数不锈钢带表卡尺, 螺钉固定齿条

This type of dial caliper have two pointers in the dial. One pointers indicate integer fraction, ones indicate decimal fraction. What advantage is that user can get readings directly from the dial, more clear and more easy.

- Made of stainless hardened throughout.
- Resolutions: 0.001".
- Direct reading from a dial.
- All measuring face is hardened and finished.
- Adjustable bezel, easy to zeroset.
- For measuring to ID, OD, Depth and Step.
- With case.



Range	Grad.	Accuracy	Dimensions(mm)					Order No.
			A	B	C	D	E	
0-6"	0.001"	0.001"	236	21	16.5	16	40	102-1406
0-8"	0.001"	0.002"	290	24.5	20	16	50	102-1408
0-12"	0.001"	0.002"	403	27.5	22	20	64	102-1412

- Four-key type : HOLD-key, on/off Key, Inch/mm Key, Zero Key.
- Hold button, hold readout at any position.
- Same features as Basic Model.



HOLD-Key Type

Range	Jaw Length	Order No.
150mm/6"	40mm	101-4806
200mm/8"	50mm	101-4808
300mm/12"	60mm	101-4812

- Four-key type : MODE-key, on/off Key, Inch/mm Key, Zero Key.
- Mode button, hold "peak" maximum or minimum measurements and recall from memory.



MODE-Key Type

Range	Jaw Length	Order No.
150mm/6"	40mm	101-4606
200mm/8"	50mm	101-4608
300mm/12"	60mm	101-4612

Splash Proof Digital Calipers

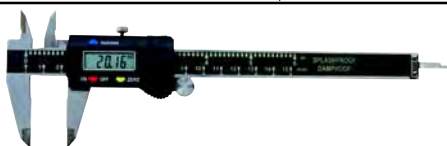
IP54 防水溅电子数显卡尺

- It can work when cleaning the splashed water on it.
- With ON/OFF button and data out put interface.
- Zero setting at any position. Metric/Inch system conversion at any position.



2 Key Type

Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-5801
0-200mm/8"	0.01mm/0.0005"	101-5802
0-300mm/12"	0.01mm/0.0005"	101-5803



3 Key Type

Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-5804
0-200mm/8"	0.01mm/0.0005"	101-5805
0-300mm/12"	0.01mm/0.0005"	101-5806

Water Proof Electronic Digital Calipers

防水电子数显卡尺

- Fully protected against the penetration of liquids and antimagnetic
- IP67 Prevent dust, spraying water or oil from entering the caliper through effective encapsulation of the main parts
- Auto Power off
- Inch/mm conversion at any position
- Zero setting at any position
- Four-way measurement



IP65 & IP67

Range	Graduation	IP65 Order No.	IP67 Order No.
0-150mm/6"	0.01mm/0.0005"	101-5810	101-5904
0-200mm/8"	0.01mm/0.0005"	101-5811	101-5905
0-300mm/12"	0.01mm/0.0005"		101-5906

Water Proof Electronic Caliper

防水电子数显卡尺-金属壳

- One of the toughest calipers available
- Use it anywhere in the shop without worry
- Large LCD display
- IP67 level: protection against coolants, dirt, chips and temporary water submersion



IP67, Water Proof

Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-5910
0-200mm/8"	0.01mm/0.0005"	101-5911
0-300mm/12"	0.01mm/0.0005"	101-5912

Water Proof Ele. Digital Caliper

IP65, Water Proof

防水数显卡尺

- Conform to IP65 level and can be used in cutting liquid conditions.



Range	Graduation	Order No.
0-150mm/6"	0.01/0.0005"	101-5812

3 Key Metal Casing Digital Calipers

三按键金属罩壳电子数显卡尺

- With manual ON/OFF
- Metric/inch system conversion at any position
- Zero setting at any position

Type II



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0114

Type v



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0117

Digital Calipers

全屏数显卡尺

- Maximum measurement speed: 1.5mm/s 60in/s
- Operating temperature: 0~40°C.
- Power: 3V CR2025(silver oxide cell) 1 battery
- in/mm, ON/OFF, ZERO



Black/White LCD

Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0104
0-200mm/8"	0.01mm/0.0005"	101-0105
0-300mm/12"	0.01mm/0.0005"	101-0106

- in/mm, ON/OFF, ZERO, ABS



Yellow LCD

Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0107
0-200mm/8"	0.01mm/0.0005"	101-0108
0-300mm/12"	0.01mm/0.0005"	101-0109

Electronic Digital Calipers

Metal-housing, 3 Key Type

三键大显示屏金属罩壳不锈钢电子卡尺

- With manual ON/OFF
- Metric/inch system conversion at any position
- Zero setting at any position



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0155
0-200mm/8"	0.01mm/0.0005"	101-0255
0-300mm/12"	0.01mm/0.0005"	101-0355



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0156
0-200mm/8"	0.01mm/0.0005"	101-0158
0-300mm/12"	0.01mm/0.0005"	101-0159

Left Hand Digital Calipers

左手三键不锈钢电子卡尺

- Extra large LCD



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-3536

3 Key Digital Caliper

三键电子数显卡尺

- Manual power off, no auto off
- Super large LCD, function 1, CR2032 3V battery
- Zero setting at any position



Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-0121

Stainless Steel Pocket Caliper



Specification	Order No.
3"x32nds & 16ths	403-4003
4"x32nds & 16ths	403-4004

Fractional Digital Caliper

带分数值能数显卡尺

3- key

Technical specifications

- Error of indication(mm): 0.03
- Power Supply: one zinc-silver button cell, SR44, 1.55V
- Measuring speed: $\leq 1.5\text{m/s}$
- Working temperature: $0\sim+45^{\circ}\text{C}$
- Relative humidity: $<80\%$
- Storage temperature: $-10^{\circ}\text{C}\sim+60^{\circ}\text{C}$

Functions:

- ON/OFF function
- ZERO setting at any position for differential measurement.
- inch/mm/in frac interchange
- Data can be input to special printer for processing and print via special cable.
- It can test low voltage. It flashes in low voltage.
- It functions "Auto OFF". "Auto OFF" means the power is off when the slider is not moved for 4 minutes at power-on mode.



101-1021



101-1022

Range	Graduation	Frac Grad.	Order No.
0-150mm/6"	0.001mm/0.00005"	1/128"	101-1021
0-100mm/4"	0.001mm/0.00005"	1/64"	101-1030
0-150mm/6"	0.001mm/0.00005"	1/64"	101-1031
0-200mm/8"	0.001mm/0.00005"	1/64"	101-1032
0-150mm/6"	0.001mm/0.00005"	1/128"Metal Housing	101-1022

Fractional Digital Caliper

3 Keys, Yellow LCD

带分数值数显卡尺

- Maximum measurement speed: 3m/s 120in/s
- Operating temperature: $0\sim40^{\circ}\text{C}$.
- Power: 3V CR2025(Lithium ion cell) 1 battery
- in/mm/FRAC, ON/OFF, ZERO



Range	Graduation	Frac Grad.	Order No.
0-150mm/6"	0.01mm/0.0005"	1/128"	101-1006
0-200mm/8"	0.01mm/0.0005"	1/128"	101-1008
0-300mm/12"	0.01mm/0.0005"	1/128"	101-1012

Solar Digital Caliper

Solar power 太阳能数显卡尺

Solar Calipers eliminate the problem of battery replacement/disposal and the interent costs.

- Switchable inch/metric .0005"/0.01mm LCD display for easy reading
- Hardened stainless steel throughout for longer life and corrosion resistance
- The thumb roll provides a consistent "feel" for more accurate measurements
- OD, ID, step and depth measurements
- The epoxy embedded scale eliminates rack and pinion jams



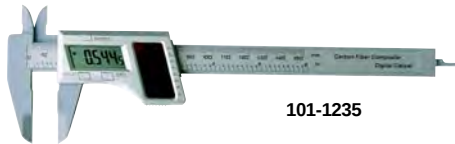
Range	Graduation	Order No.
0-150mm/6"	0.01mm/0.0005"	101-1231

Solar Digital Calipers

太阳能数显卡尺



101-1233



101-1235

Range	Grad.	Material	Order No.
150mm/6"	.01mm/.0005"	Stainless Steel	101-1233
150mm/6"	.01mm/.0005"	Carbon Fiber	101-1235

Carbon Fiber Composites Digital Calipers

碳素塑料数显卡尺

- Made of extra strong carbon fiber composites
- Big LCD display for easy reading
- Functions: Zero setting at any position; metric/ inch system conversion at any position & ON; manual OFF or auto power off
- One 1.55V SR44 Battery
- Low voltage warning by flashing display



Black Frame

Range	Graduation	Accuracy	Order No.
0-100mm/4"	0.1mm/0.1"	0.2mm/0.1"	101-0141



Black Frame

Range	Graduation	Accuracy	Order No.
0-150mm/6"	0.1mm/0.1"	0.2mm/0.1"	101-0144

3 Key Digital Calipers

三键不锈钢电子卡尺

- Large LCD
- Inch/mm conversion (.01mm/.0005").
- Zero setting at any position.
- Three-key type : on/off Key, Inch/mm Key, Zero Key.
- SPC out put.



Range	Jaw Length	Open vernier Order No.	Close Vernier Order No.
100mm/4"	30mm	101-3504	101-3604
150mm/6"	40mm	101-3506	101-3606
200mm/8"	50mm	101-3508	101-3608
300mm/12"	60mm	101-3512	101-3612

- Extra Large LCD
- Auto Lock Model



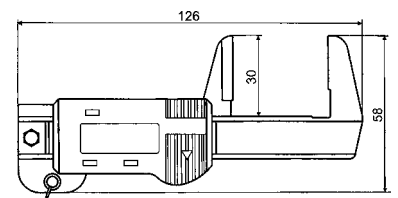
Range	Graduation	Roller Order No.	Auto Lock Order No.
150mm	.01mm/.0005"	101-3526	101-3546
200mm	.01mm/.0005"	101-3528	101-3548
300mm	.01mm/.0005"	101-3532	101-3552

Digital Snap Calipers

Single Wide Measuring Face

单宽量面卡规

- Light weight.
- Easy to operate.
- High efficiency.
- Usually to measure dimensions of small workpieces.
- Power on/off.
- Inch/mm conversion at any position.
- Zero-setting at any position. Data output.



Range	Graduation	Accuracy	Order No.
0-12"/30mm	.0005"/.001mm	0.03mm	101-5602

Carbide Tipped Jaw Digital Calipers

合金量面电子卡尺

- Carbide tipped measuring faces for lasting quality.

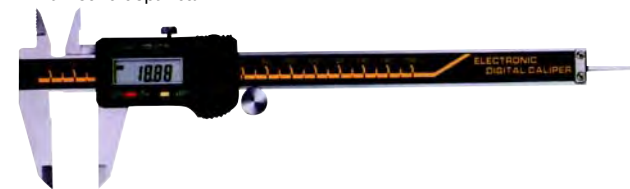


Range	Graduation	Jaw Length	Order No.
150mm/6"	.01mm/.0005"	40mm	101-3406
200mm/8"	.01mm/.0005"	50mm	101-3408
300mm/12"	.01mm/.0005"	60mm	101-3412

Round Depth Bar Digital Calipers

圆棍深度尺电子卡尺

- With round depth bar.



Range	Graduation	Jaw Length	Open Vernier Order No.	Close Vernier Order No.
150mm/6"	.01mm/.0005"	40mm	101-2806	101-2906
200mm/8"	.01mm/.0005"	50mm	101-2808	101-2908
300mm/12"	.01mm/.0005"	60mm	101-2812	101-2912

Pointed Jaw Digital Calipers

细尖爪电子卡尺

- The narrow tip jaws fit into very small grooves and tracks.



Range	Graduation	Jaw Length	Order No.
100mm/4"	.01mm/.0005"	30mm	101-4100
150mm/6"	.01mm/.0005"	40mm	101-4150
200mm/8"	.01mm/.0005"	50mm	101-4200
300mm/12"	.01mm/.0005"	60mm	101-4300

Plate Anvil Digital Calipers

碟量面带限力装置电子卡尺

- Featured with pushing power limited device.
- Used to measure the half-soft board.



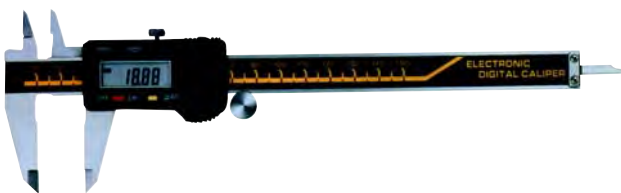
Range	Graduation	Jaw Length	Plate Dia.	Order No.
150mm/6"	.01mm/.0005"	50mm	20mm	101-4405
150mm/6"	.01mm/.0005"	100mm	20mm	101-4406
200mm/8"	.01mm/.0005"	80mm	30mm	101-4407
200mm/8"	.01mm/.0005"	150mm	30mm	101-4408
300mm/12"	.01mm/.0005"	120mm	50mm	101-4412
500mm/20"	.01mm/.0005"	150mm	50mm	101-4415

Same Direction Upper Jaws

Digital Calipers

上同向爪电子卡尺

- To measure the step distance on the same surface and in the same direction.
- To measure the step distance in the same direction, but on different surfaces.



Range	Graduation	Order No.
150mm/6"	.01mm/.0005"	101-3906
200mm/8"	.01mm/.0005"	101-3908
300mm/12"	.01mm/.0005"	101-3912

Jaw Offset Digital Calipers

管壁厚电子卡尺

- Main scale jaw can be slid up and down to facilitate measurement of stepped sections.

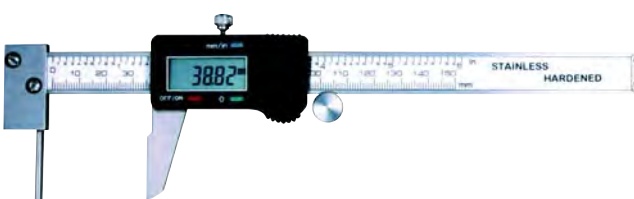


Range	Graduation	Jaw Size	Order No.
150mm/6"	.01mm/.0005"	40x110mm	101-5150
200mm/8"	.01mm/.0005"	50x120mm	101-5200
300mm/12"	.01mm/.0005"	60x130mm	101-5300
500mm/20"	.01mm/.0005"	100x210mm	101-5500

Tube Digital Calipers

伸缩爪电子卡尺

- To measure the tube thickness (≥ 4 mm).

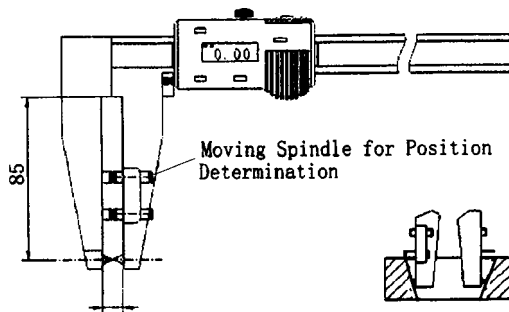


Range	Graduation	Order No.
150mm/6"	.01mm/.0005"	101-3150
200mm/8"	.01mm/.0005"	101-3200
300mm/12"	.01mm/.0005"	101-3300
500mm/20"	.01mm/.0005"	101-3500

Digital Brake Drum Gauges

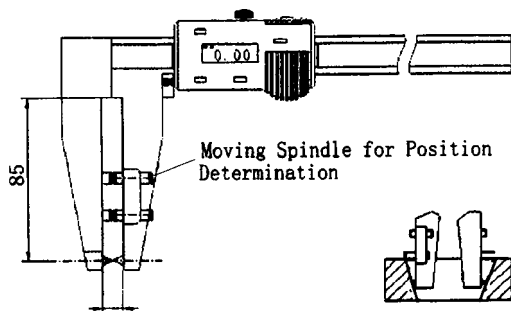
闸圈数显卡尺

- Manual power on/off.
- Zero setting at any position.
- Metric/Inch system conversion at any position.
- With data output interface.
- To measure the wear dimension of the automobile brake drum.
- Made of stainless steel.



Range (Inch/mm)	Graduation (Inch/mm)	Accuracy (mm)	Order No.
0-12"/0-300	0.0005"/0.01	+/-0.06	101-1103

A Type

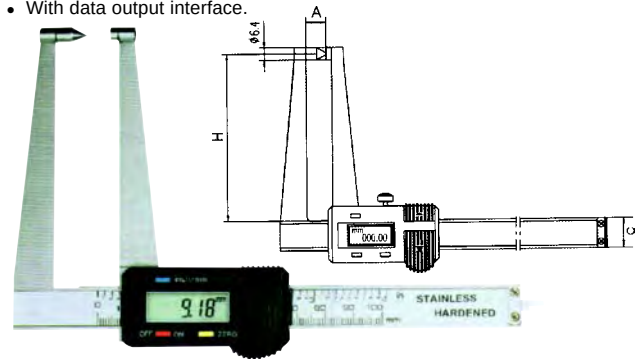


Range (Inch/mm)	Graduation (Inch/mm)	Accuracy (mm)	Order No.
0-20"/0-500	0.0005"/0.01	+/-0.06	101-1105

Disc Brake Digital Calipers

刹车片数显卡尺

- To measure the depth of grooves on the disc brake.
- Manual power on/off.
- Zero setting at any position.
- Metric/Inch system conversion at any position.
- With data output interface.

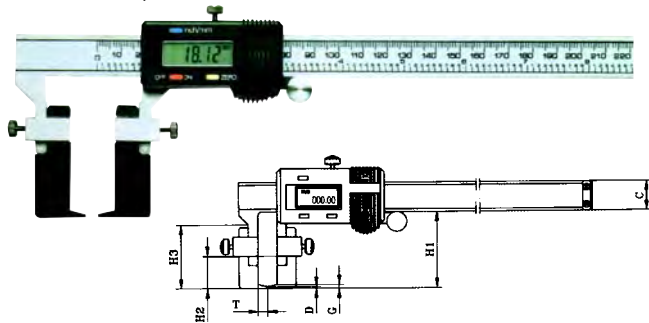


Range (Inch/mm)	Graduation (Inch/mm)	Accuracy (mm)	H (mm)	A (mm)	C (mm)	Order No.
0-3"/0-75	0.0005"/0.01	+/-0.03	50	8	13	101-5503
0-4"/0-100	0.0005"/0.01	+/-0.03	70	8	13	101-5504
0-6"/0-150	0.0005"/0.01	+/-0.04	90	10	16	101-5506

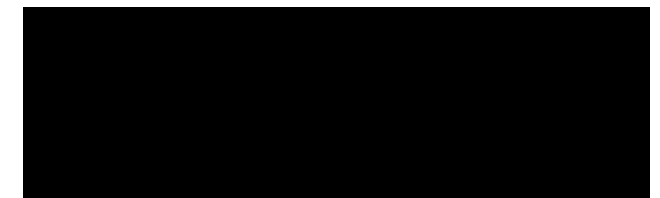
Inside & Outside Combined

Digital Calipers 组合式内外沟槽数显卡尺

- With interchangeable anvils.
- Manual power on/off.
- Zero setting at any position.
- Metric/Inch system conversion at any position.
- With data output interface.



Range mm	H1 (mm)	H2 (mm)	H3 (mm)	B (mm)	C (mm)	D (mm)	G (mm)	T (mm)
0-6"/0-150	40	17	33	30	16	1	2	5
0-8"/0-200	50	24	40	42	16	1.5	2.5	8
0-12"/0-300	60	32	48	50	17	1.5	3	10



Range (Inch/mm)	Graduation (Inch/mm)	Order No.
0-6"/0-150	0.0005"/0.01	101-1106
0-8"/0-200	0.0005"/0.01	101-1108
0-12"/0-300	0.0005"/0.01	101-1112

Inside Groove Digital Calipers

内槽宽数显卡尺

- Easy to measure the diameter of inside groove.



Range	Graduation	Order No.
125mm/5"	.01mm/.0005"	101-2705
150mm/6"	.01mm/.0005"	101-2706
200mm/8"	.01mm/.0005"	101-2708

Arc Outside Digital Calipers

外圆弧半径电子卡尺

- Easy to measure the radius of a workpiece whose shape is smaller than semi-circle.

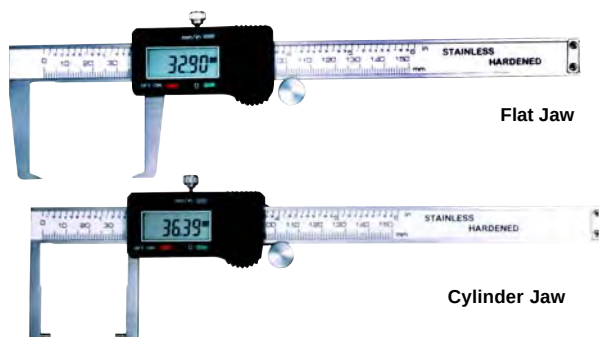


Radius Range	Graduation	Order No.
3-150mm	.01mm/.0005"	101-5700

Outside Groove Digital Calipers

外沟槽电子卡尺

- Easy to measure the diameter of outside groove which is hard to reach by normal calipers.



Range	Graduation	Jaw Length	Flat Jaw Order No.	Cylinder Jaw Order No.
150mm/6"	.01mm/.0005"	40mm	101-1150	101-1606
200mm/8"	.01mm/.0005"	50mm	101-1200	101-1608
300mm/12"	.01mm/.0005"	60mm	101-1300	101-1612
500mm/20"	.01mm/.0005"	100mm	101-1500	101-1620

Inside Groove Digital Calipers

内沟槽电子卡尺

- Easy to measure the diameter of inside groove.



Range	Graduation	Jaw Length	Flat Jaw Order No.	Cylinder Jaw Order No.
150mm/6"	.01mm/.0005"	40mm	101-2150	101-2606
200mm/8"	.01mm/.0005"	50mm	101-2200	101-2608
300mm/12"	.01mm/.0005"	60mm	101-2300	101-2612
500mm/20"	.01mm/.0005"	100mm	101-2500	101-2620

Battery For Digital Calipers

电池

- Accessory for Electronic Calipers.
- SR44. 1.5V, one year lifetime.



Description	Order No.
Battery for Electronic Calipers	101-0000
Battery Plastic Cover for Digital Caliper	101-0001

Center Distance Digital Calipers

电子中心距卡尺-小锥头

- Easy measurement solution of hole center to hole center diameter of holes are between 1mm and 10mm.



Range	Graduation	Order No.
5-150mm/0.2-6"	.01mm/.0005"	101-1706
5-200mm/0.2-8"	.01mm/.0005"	101-1708
5mm-300mm/0.2-12"	.01mm/.0005"	101-1712

Welding Groove Digital Calipers

数显焊缝规

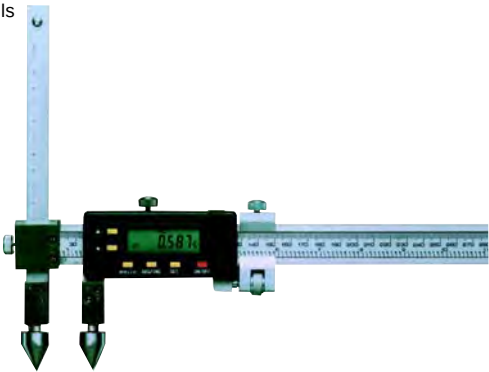


Range	Graduation	Order No.
12.5mm/0.5"	.01mm/.0005"	101-5600
60°, 70°, 80°, 90°		

Center Distance Digital Calipers

电子数显中心距卡尺-大锥度测头

- With Cone Anvils



Range	Graduation	Order No.
20-500mm/0.8-20"	0.01mm/0.0005"	101-1715
20-1000mm/0.8-40"	0.01mm/0.0005"	101-1720
20-2000mm/0.8-80"	0.01mm/0.0005"	101-1730

Long Jaws Inside Digital Calipers

下长爪刀口内测数显卡尺

- Easy to obtain the diameter of deep hole with long jaws.



Range	Graduation	Size of Jaw	Order No.
150mm/6"	.01mm/.0005"	60x24mm	100-2115
150mm/6"	.01mm/.0005"	90x28mm	100-2116
200mm/8"	.01mm/.0005"	80x28mm	100-2120
200mm/8"	.01mm/.0005"	100x34mm	100-2121
300mm/12"	.01mm/.0005"	150x44mm	100-2132
300mm/12"	.01mm/.0005"	90x30mm	100-2130
300mm/12"	.01mm/.0005"	120x40mm	100-2131
500mm/20"	.01mm/.0005"	120x40mm	100-2150
500mm/20"	.01mm/.0005"	150x44mm	100-2151
500mm/20"	.01mm/.0005"	180x48mm	100-2152

Heavy Duty Digital Calipers

With Fine Adjustment & External Upper Jaws

带微调电子卡尺, 带上爪

- Inch/mm conversion (.01mm/.0005").
- Manual power on/off.
- Zero setting at any position.
- SPC output.



60-90 & 250mm Jaw

Range	Jaw Length	Order No.
300mm/12"	60mm	100-3030
300mm/12"	75mm	100-3031
300mm/12"	90mm	100-3032
500mm/20"	250mm	100-3053

100-300 mm Jaw

	100mm	150mm	200mm	300mm
	Jaw Length	Jaw Length	Jaw Length	Jaw Length
Range	Order No.	Order No.	Order No.	Order No.
450mm/18"	100-3045	100-3046		100-3063
500mm/20"	100-3050	100-3051	100-3052	100-3082
600mm/24"	100-3060	100-3061	100-3062	100-3102
800mm/32"		100-3080	100-3081	100-3152
1000mm/40"		100-3100	100-3101	100-3202
1500mm/60"		100-3150	100-3151	
2000mm/80"		100-3200	100-3201	

Heavy Duty Digital Calipers

No Upper Jaws, with Fine Adjustment

带微调电子卡尺, 无上爪

- Manual power on/off.
- Inch/mm conversion (.01mm/.0005").
- Fast tracing of maximum or minimum value.
- Zero setting at any position.
- Data hold function.
- SPC output.



	100mm	150mm	200mm	250mm	300mm
	Jaw Length	Jaw Length	Jaw Length	Jaw Length	Jaw Length
Range	Order No.	Order No.	Order No.	Order No.	Order No.
500mm/20"	100-5050	100-5051	100-5052	100-5053	
600mm/24"	100-5060	100-5061	100-5062	100-5064	100-5063
1000mm/40"		100-5100	100-5101	100-5103	100-5102
1500mm/60"		100-5150	100-5151	100-5153	100-5152
2000mm/80"			100-5200	100-5201	100-5202

Digital Scale Units 电子标尺

- Made of stainless steel.
 - Graduation: .01mm/.0005"
 - Each specification of vertical scale has predetermination function.
- Horizontal scale units, over 500mm/20" range, have predetermination function.



Range	Horizontal Reading Order No.	Vertical Reading Order No.	Range	Horizontal Reading Order No.	Vertical Reading Order No.
100mm/4"	100-1010	100-0010	500mm/20"	100-1050	100-0050
150mm/6"	100-1015	100-0015	600mm/24"	100-1060	100-0060
200mm/8"	100-1020	100-0020	750mm/30"	100-1075	100-0075
300mm/12"	100-1030	100-0030	800mm/32"	100-1080	100-0080
400mm/16"	100-1040	100-0040	1000mm/40"	100-1100	100-0100
450mm/18"	100-1045	100-0045	1500mm/60"	100-1150	100-0150
			2000mm/80"	100-1200	100-0200

Digital Readout System 欧式数字显示器

For Digital Measuring Tools

The indicator can be used on drilling, lathing, grinding, cutting, and wood working machines along with Digital Scale Units for purpose of easy operation & increasing accuracy.

- mm/Inch conversion: .01mm/.001".
- Operating range: 999.99mm/39.37".
- Center-Separation.
- On/Off Switch.
- Zero Reset.
- Magnetic Back.



100-0001/100-0006

Liquid Crystal Display(LCD)



100-0004



100-0005



100-0002

Liquid Crystal Display(LCD)

Digital Scale Units Not Included



100-0003

Low Emitting Diode(LED)

Specification	LCD Order No.	LED Order No.
Three Axis(220V AC Power)	100-0002	100-0003
Three Axis(220V AC Power)	100-0004	100-0005
One Axis 220V	100-0001	
One Axis 110V	100-0006	

Mini-Interface Set 数显量具数据输出适配器

Mini-interface is an integration of interface and COM plugs, designed for portable and easy use

Type A



Specifications	Order No. 101-0041	Order No. 101-0042
Data input port	Port for capacitive digital measuring instruments	Port for capacitive digital measuring instruments
Data output port	COM port/RS232 port	USB port
Power supply	Via a PC	Via a PC
Dimensions	80 x 50 x 32mm	80 x 50 x 32mm
Mass	80g	80g

Interface protocol:

Band Tare: 48000 Data Bits: 8 Stop Bit:1

No correction or examination.

Data will be sent in ASCII Code(and TXT) continually. After each datum finishes sending, press <enter>.

There's no frame for data. Cord ASCII for data measurement consists of 10 bytes starting with sign <+> or sign <->, followed by 7 digits, one decimal point and <Enter>.

With stable bytes transmission.

Followed by a group of data is Code ASCII for <Enter>.

Transmission Rate: 3 times/s.

Type B



Specifications	Order No. 101-0043	Order No. 101-0044
Data input port	Port for capacitive digital measuring instruments	Port for capacitive digital measuring instruments
Data output port	COM port/RS232 port	USB port
Power supply	Via a PC	Via a PC
Dimensions	62 x 33 x 17mm	62 x 33 x 17mm
Mass	30g	30g

Interface protocol:

Band Tare: 48000 Data Bits: 8 Stop Bit:1

No correction or examination.

Data will be sent in ASCII Code(and TXT) continually. After each datum finishes sending, press <enter>.

There's no frame for data. Cord ASCII for data measurement consists of 10 bytes starting with sign <+> or sign <->, followed by 7 digits, one decimal point and <Enter>.

With stable bytes transmission.

Followed by a group of data is Code ASCII for <Enter>.

Transmission Rate: 3 times/s.

Caliper Accessory Kit 卡尺附件

- Designed for vernier, dial, and electronic calipers.
- For different applications and configurations on hard-to-reach places, measuring slot, step, grooves etc.



Digital caliper not included

Specification

4 Pairs/set, includes:
A pair of Ball Contact Point
A pair of Point Contact Point
A pair of Flat Contact Point
A pair of Spline Contact Point

Order No. 101-0020

Optional Extension Bases

深度卡尺附件

- Stainless Steel
- Dial Depth Gages Type

Length	Order No.
7"	610-5007
10"	610-5010
12"	610-5012



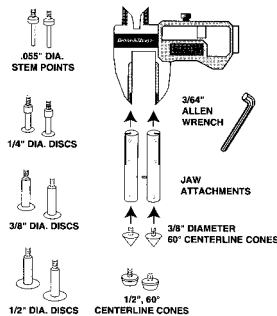
Centerline Plus Accessory Kit

卡尺附件

Fits all 6" Dial, Digital, and Vernier calipers -Jaw attachment slots are manufactured to .140".

Features:

- Exclusive interchangeable centerline cones
- Measure places otherwise impossible to reach with a regular caliper – undercuts, grooves, webs, and shoulders
- Exclusive 4-48 threaded holes in accessory jaws allow the use of any AGD Standard Point equipped with 4-48 threads -- has virtually unlimited uses
- Long life – corrosion protection
- Permanent alignment

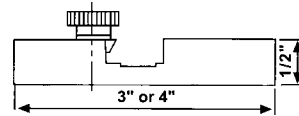


No. of Pieces	Specification	Set Order No.
6 Pairs/Set	6 Pairs/Set, includes: .055" Dia. Stem points 1/4" Dia. Discs 3/8" Dia. Discs 1/2" Dia. Discs 1/2" Dia. 60° Centerline Cones 3/8" Dia. 60° Centerline Cones	101-0110
	• Wooden case (Case only Order No. 9100-9186)	

T-Bar Base Depth Attachment

for Calipers 深度卡尺座

- For 4", 6", 8" & 12" Vernier and Dial calipers
- Choice of 3" or 4" base length for 6" & 8" models
- Finely ground base surface and secure locking clamp



Length	Specifications	Order No.
3"	For 4, 6 8" Calipers	101-0003
4"	For 4, 6 8" Calipers	101-0004
5"	For 12" Calipers only	101-0005

Caliper Depth Base Attachment

深度卡尺座

1/8" thick, 5/8" wide holder,
3x1/4" base

Order No. 610-5001



Caliper Clamp On Jaw

卡尺附件

Turn your Caliper into a versatile and accurate depth measurement device. Small, light, and corrosion resistant. Clamp On attaches to any Caliper Jaw in seconds. Thin probes in differing lengths can be used singly or in pairs to measure depths of grooves, blind holes, and other places otherwise impossible to reach.

Material is Stainless Steel, 4-48 Threads.

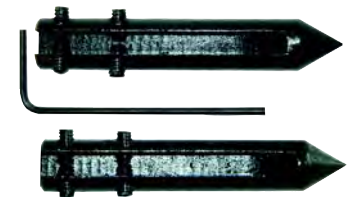
Dimensions	Order No.
Jaw clamp On for 6" Calipers .133 Max. jaw Width (Sold singly)	101-0002



Centerline Gage Sets

卡尺测头

- Designed for dial, vernier and digital calipers, measure centerline distance.
- Sold in pairs, these gages quickly adapt to most calipers.
- Constructed of high quality alloy steel hardened to 50 RC, black oxide finish.

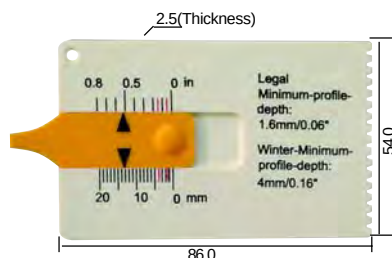


Description	Dia.	Length	Jaw	Order No.
			Thickness	
For 4", 6", 8" calipers	.375"	2.195"	.155"	101-0008
For 10", 12" calipers	.500"	2.750"	.188"	101-0012

Plastic Tyre Profile Depth Gauge

轮胎花纹深度尺

- With metric and inch scales. The red scale can help judge quickly if the tread profile depth on the safe level
- The bevel edge with saw teeth can be used to scrape off the snow or ice on the windsreen and wing mirrors
- Made of ABS plastic, which is a good choice for promotion.



Range: 0-20mm/0-0.8"

Order No. 615-6400

Adjustable Angle Depth Gages

可调角度深度规

- Front side of head has a "V" groove to hold depth rod in upright position
- 6" stainless steel rule;
- Hardened and ground steel base.
- Not precisely a protractor, but the angle measurements in 15 degree increment are a use ful and welcomed feature.

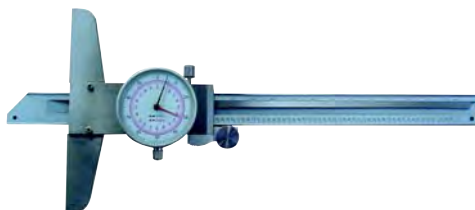


Range	Graduation	Order No.
6"	0.5mm	615-6122

Double Dial Depth Caliper

深度带表卡尺

- Dial is graduated in both inch and metric.
- Features separate hands for inch and metric measurements for easy recognition
- Range per revolution: .100"/2mm
- Graduations:.001"/.02mm
- Made of hardened stainless steel
- Include case



Range	Order No.
0-6"/150mm	102-0616
0-8"/200mm	102-0618

Digital Thread Depth Gauge

数显胎纹尺

- Large LCD display.
- Zero setting at any position.
- Metric/Inch system interchange.
- Manual power on/off.
- Suitable for thread depth, brake shoe and pad wear.

Black-Hoursing, black frame

Order No. 110-0100

Blue-Hoursing, black frame

Order No. 110-0101



Range	Resolution	Operation Temperature	Weight
0-25mm/1"	0.01mm/0.0005"	-5°C~40°C	40g

Digital Depth Gages

电子深度卡尺

- Graduation .01mm/.0005"
- Three Key Type is popular than auto on/off type .

Without Hook



Range	Base	Three key Order No.
0-150mm /6"	100mm	110-2150
0-200mm /8"	100mm	110-2200
0-300mm/12"	100mm	110-2300
0-500mm/20"	120mm	110-2500
0-150mm /6"	150mm	110-2151
0-200mm/8"	150mm	110-2201
0-300mm/12"	150mm	110-2301
0-500mm/20"	150mm	110-2501
0-500mm /20"	200mm	110-2502

With Hook

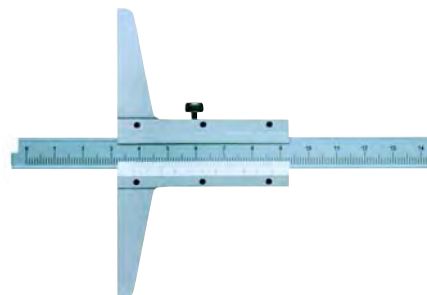


Range	Base	Three key Order No.
0-150mm /6"	100mm	110-3150
0-200mm /8"	100mm	110-3200
0-300mm/12"	100mm	110-3300
0-500mm/20"	120mm	110-3500
0-150mm /6"	150mm	110-3151
0-200mm/8"	150mm	110-3201
0-300mm/12"	150mm	110-3301
0-500mm/20"	150mm	110-3501
0-500mm /20"	200mm	110-3502

Vernier Depth Gages 不锈钢游标深度卡尺

Basic Model

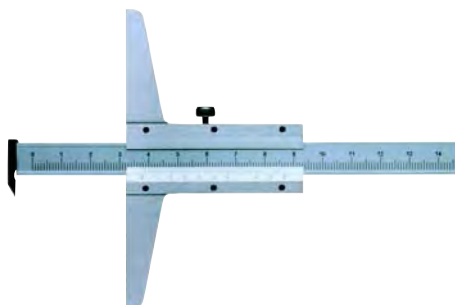
- Designed for measuring depth of holes, slots and recesses.
- Clear graduations on satin chrome finish.
- All bases are hardened and micro-lapped.



Without Hook

Range	Grad.	Base	Carbon Steel Order No.	Stainless Steel Order No.
0-6"	.001"	4"	111-0060	112-0060
0-8"	.001"	4"	111-0084	112-0084
0-12"	.001"	4"	111-0124	112-0124
0-20"	.001"	4"	111-0140	112-0140
0-6"	1/128"	4"	111-0061	112-0061
0-8"	1/128"	4"	111-0086	112-0086
0-12"	1/128"	4"	111-0125	112-0125
0-20"	1/128"	4"	111-0141	112-0141
0-8"/200mm	.001"/.02mm	4"	111-0620	112-0620
0-12"/300mm	.001"/.02mm	4"	111-0621	112-0621

Range	Grad.	Base	Carbon Steel Order No.	Stainless Steel Order No.
0-150mm	.02mm	100mm	111-0152	112-0152
0-200mm	.02mm	100mm	111-0202	112-0202
0-300mm	.02mm	100mm	111-0302	112-0302
0-500mm	.02mm	100mm	111-0502	112-0502
0-150mm	.05mm	100mm	111-0155	112-0155
0-200mm	.05mm	100mm	111-0205	112-0205
0-300mm	.05mm	100mm	111-0305	112-0305
0-500mm	.05mm	100mm	111-0505	112-0505



With Hook

Range	Grad.	Base	Carbon Steel Order No.	Stainless Steel Order No.
0-8"	.001"	4"	111-1084	112-1084
0-12"	.001"	4"	111-1124	112-1124
0-20"	.001"	4"	111-1140	112-1140
0-8"	1/128"	4"	111-1086	112-1086
0-12"	1/128"	4"	111-1125	112-1125
0-20"	1/128"	4"	111-1141	112-1141
0-8"/200mm	.001"/.02mm	4"	111-1620	112-1620
0-12"/300mm	.001"/.02mm	4"	111-1621	112-1621

Range	Grad.	Base	Carbon Steel Order No.	Stainless Steel Order No.
0-200mm	.02mm	100mm	111-1202	112-1202
0-300mm	.02mm	100mm	111-1302	112-1302
0-500mm	.02mm	100mm	111-1502	112-1502
0-200mm	.05mm	100mm	111-1205	112-1205
0-300mm	.05mm	100mm	111-1305	112-1305
0-500mm	.05mm	100mm	111-1505	112-1505



Mono-Block Type

Range	Grad.	Base	Carbon Steel Order No.	Stainless Steel Order No.
0-150mm	.02mm	80mm	111-2152	112-2152
0-200mm	.02mm	100mm	111-2202	112-2202
0-300mm	.02mm	100mm	111-2302	112-2302
0-300mm	.02mm	150mm	111-2402	112-2303
0-400mm	.02mm	100mm	111-2502	112-2402
0-400mm	.02mm	150mm	111-2502	112-2403
0-500mm	.02mm	100mm	111-2502	112-2502
0-500mm	.02mm	150mm	111-2502	112-2503
0-150mm	.05mm	80mm	111-2155	112-2155
0-200mm	.05mm	100mm	111-2205	112-2205
0-300mm	.05mm	100mm	111-2305	112-2305
0-300mm	.05mm	150mm	111-2305	112-2306
0-400mm	.05mm	100mm	111-2405	112-2405
0-400mm	.05mm	150mm	111-2405	112-2406
0-500mm	.05mm	100mm	111-2505	112-2505
0-500mm	.05mm	150mm	111-2505	112-2506

Precision Vernier Height Gages

碳钢游标高度尺, 普通型

- With fine adjustment and lock.
- Made of high quality tool steel.
- Including offset steel scriber.
- Supplied in fitted case.

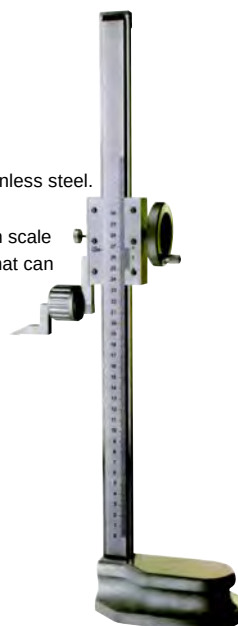


Range	Gradu.	Order No.	Grad.	Order No.
0-200mm	.02mm	622-8222	.05mm	622-8225
0-300mm	.02mm	622-8232	.05mm	622-8235
0-350mm	.02mm	622-8237	.05mm	622-8239
0-400mm	.02mm	622-8242	.05mm	622-8245
0-500mm	.02mm	622-8252	.05mm	622-8255
0-550mm	.02mm	622-8257	.05mm	622-8259
0-600mm	.02mm	622-8262	.05mm	622-8265
0-1000mm	.02mm	622-8312	.05mm	622-8315

Side Wheel Vernier Height Gages

无视差游标高度尺

- Both main scale and vernier are made of stainless steel.
- Height measurement and scribing.
- No parallax reading. The reading lines of main scale and vernier are at the same horizontal line. That can effectually avoid section parallax.
- Large cross-section area of scale body and inflexible vertical shaft ensure the quality of scribing and repeated measurement.
- Vernier can make precision fine adjustable measurement through handwheel.



Range	Graduation	Accuracy	Order No.
0-300mm	.01mm	+/-0.05	621-8401
0-450mm	.01mm	+/-0.08	621-8402
0-500mm	.01mm	+/-0.08	621-8403
0-600mm	.01mm	+/-0.09	621-8404

Precision Adjustable Height Gages

可调游标高度尺, 带放大镜

- With Cam-Lock scriber mounting.
- With fine adjustment and lock.
- Include: Straight steel scriber.
Offset steel scriber.
Square holding bar.
Magnifying glass.
- Supplied in fitted case.



Range	Grad.	Base Size	Carbon Steel Order No.	Stainless Steel Order No.
0-10"	.001"	4.8x3.2"	622-8511	621-8511
0-10"/250mm	.001"/.02mm	3.0x4.0"	622-8510	621-8510
0-12"/300mm	.001"/.02mm	3.3x4.9"	622-8512	621-8512
0-18"/450mm	.001"/.02mm	4.7x7"	622-8518	621-8518
0-20"/500mm	.001"/.02mm	4.7x7"	622-8520	621-8520
0-24"/600mm	.001"/.02mm	4.7x7"	622-8524	621-8524
0-40"/1000mm	.001"/.02mm	5.9x9.9"	622-8540	621-8540

Range	Grad.	Carbon Steel Order No.	Stainless Steel Order No.
0-300mm	.02mm	622-8442	621-8442
0-500mm	.02mm	622-8444	621-8444
0-600mm	.02mm	622-8446	621-8446
0-1000mm	.02mm	622-8448	621-8448
0-300mm	.05mm	622-8450	621-8450
0-500mm	.05mm	622-8452	621-8452

Dial Height Gages

单柱带表高度尺

- With fine adjustment and lock.
- Has a carbide tipped scriber.
- Made of stainless steel.
- Black face or white face.
- Shock proof.
- Right hand type for easy use.
- Supplied in fitted case.



Range	Graduations	White Face Order No.	Black Face Order No.
0-6"	.001"	621-7506	621-7606
0-8"	.001"	621-7508	621-7608
0-12"	.001"	621-7512	621-7612
0-150mm	.01mm	621-7115	621-7215
0-200mm	.01mm	621-7120	621-7220
0-300mm	.01mm	621-7130	621-7230
0-150mm	.02mm	621-7315	621-7415
0-200mm	.02mm	621-7320	621-7420
0-300mm	.02mm	621-7330	621-7430
150mm/6"	.02mm/.001"	621-7806	621-7906
200mm/8"	.02mm/.001"	621-7808	621-7908
300mm/12"	.02mm/.001"	621-7812	621-7912

Digital Counter Double Beam Height Gages

双柱带表高度尺

- .001" graduation, .1" dial reading digital counter.
- Double digital counter can be zero-set at an any height within range by pressing zero-reset button.
- Features a large feed wheel for coarse & fine vertical adjustments.
- Carbide tipped scriber.
- Bottom surface hardened & ground.
- Supplied in fitted case.

Range	Grad.	Order No.
0-12"	.001"	621-8412
0-18"	.001"	621-8418
0-20"	.001"	621-8420
0-24"	.001"	621-8424

Range	Grad.	Order No.
0-300mm	.01mm	621-8530
0-450mm	.01mm	621-8545
0-500mm	.01mm	621-8550
0-600mm	.01mm	621-8560



Digital Counter Three Beam Height Gages

三柱带表高度尺

- .001"/.01mm graduation, .1" dial reading digital counter.
- Three beam type provides high rigidity for large sizes.
- Three beam digital counter can be zero-set at an any height within range by pressing zero-reset button.
- Features a large feed wheel for coarse & fine vertical adjustments.
- Carbide tipped scriber.
- Bottom surface hardened & ground.
- Supplied in fitted case.

Range	Grad.	Order No.
0-32"	.001"	621-7032
0-40"	.001"	621-7040
0-800mm	.01mm	621-7080
0-1000mm	.01mm	621-7100



Electronic Digital Height Gages

电子数显单柱高度尺

Saddle Base

- Stainless Steel.
- Large Screen.
- Inch/Metric conversion.
- Relative/Absolute conversion.
- Preset memory functions.
- SPC Output.
- Rotate tighten scriber clamp.
- Supplied in fitted case.



Range	Graduation	Order No.
0-300mm/0-12"	.01mm/.0005"	621-7813
0-450mm/0-18"	.01mm/.0005"	621-7814
0-500mm/0-20"	.01mm/.0005"	621-7815
0-600mm/0-24"	.01mm/.0005"	621-7816
0-1000mm/0-40"	.01mm/.0005"	621-7821
0-1500mm/0-60"	.01mm/.0005"	621-7822

Electronic Digital Height Gages

电子数显单柱高度尺

T - Base

- Switchable Inch/Metric high contrast LCD with fine adjustment device and carbide tipped scriber.
- Made of hardened steel, precision ground and micro-lapped base.
- Two standard 1.5 V batteries.
- Supplied in fitted case.



Ranged	Graduation	Order No.
0-300mm/0-12"	.01mm/.0005"	621-8390
0-600mm/0-24"	.01mm/.0005"	621-8394
0-500mm/0-20"	.01mm/.0005"	621-8395
0-1000mm/0-40"	.01mm/.0005"	621-8396

Electronic Double Beam Digital Height Gages

双柱电子数显高度尺

Light Duty

- Made of stainless steel.
- Supplied in fitted case.



Range	Graduation	Order No.
0-300mm/0-12"	.01mm/.001"	621-8312
0-450mm/0-18"	.01mm/.001"	621-8318
0-500mm/0-20"	.01mm/.001"	621-8320
0-600mm/0-24"	.01mm/.001"	621-8324

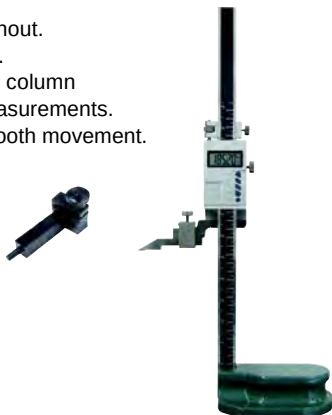
Electronic Digital Height Gage

轻型电子数显高度尺

- Made of stainless steel throughout.
- Bases is hardened throughout.
- The robust construction with a column provides highly repeatable measurements.
- Fine adjustment control for smooth movement.
- Carbide-tipped scriber.
- With RS232 output.
- Battery: 3V Cr2032 battery.
- With wooded case.

Function:

- mm/inch conversion
- ABS and INC mode
- Power on, off
- Zero setting



Range	Grad.	Accuracy	Order No.
0-200mm/8"	0.01mm/0.0005"	0.03mm/0.0015"	621-7842
0-300mm/12"	0.01mm/0.0005"	0.04mm/0.002"	621-7844
0-500mm/20"	0.01mm/0.0005"	0.04mm/0.002"	621-7848
0-600mm/24"	0.01mm/0.0005"	0.05mm/0.0025"	621-7850

Electronic Side Wheel Digital Height Gages

双芯片手轮移动数显高度尺

- Both main scale and vernier are made of stainless steel.
- Height measurement and scribing.
- Structure of double CMOS chips and stable characteristic.
- Vernier have two frames: handwheel movement and quick movement. The movement of handwheel can make precision fine adjustable measurement.
- Set zero at discretion. INC/ABC. Transfer of measurement. Keeping of data. Power ON/OFF. Metric/Inch transfer.
- Battery SR44.



Range	Graduation	Accuracy	Order No.
0-300mm/12"	.01mm/.0005"	+/-0.04	621-7831
0-450mm/18"	.01mm/.0005"	+/-0.05	621-7832
0-500mm/20"	.01mm/.0005"	+/-0.05	621-7833
0-600mm/24"	.01mm/.0005"	+/-0.05	621-7834

Optional Height Gage Component



Chrome Plated Saddle Base



Painted Saddle Base



Chrome Plated T-Base



Rotate Tighten Clamp



Screw Tighten Clamp

Please advise us if you prefer to certain type of bases or Clamps

Scribers & Clamps

高度尺划线爪框



Stainless Steel

Description	Scriber Order No.	Clamp Order No.
for 150mm/6" dial height gage	621-A006	621-A106
for 200mm/8" dial height gage	621-A008	621-A108
for 300mm/12" dial height gage	621-A012	621-A112
for 12-40" double beam counter	621-D000	621-D010
for 300mm/12" electronic double beam	621-E012	621-E112
for 450mm/18" electronic double beam	621-E018	621-E118
for 500mm/20" electronic double beam	621-E020	621-E120
for 600mm/24" electronic double beam	621-E024	621-E124
for 1000mm/40" electronic double beam	621-E040	621-E140
for 300mm/12" electrical digital	621-G012	621-G112
for 500mm/20" electrical digital	621-G020	621-G120
for 600mm/24" electrical digital	621-G024	621-G124
for 1000mm/40" electrical digital	621-G040	621-G140
for 800mm/32" three beam height gage	621-T032	621-T132
for 1000mm/40" three beam height gage	621-T040	621-T140
for 250mm/10" stainless steel vernier	621-V010	621-V110
for 300mm/12" stainless steel vernier	621-V012	621-V112
for 450mm/18" stainless steel vernier	621-V018	621-V118
for 500mm/20" stainless steel vernier	621-V020	621-V120
for 600mm/24" stainless steel vernier	621-V024	621-V124
for 1000mm/40" stainless steel vernier	621-V040	621-V140

Carbon Steel

Descriptions	Scriber Order No.	Clamp Order No.
for 250mm/10" carbon steel vernier	622-V010	622-V110
for 300mm/12" carbon steel vernier	622-V012	622-V112
for 450mm/18" carbon steel vernier	622-V018	622-V118
for 500mm/20" carbon steel vernier	622-V020	622-V120
for 600mm/24" carbon steel vernier	622-V024	622-V124
for 1000mm/40" carbon steel vernier	622-V040	622-V140

Test Indicator Holder 高度尺用表座

for Eletronic Digital Height Gage



Range	Order No.
Inch dovetail fit and 7/32" & 3/8" holes	621-H006
Metric dovetail fit and 4 & 8mm holes	621-H016
Square 9x9mmx75mm	605-0017

Outside Micrometers 外径千分尺

- Deluxe heat insulated forged steel frame up to 6".
- Tubular steel frame (6" and up).
- Complete with standards (2" and up).
- Carbide tipped anvils.
- Ratchet stop and lock nut for exact and repetitive reading.



Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-1/2	.001"		601-1001
0-1"	.001"	600-0001	601-0001
1-2"	.001"	600-0002	601-0002
2-3"	.001"	600-0003	601-0003
3-4"	.001"	600-0004	601-0004
4-5"	.001"	600-0005	601-0005
5-6"	.001"	600-0006	601-0006
6-7"	.001"	600-0007	601-0007
7-8"	.001"	600-0008	601-0008
8-9"	.001"	600-0009	
9-10"	.001"	600-0010	
10-11"	.001"	600-0011	
11-12"	.001"	600-0012	

Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-1"	.0001"	600-0111	601-0111
1-2"	.0001"	600-0112	601-0112
2-3"	.0001"	600-0113	601-0113
3-4"	.0001"	600-0114	601-0114
4-5"	.0001"	600-0125	601-0115
5-6"	.0001"	600-0126	601-0116
6-7"	.0001"	600-0127	601-0117
7-8"	.0001"	600-0128	601-0118
8-9"	.0001"	600-0119	
9-10"	.0001"	600-0210	
10-11"	.0001"	600-0211	
11-12"	.0001"	600-0212	

Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-25mm	.001mm	600-5025	601-5025
25-50mm	.001mm	600-5050	601-5050
50-75mm	.001mm	600-5075	601-5075
75-100mm	.001mm	600-5100	601-5100
0-13mm	.01mm		601-A013
0-25mm	.01mm	600-4025	601-4025
25-50mm	.01mm	600-4050	601-4050
50-75mm	.01mm	600-4075	601-4075
75-100mm	.01mm	600-4100	601-4100
100-125mm	.01mm	600-4125	601-4125
125-150mm	.01mm	600-4150	601-4150
150-175mm	.01mm	600-4175	601-4175
175-200mm	.01mm	600-4200	601-4200

Outside Micrometer Sets 套装外径千分尺

Horizontal Packing

- Ratchet and lock nut.
- Complete with standards (2" and up).
- Carbide tipped anvils.
- Forged steel frame up to 6".
- Tubular steel frame (6" and up).
- Supplied in fitted plastic case



Piece	Range	Grad.	Painted Order No.	Chrome-Plated Order No.	Painted Order No.	Chrome-Plated Order No.
3Pcs/set	0-3"	.001"	600-1003	601-1003	.0001"	600-1013
4Pcs/set	0-4"	.001"	600-1004	601-1004	.0001"	600-1014

Piece	Range	Grad.	Painted Order No.	Chrome-Plated Order No.
3Pcs/set	0-75mm	.01mm	600-1023	601-1023
4Pcs/set	0-100mm	.01mm	600-1024	601-1024

Vertical Packing

- Ratchet and lock nut.
- Complete with standards (2" and up).
- Carbide tipped anvils.
- Forged steel frame up to 6".
- Tubular steel frame (6" and up).
- Supplied in fitted case



Piece	Range	Grad.	Painted Order No.	Chrome-Plated Order No.	Painted Order No.	Chrome-Plated Order No.
6Pcs/set	0-6"	.001"	600-1006	601-1006	.0001"	600-1016
6Pcs/set	6-12"	.001"	600-1009		.0001"	600-1019
12Pcs/set	0-12"	.001"	600-1012		.0001"	600-1122

Piece	Range	Graduation	Painted Order No.	Chrome-Plated Order No.
6Pcs/set	0-150mm	.01mm	600-1026	601-1026
12Pcs/set	0-300mm	.01mm	600-1212	
4Pcs/set	100-200mm	.01mm	600-1126	
6Pcs/set	150-300mm	.01mm	600-1029	
4Pcs/set	200-300mm	.01mm	600-1129	

Slim Outside Micrometers

棘轮套测力普通尺架千分尺

- Deluxe heat insulated forged steel frame up to 6".
- Tubular steel frame (6" and up).
- Complete with standards (2" and up).
- Carbide tipped anvils.
- The new slim thimble design is comfortable to hold.
- Small size for one hand holding.



Range	Grad.	Chrome-Plated		Grad.	Chrome-Plated	
		Painted Order No.	Order No.		Painted Order No.	Order No.
0-1"	.001"	6V0-0001	6V1-0001	.0001"	6V0-0111	6V1-0111
1-2"	.001"	6V0-0002	6V1-0002	.0001"	6V0-0112	6V1-0112
2-3"	.001"	6V0-0003	6V1-0003	.0001"	6V0-0113	6V1-0113
3-4"	.001"	6V0-0004	6V1-0004	.0001"	6V0-0114	6V1-0114
4-5"	.001"	6V0-0005	6V1-0005	.0001"	6V0-0115	6V1-0115
5-6"	.001"	6V0-0006	6V1-0006	.0001"	6V0-0116	6V1-0116
6-7"	.001"	6V0-0007	6V1-0007	.0001"	6V0-0117	6V1-0117
7-8"	.001"	6V0-0008	6V1-0008	.0001"	6V0-0118	6V1-0118
8-9"	.001"	6V0-0009		.0001"	6V0-0119	
9-10"	.001"	6V0-0010		.0001"	6V0-0210	
10-11"	.001"	6V0-0011		.0001"	6V0-0211	
11-12"	.001"	6V0-0012		.0001"	6V0-0212	

Range	Grad.	Painted Order No.	Chrome-plated Order No.
0-25mm	.001mm	6V0-5025	6V1-5025
25-50mm	.001mm	6V0-5050	6V1-5050
50-75mm	.001mm	6V0-5075	6V1-5075
75-100mm	.001mm	6V0-5100	6V1-5100
0-25mm	.01mm	6V0-4025	6V1-4025
25-50mm	.01mm	6V0-4050	6V1-4050
50-75mm	.01mm	6V0-4075	6V1-4075
75-100mm	.01mm	6V0-4100	6V1-4100
100-125mm	.01mm	6V0-4125	6V1-4125
125-150mm	.01mm	6V0-4150	6V1-4150
150-175mm	.01mm	6V0-4175	6V1-4175
175-200mm	.01mm	6V0-4200	6V1-4200
200-225mm	.01mm	6V0-4225	
225-250mm	.01mm	6V0-4250	
250-275mm	.01mm	6V0-4275	
275-300mm	.01mm	6V0-4300	

Indicator Micrometers 带表杠杆千分尺

- Carbide faces.
- Chrome-plated frame.
- Premium quality.
- Can be used as a Go/ No Go gage.



Type 1

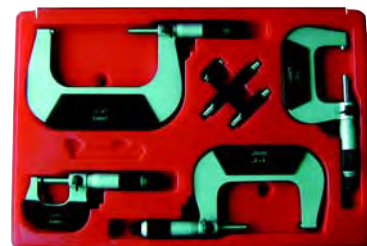
Range	Graduation	Dial Scale	Order No.
0-1"	.00005"	-15-0~+15	600-0501
1-2"	.00005"	-15-0~+15	600-0502
0-25mm	.001mm	-40-0~+40	600-0511
25-50mm	.001mm	-40-0~+40	600-0512

Slim Outside Micrometer Sets

套装棘轮套测力千分尺

Horizontal Packing

- Ratchet and lock nut.
- Complete with standards (2" and up)
- Carbide tipped anvils.



Piece	Range	Grad.	Chrome-Plated		Grad.	Chrome-Plated	
			Painted Order No.	Order No.		Painted Order No.	Order No.
3Pcs/set	0-3"	.001"	6V0-1003	6V1-1003	.0001"	6V0-1013	6V1-1013
4Pcs/set	0-4"	.001"	6V0-1004	6V1-1004	.0001"	6V0-1014	6V1-1014

Piece	Range	Grad.	Painted Order No.	Chrome-plated Order No.
3Pcs/set	0-75mm	.01mm	6V0-1023	6V1-1023
4Pcs/set	0-100mm	.01mm	6V0-1024	6V1-1024

Vertical Packing

- Ratchet and lock nut.
- Complete with standards (2" and up)
- Carbide tipped anvils.



Piece	Range	Grad.	Chrome-Plated		Grad.	Chrome-Plated	
			Painted Order No.	Order No.		Painted Order No.	Order No.
6Pcs/set	0-6"	.001"	6V0-1006	6V1-1006	.0001"	6V0-1016	6V1-1016
6Pcs/set	6-12"	.001"	6V0-1009		.0001"	6V0-1019	
12Pcs/set	0-12"	.001"	6V0-1012		.0001"	6V0-1122	

Piece	Range	Grad.	Painted Order No.	Chrome-plated Order No.
6Pcs/set	0-150mm	.01mm	6V0-1026	6V1-1026
6Pcs/set	150-300mm	.01mm	6V0-1029	
12Pcs/set	0-300mm	.01mm	6V0-1212	

Type 2

Range	Graduation	Dial Scale	Order No.
0-1"	.00005"	-15-0~+15	600-0521
1-2"	.00005"	-15-0~+15	600-0522
0-25mm	.001mm	-40-0~+40	600-0531
25-50mm	.001mm	-40-0~+40	600-0532



A-Type Outside Micrometers

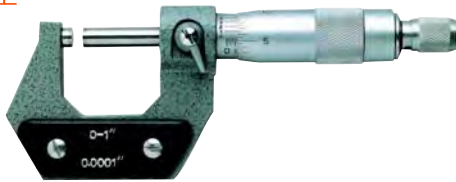
外径千分尺 A型



Range	Grad.	Chrom-Plated Order No.
0-15mm	.01mm	601-A013
0-25mm	.01mm	601-A025
0-0.6"	.001"	601-1001
0-1"	.001"	601-A001
0-1"	.0001"	601-A011

B-Type Outside Micrometers

外径千分尺 B型

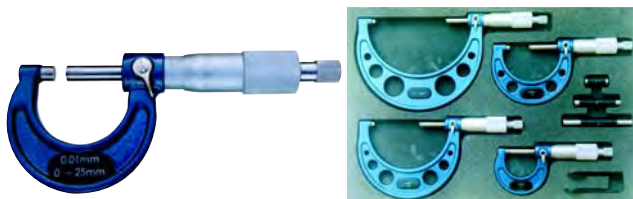


Range	Grad.	Chrom-Plated Order No.
0-25mm	.01mm	601-B025
0-25mm	.001mm	601-B026
0-1"	.001"	601-B001
0-1"	.0001"	601-B011

C-Type Outside Micrometers

外径千分尺 C型

- Ratchet stop.
- Complete with standards (2" and up).



Inch Individuals

	.001"	.0001"
Range	Order No.	Order No.
0-1"	600-C001	600-C011
1-2"	600-C002	600-C012
2-3"	600-C003	600-C013
3-4"	600-C004	600-C014
4-5"		600-C015
5-6"		600-C016

Metric Individuals

Range	Grad.	Order No.
0-25mm	.01mm	600-C025
25-50mm	.01mm	600-C050
50-75mm	.01mm	600-C075
75-100mm	.01mm	600-C100
100-125mm	.01mm	600-C125
125-150mm	.01mm	600-C150

Inch Sets

Pcs/Set	Range	Grad.	Order No.
3	0-3"	.0001"	600-C403
4	0-4"	.0001"	600-C404
6	0-6"	.0001"	600-C406

Metric Sets

Pcs /set	Range	Grad.	Order No.
3	0-75mm	.01mm	600-C303
4	0-100mm	.01mm	600-C304
6	0-150mm	.01mm	600-C306

Parallax Free Outside Micrometers

无视差微米千分尺

- No parallax error sleeve scale.
- Ratchet friction thimble.



Range	Painted .0001" Order No.	Chrome-Plated .0001" Order No.	Chrome-Plated .00005" Order No.
0-1"	600-9141	601-9141	601-9101
1-2"	600-9142	601-9142	601-9112
2-3"	600-9143	601-9143	601-9123
3-4"	600-9144	601-9144	
4-5"	600-9145	601-9145	
5-6"	600-9146	601-9146	
6-7"	600-9147	601-9147	
7-8"	600-9148	601-9148	

Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-15mm	.002mm		601-9140
0-25mm	.001mm	600-9130	601-9130
25-50mm	.001mm	600-9131	601-9131
50-75mm	.001mm	600-9132	601-9132
75-100mm	.001mm	600-9133	601-9133
100-125mm	.001mm	600-9134	601-9134
125-150mm	.001mm	600-9135	601-9135
150-175mm	.001mm	600-9136	601-9136
175-200mm	.001mm	600-9137	601-9137

Digital Outside Micrometer Sets

套装计数器数字外径千分尺

- 0-3"(0-75mm) & 0-4"(0-100mm):
Horizontal packing, 0-6"(0-150mm), 0-12"(0-300mm) & 6-12"(150-300mm):
Vertical packing.



Piece	Range	Wooden Case		Plastic Case
		.001"	.0001"	.0001"
		Order No.	Order No.	Order No.
3-pc set	0-3"	600-3203		600-3213
4-pc set	0-4"	600-3204		600-3214
6-pc set	0-6"	600-3206	600-3216	
6-pc set	6-12"	600-3207	600-3217	
12-pc set	0-12"	600-3208	600-3218	

Piece	Range	Wooden Case		Plastic Case
		.01mm	.01mm	.01mm
		Order No.	Order No.	Order No.
3-pc set	0-75mm			600-3275
4-pc set	0-100mm			600-3300
6-pc set	0-150mm	600-3350		
6-pc set	150-300mm	600-3355		
12-pc set	0-300mm	600-3360		

Electronic Digital Outside Micrometers

IP54, Water Proof

IP54防水电子数显外径千分尺

- The water proof digital outside micrometer's degree of protection is IP 54.
- Friction thimble.
- Zero setting at any position.
- Metric/Inch system conversion at any position.



2 Key

Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.0001mm	600-8051
1-2"/25-50mm	.00005"/.0001mm	600-8052
2-3"/50-75mm	.00005"/.0001mm	600-8053
3-4"/75-100mm	.00005"/.0001mm	600-8054

3 Key

Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.0001mm	600-8071
1-2"/25-50mm	.00005"/.0001mm	600-8072
2-3"/50-75mm	.00005"/.0001mm	600-8073
3-4"/75-100mm	.00005"/.0001mm	600-8074

Outside Micrometer

镀铬外径千分尺 (尺架刻对照表)

Chrome, Equivalent Chart

- Satin-chrome finish
- Carbide measuring faces
- Convertible "friction" to "feel" thimble sleeve
- Spindle locks are standard
- 1-2" and 3-3" models have insulated frames



Range	Grad.	Order No.
0-1"	0.0001"	601-0501
1-2"	0.0001	601-0502
0-25mm	0.01mm	601-0525
25-50	0.01	601-0550

Electronic Digital Outside Micrometer

2 Key Model

数显外径千分尺

- Value presetting.
- The ratchet stop still works even with one hand operation, while regular micrometers don't.
- Absolute and incremental measurement mode switching.
- Less buttons and multi-function.



Range	Graduation	Order No.
0-1"/25mm	.00005"/.0001mm	600-8061
1-2"/25-50mm	.00005"/.0001mm	600-8062
2-3"/50-75mm	.00005"/.0001mm	600-8063
3-4"/75-100mm	.00005"/.0001mm	600-8064
4-5"/100-25mm	.00005"/.0001mm	600-8065
5-6"/125-150mm	.00005"/.0001mm	600-8066

Electronic Digital Outside Micrometers

电子数显外径千分尺

2-Key Model

- LCD display.
- Carbide tipped anvils.
- Ratchet stop.
- Enamel finish for frame.
- Battery 1year life time.



Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.0001mm,	600-8001
1-2"/25-50mm	.00005"/.0001mm,	600-8002
2-3"/50-75mm	.00005"/.0001mm,	600-8003
3-4"/75-100mm	.00005"/.0001mm,	600-8004

3-Key Model

- on/off
- Metric/inch conversion
- Origin resetting
- Data Output



Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.0001mm	600-8025
1-2"/25-50mm	.00005"/.0001mm	600-8026
2-3"/50-75mm	.00005"/.0001mm	600-8027
3-4"/75-100mm	.00005"/.0001mm	600-8028

Digital Outside Micrometers

计数器数字外径千分尺

- Ratchet stop.
- Carbide tipped anvils.
- Positive locking nut.
- Clear graduations on satin chrome finished thimble.



.001"		.0001"		.01mm		.001mm	
Range	Order No.	Order No.		Range	Order No.	Order No.	
0-1"	600-3001	600-3011		0-25mm	600-3025	601-9225	
1-2"	600-3002	600-3012		25-50mm	600-3050	601-9250	
2-3"	600-3003	600-3013		50-75mm	600-3075	601-9275	
3-4"	600-3004	600-3014		75-100mm	600-3100	601-9300	
4-5"	600-3005	600-3015		100-125mm	600-3125		
5-6"	600-3006	600-3016		125-150mm	600-3150		
6-7"	600-3007	600-3017		150-175mm	600-3175		
7-8"	600-3008	600-3018		175-200mm	600-3200		
8-9"	600-3009	600-3019		200-225mm	600-3225		
9-10"	600-3010	600-3020		225-250mm	600-3250		
10-11"	600-3111	600-3021		250-275mm	600-3270		
11-12"	600-3112	600-3022		275-300mm	600-3272		

Electronic Digital Outside

Micrometer

2键电子数显外径千分尺

2 Key Model

- Large LCD display.
- Zero setting at any position.
- mm/ABS/INC conversion.
- Manual power on/off.



Range	Grad.	Order No.
0-1"/25mm	0.0005"/0.01mm	600-8081
1-2"/25-50mm	0.0005"/0.01mm	600-8082

Interchangeable Anvil Outside Micrometers 钢管尺架外径千分尺（可换测砧）

12"/300 Lower Range Model

- Enamel frame.
- Packed standards in a fitted case.
- Ratchet stop and lock nut.
- High accuracy interchangeable measuring anvils.
- Carbide measuring anvils.
- Laser engraved graduations.

Replacement Anvil

Range	Order No.
1"	600-0021
2"	600-0022
3"	600-0023
4"	600-0024
5"	600-0025



Range	Grad.	Order No.
0-2"	.001"	600-9412
2-4"	.001"	600-9417
2-6"	.001"	600-9418
0-4"	.001"	600-9414
4-8"	.001"	600-9419
0-6"	.001"	600-9416
6-12"	.001"	600-9300
8-12"	.001"	600-9410

Range	Grad.	Order No.
0-50mm	.01mm	600-9403
50-100mm	.01mm	600-9405
50-150mm	.01mm	600-9409
0-150mm	.01mm	600-9406
150-300mm	.01mm	600-9000
0-100mm	.01mm	600-9404
100-200mm	.01mm	600-9407
200-300mm	.01mm	600-9408
200-250mm	.01mm	600-9021
250-300mm	.01mm	600-9022

Electronic Interchangeable Anvil

Micrometers 电子数显可换测砧外径千分尺

12"/300 Lower Range Model

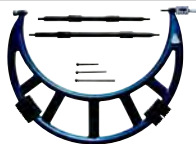
- Friction thimble (ratchet friction thimble available).
- With 5 keys Deluxe Model micrometer head.
- Painted frame.



Range	Graduation	Order No.
0-2"/0-50mm	0.00005"/0.001mm	600-9421
2-4"/50-100mm	0.00005"/0.001mm	600-9424
0-4"/0-100mm	0.00005"/0.001mm	600-9422
4-8"/100-200mm	0.00005"/0.001mm	600-9425
0-6"/0-150mm	0.00005"/0.001mm	600-9423
6-12"/150-300mm	0.00005"/0.001mm	600-9426
8-12"/200-300mm	0.00005"/0.001mm	600-9427

12"/300mm Upper Range Model

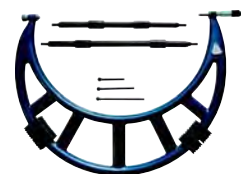
- 7keys Positive-designed electronic micrometer head.
- Large and clear LCD.



Range	Graduation	Order No.
12-16"/300-400mm	0.00005"/0.001mm	600-9321
16-20"/400-500mm	0.00005"/0.001mm	600-9322
20-24"/500-600mm	0.00005"/0.001mm	600-9323
24-28"/600-700mm	0.00005"/0.001mm	600-9324
28-32"/700-800mm	0.00005"/0.001mm	600-9325
32-36"/800-900mm	0.00005"/0.001mm	600-9326
36-40"/900-1000mm	0.00005"/0.001mm	600-9327

12"/300mm Upper Range Model

- Pipe combined steel frame provides lightness plus extreme rigidity for perfect balance.
- With standards in a fitted case.
- Carbide measuring faces.
- Ratchet stop and lock nut.



Range	Grad.	Order No.
12-16"	.001"	600-9301
16-20"	.001"	600-9302
20-24"	.001"	600-9303
24-28"	.001"	600-9304
28-32"	.001"	600-9305
32-36"	.001"	600-9306
36-40"	.001"	600-9307

Range	Grad.	Order No.
300-400mm	.01mm	600-9001
400-500mm	.01mm	600-9002
500-600mm	.01mm	600-9003
600-700mm	.01mm	600-9004
700-800mm	.01mm	600-9005
800-900mm	.01mm	600-9006
900-1000mm	.01mm	600-9007

Electronic Outside Micrometers

5 Key Model

5按键电子数显外径千分尺

- 5 keys Positive-designed electronic micrometer head.
- Large LCD.
- Absolute and incremental conversion.
- Friction thimble (Ratchet friction thimble available).
- Data holding and Tolerance setting.
- SPC output.



Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.001mm	600-8005
1-2"/25-50mm	.00005"/.001mm	600-8006
2-3"/50-75mm	.00005"/.001mm	600-8007
3-4"/75-100mm	.00005"/.001mm	600-8008
4-5"/100-125mm	.00005"/.001mm	600-8015
5-6"/125-150mm	.00005"/.001mm	600-8016
6-7"/150-175mm	.00005"/.001mm	600-8017
7-8"/175-200mm	.00005"/.001mm	600-8018
8-9"/200-225mm	.00005"/.001mm	600-8019
9-10"/225-250mm	.00005"/.001mm	600-8020
10-11"/250-275mm	.00005"/.001mm	600-8021
11-12"/275-300mm	.00005"/.001mm	600-8022

7 Key Model



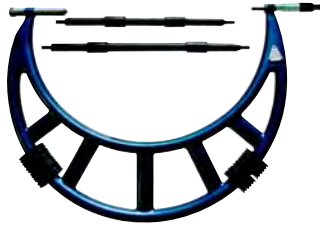
- Auto power on/off.
- Data hold function.
- Relative and absolute measurement.
- Ratchet stop.
- Tolerance setting functions.
- Zero setting at any position.

Range	Graduation	Order No.
0-1"/0-25mm	.00005"/.001mm	600-8031
1-2"/25-50mm	.00005"/.001mm	600-8032
2-3"/50-75mm	.00005"/.001mm	600-8033
3-4"/75-100mm	.00005"/.001mm	600-8034
4-5"/100-125mm	.00005"/.001mm	600-8035
5-6"/125-150mm	.00005"/.001mm	600-8036
6-7"/150-175mm	.00005"/.001mm	600-8037
7-8"/175-200mm	.00005"/.001mm	600-8039

Adjustable Anvil Micrometers

钢管尺架大量程外径千分尺（可换标准套）

- High accuracy standard collars enable that reading does not have to be reset when changing collars.
- Standard collars: 25mm/1", 50mm/2" (within 1000mm/40"); 50mm/2", 100mm/4", (over 1000mm/40").
- Carbide tipped anvils, painted frame.
- Pipe combined frame for light weight and high rigidity.



Range	Grad.	Order No.	Range	Grad.	Order No.
12-16"	.001"	600-9901	300-400mm	.01mm	600-9801
16-20"	.001"	600-9902	400-500mm	.01mm	600-9802
20-24"	.001"	600-9903	500-600mm	.01mm	600-9803
24-28"	.001"	600-9904	600-700mm	.01mm	600-9804
28-32"	.001"	600-9905	700-800mm	.01mm	600-9805
32-36"	.001"	600-9906	800-900mm	.01mm	600-9806
36-40"	.001"	600-9907	900-1000mm	.01mm	600-9807
40-48"	.001"	600-9308	1000-1200mm	.01mm	600-9008
18-56"	.001"	600-9309	1200-1400mm	.01mm	600-9009
56-64"	.001"	600-9310	1400-1600mm	.01mm	600-9010
64-72"	.001"	600-9311	1600-1800mm	.01mm	600-9011
72-80"	.001"	600-9312	1800-2000mm	.01mm	600-9012
80-88"	.001"	600-9313	2000-2200mm	.01mm	600-9013
88-96"	.001"	600-9314	2200-2400mm	.01mm	600-9014
96-104"	.001"	600-9315	2400-2600mm	.01mm	600-9015
104-112"	.001"	600-9316	2600-2800mm	.01mm	600-9016
112-120"	.001"	600-9317	2800-3000mm	.01mm	600-9017

Quick Feeding Outside Micrometers

快速进给外径千分尺

- Quick feeding.
- Carbide measuring faces.
- Positive locking clamp.
- Ratchet friction thimble (ratchet stop available).



Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-1"	.0005"	600-8201	601-8201
1-2"	.0005"	600-8202	601-8202
2-3"	.0005"	600-8203	601-8203
3-4"	.0005"	600-8204	601-8204
4-5"	.0005"	600-8205	601-8205
5-6"	.0005"	600-8206	601-8206
6-7"	.0005"	600-8207	601-8207
7-8"	.0005"	600-8208	601-8208

Range	Grad.	Painted Order No.	Chrome-Plated Order No.
0-25mm	.01mm	600-8221	601-8221
25-50mm	.01mm	600-8222	601-8222
50-75mm	.01mm	600-8223	601-8223
75-100mm	.01mm	600-8224	601-8224
100-125mm	.01mm	600-8225	601-8225
125-150mm	.01mm	600-8226	601-8226
150-175mm	.01mm	600-8227	601-8227
175-200mm	.01mm	600-8228	601-8228

Multi-Anvil Micrometers

多用千分尺

- Chrome-Plated frame.
- Carbide-tipped spindle.
- Friction thimble for exact repetitive readings.
- Interchangeable anvils permit quick accurate measurement of tubing, cylindrical walls, from a hole or slot to an edge, and many hard-to-reach locations.



Accessories

Name	Order No.
Flat Anvil	600-0801
Rod Anvil	600-0802

Range	.001" Order No.	.0001" Order No.	Range	Graduation	Order No.
0-1"	600-1501	600-1511	0-25mm	.01mm	600-1525
1-2"	600-1502	600-1512	25-50mm	.01mm	600-1550

Electronic Multi-Anvil Micrometers

电子数显多用千分尺

- Chrome-Plated frame.
- With 5 keys deluxe model micrometer head.



Range	Graduation	Order No.
0-1"/0-25mm	0.00005"/0.001mm	600-1521
1-2"/25-50mm	0.00005"/0.001mm	600-1522

Screw Thread Outside Micrometers

螺纹千分尺

- Either 60° or 55° V-Anvil and conical spindle are made of high-grade special steel.
- Ratchet friction thimble (ratchet stop or friction thimble available).
- Laser engraved graduations.
- Enamel frame.



Range	Anvils	.001" Order No.	Anvils	.0001" Order No.
0-1"	5	600-7801	5	600-7811
1-2"	5	600-7802	5	600-7812
2-3"	4	600-7803	4	600-7813
3-4"	4	600-7804	4	600-7814
4-5"	3	600-7805	6	600-7815
5-6"	3	600-7806	6	600-7816

Range	Grad.	Anvils	Order No.
0-25mm	0.01mm	5	600-8825
25-50mm	0.01mm	5	600-8850
50-75mm	0.01mm	4	600-8875
75-100mm	0.01mm	4	600-8900
100-125mm	0.01mm	3	600-8925
125-150mm	0.01mm	3	600-8950

Disc Brake Micrometers

刹车片千分尺

- For measuring the depth of grooves on the Disc Brake.
- Carbide measuring face with 60 degree point.
- Ratchet stop (friction thimble or ratchet friction thimble available)



Range	Graduation	Order No.
1-2"	.0001"	600-7080
.3-1.3"	.0001"	600-7099

Range	Graduation	Order No.
7.6-33mm	.01mm	600-7082
25-50mm	.01mm	600-7084

Digital Disc Brake Micrometers

数显刹车片千分尺

- To measure the depth of grooves on the disc brake.
- Carbide tipped measuring faces.
- Metric/Inch system conversion at any position.
- Zero setting at any position.
- With data output interface.



Range	Graduation	Accuracy	Order No.
.3-1.3"/7.6-33mm	.00005"/.0001mm	+/- .004mm	600-7092
1-2"/25-50mm	.00005"/.0001mm	+/- .004mm	600-7094

Electronic Deep Throat Micrometer

电子深喉千分尺

Main Features:

- Fast sliding scale for quick measurements
- Easy to read large digital display
- Easy to hold - ergonomic finger grip
- Cast aluminum frame - rugged and lightweight
- Includes Heavy Duty Molded Plastic Case
- Inch/Metric conversion
- On/Off Buttons
- Zero setting

Specification:

Measuring range: 0-2.6"(66mm)
 Max measuring depth: 3-1/8"
 Resolution: 0.0005"/0.01mm
 Accuracy: 0.001"/0.02mm

Order No. 600-6701

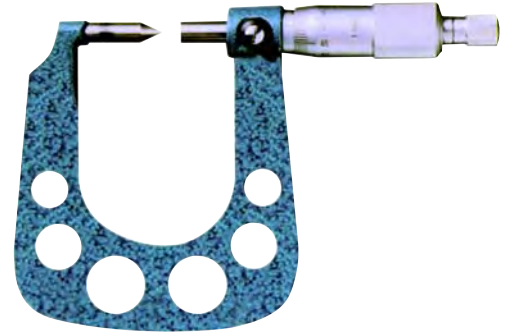


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Disc Brake Micrometers

刹车片千分尺

- To measure the depth of grooves on the disc brake.
- Carbide tipped measuring faces.



Range	Graduation	Order No.
1-2"	.0001"	600-7102
.3-1.3"	.0001"	600-7104

Range	Graduation	Order No.
7.6-33mm	.001mm	600-7105
25-50mm	.001mm	600-7110
7.6-33mm	.01mm	600-7115
25-50mm	.01mm	600-7120

Universal Micrometers

多功能外径千分尺(带七组测砧)

- Enamel frame.
- Positive lever locking nut.
- Laser engraved graduations.
- Ratchet friction thimble.
- 7 pairs of interchangeable anvils (flat, spherical, spline, disk, blade, Point and knife-edge) for a wide range of applications.



Range	Grad.	Order No.	Grad.	Order No.
0-1"	.001"	600-1551	.0001"	600-1561
1-2"	.001"	600-1552	.0001"	600-1562
2-3"	.001"	600-1553	.0001"	600-1563
3-4"	.001"	600-1554	.0001"	600-1564
4-5"	.001"	600-1555	.0001"	600-1565
5-6"	.001"	600-1556	.0001"	600-1566
6-7"	.001"	600-1557	.0001"	600-1567
7-8"	.001"	600-1558	.0001"	600-1568

Range	Graduation	Order No.
0-25mm	.01mm	600-1531
25-50mm	.01mm	600-1532
50-75mm	.01mm	600-1533
75-100mm	.01mm	600-1534
100-125mm	.01mm	600-1535
125-150mm	.01mm	600-1536
150-175mm	.01mm	600-1537
175-200mm	.01mm	600-1538

Electronic Universal Micrometers

电子数显多功能外径千分尺(带七组测砧)

- Friction thimble (ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys Deluxe Model micrometer head.



Range	Graduation	Order No.
0-1"/0-25mm	0.0005"/0.001mm	600-1541
1-2"/25-50mm	0.0005"/0.001mm	600-1542
2-3"/50-75mm	0.0005"/0.001mm	600-1543
3-4"/75-100mm	0.0005"/0.001mm	600-1544
4-5"/100-125mm	0.0005"/0.001mm	600-1545
5-6"/125-150mm	0.0005"/0.001mm	600-1546
6-7"/150-175mm	0.0005"/0.001mm	600-1547
7-8"/175-200mm	0.0005"/0.001mm	600-1548

V-Anvil Micrometers

三刃千分尺

- Measuring diameter of cylinder with an odd number flutes such as taps,reamers and end mills.
- Ratchet stop (friction thimble or ratchet friction thimble available).
- Laser engraved graduations.
- Enamel frame.



60° V-Anvil micrometer 3 flute

Range	Graduation	Order No.
.04 to .6"	.001"	600-9111
.2 to .8"	.001"	600-9112
.8 to 1.4"	.001"	600-9113
1.4 to 2"	.001"	600-9114
2 to 2.6"	.001"	600-9115
2.6 to 3.2"	.001"	600-9116

Range	Graduation	Order No.
1-15mm	.01mm	600-9101
5-20mm	.01mm	600-9102
20-35mm	.01mm	600-9103
35-50mm	.01mm	600-9104
50-65mm	.01mm	600-9105
65-80mm	.01mm	600-9106

108° V-Anvil micrometer 5 flute

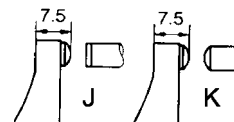
Range	Graduation	Order No.
.2 to 1"	.001"	600-9117
1 to 1.8"	.001"	600-9118
1.8 to 2.6"	.001"	600-9119
2.6 to 3.4"	.001"	600-9120

Range	Graduation	Order No.
5-25mm	.01mm	600-9107
25-45mm	.01mm	600-9108
45-65mm	.01mm	600-9109
65-85mm	.01mm	600-9110

Tubing Micrometers

球头千分尺

- Enamel frame.
- Carbide-tipped spherical anvil.
- Ratchet stop (friction thimble or ratchet friction thimble available).



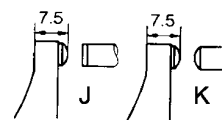
Range	Anvil Type J		Anvil Type K	
	.001"	.0001"	.001"	.0001"
Order No.	Order No.	Order No.	Order No.	Order No.
0-1"	600-7644	600-7701	600-7660	600-7670
1-2"	600-7645	600-7702	600-7661	600-7671
2-3"	600-7646	600-7703	600-7662	600-7672
3-4"	600-7647	600-7704	600-7663	600-7673

Range	Grad.	Anvil Type J	Anvil Type K
		Order No.	Order No.
0-25mm	.01mm	600-7725	600-7685
25-50mm	.01mm	600-7750	600-7686
50-75mm	.01mm	600-7775	600-7687
75-100mm	.01mm	600-7800	600-7688

Electronic Tubing Micrometers

电子数显球头千分尺

- Chrome-plated frame.
- Friction thimble (ratchet friction thimble available).
- With 5 keys Deluxe Model micrometer head.

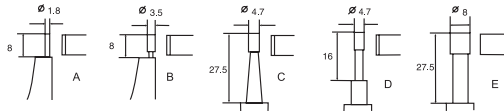


Range	Graduation	Anvil Type J	Anvil Type K
		Order No.	Order No.
0-1"/0-25mm	.0005"/0.001mm	600-7611	600-7615
1-2"/25-50mm	.0005"/0.001mm	600-7612	600-7616
2-3"/50-75mm	.0005"/0.001mm	600-7613	600-7617
3-4"/75-100mm	.0005"/0.001mm	600-7614	600-7618

Tubing Micrometers

测轴壁厚千分尺

- For measuring thickness of various tubes.
- Ratchet stop.
- Carbide-tipped spindle.
- Different diameter on fixed anvils.
- Laser engraved graduations.
- Enamel frame.



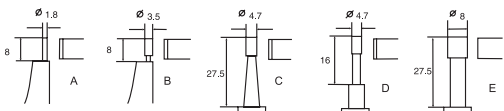
Anvils					
Range	Type	Grad.	Order No.	Grad.	Order No.
0-1"	A	.001"	600-7632	.0001"	600-7626
1-2"	A	.001"	600-7635	.0001"	600-7629
0-1"	B	.001"	600-7633	.0001"	600-7627
1-2"	B	.001"	600-7636	.0001"	600-7630
0-1"	C	.001"	600-7634	.0001"	600-7628
1-2"	C	.001"	600-7637	.0001"	600-7631
0-1"	D	.001"	600-7640	.0001"	600-7650
1-2"	D	.001"	600-7641	.0001"	600-7651
0-1"	E	.001"	600-7642	.0001"	600-7652
1-2"	E	.001"	600-7643	.0001"	600-7653

Anvils			
Range	Type	Grad.	Order No.
0-25mm	A	.01mm	600-7620
25-50mm	A	.01mm	600-7623
0-25mm	B	.01mm	600-7621
25-50mm	B	.01mm	600-7624
0-25mm	C	.01mm	600-7622
25-50mm	C	.01mm	600-7625
0-25mm	D	.01mm	600-7664
25-50mm	D	.01mm	600-7665
0-25mm	E	.01mm	600-7666
25-50mm	E	.01mm	600-7667

Electronic Tubing Micrometers

电子数显测轴壁厚千分尺

- Chrome-plated frame.
- Friction thimble (ratchet friction thimble available).
- With 5 keys Deluxe Model micrometer head.

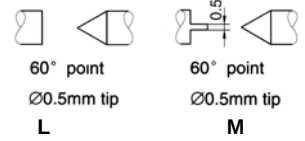
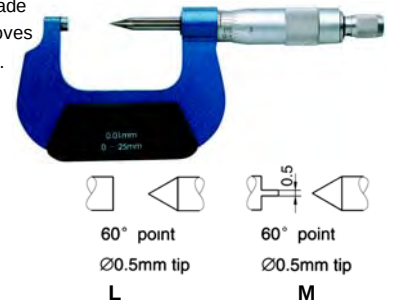


Anvils			
Range	Type	Graduation	Order No.
0-1"/0-25mm	A	0.00005"/0.001mm	600-7690
1-2"/25-50mm	A	0.00005"/0.001mm	600-7691
0-1"/0-25mm	B	0.00005"/0.001mm	600-7692
1-2"/25-50mm	B	0.00005"/0.001mm	600-7693
0-1"/0-25mm	C	0.00005"/0.001mm	600-7694
1-2"/25-50mm	C	0.00005"/0.001mm	600-7695
0-1"/0-25mm	D	0.00005"/0.001mm	600-7696
1-2"/25-50mm	D	0.00005"/0.001mm	600-7697
0-1"/0-25mm	E	0.00005"/0.001mm	600-7698
1-2"/25-50mm	E	0.00005"/0.001mm	600-7699

Single Point Micrometers

平测砧60° 单尖头外径千分尺

- Pointed Spindle and Flat or blade anvil for measuring drills, grooves and hard-to-reach dimensions.
- Enamel frame.
- Designed to measure the small recess of an electrical wire connector.
- 60° conical spindle.
- Laser engraved graduations.
- Positive lever locking clamp.



Anvil Type M

Range	Grad.	Order No.	Range	Grad.	Order No.
0-1"	.0001"	600-6680	0-25mm	.01mm	600-6671

Anvil Type L

.001"		.0001"	
Range	Order No.	Range	Order No.
0-1"	600-6651	0-25mm	600-6661
1-2"	600-6652	25-50mm	600-6662
2-3"	600-6653	50-75mm	600-6663
3-4"	600-6654	75-100mm	600-6664
4-5"	600-7305	100-125mm	600-7315
5-6"	600-7306	125-150mm	600-7316

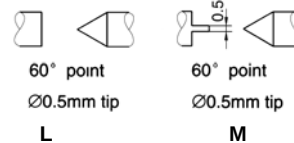
Anvil Type L

Range	Grad.	Order No.
0-25mm	.01mm	600-6641
25-50mm	.01mm	600-6642
50-75mm	.01mm	600-6643
75-100mm	.01mm	600-6644
100-125mm	.01mm	600-7329
125-150mm	.01mm	600-7330

Electronic Single Point Micrometers

电子数显平测砧60° 单尖头外径千分尺

- Friction thimble (ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys micrometer head.
- Graduation .00005"/.001mm.



Anvil Type L		Anvil Type M
Range	Order No.	Order No.
0-1"/0-25mm	600-6691	600-6690
1-2"/25-50mm	600-6692	
2-3"/50-75mm	600-6693	
3-4"/75-100mm	600-6694	

Point Micrometers

尖头千分尺-带转扭

- Pointed spindle and anvil for measuring the web thickness of drills, small grooves, keyways, and other hard-to-reach dimensions.
- Spindle made of special steel to ensure high precision and stability.
- Inside force-limited device for precise repeated reading.
- With ring-type knurled lock nut

NEW



Range	Graduation	Accuracy	Order No.
0-25mm	0.001mm	0.004mm	600-6711
25-50mm	0.001mm	0.004mm	600-6712
50-75mm	0.001mm	0.004mm	600-6713
75-100mm	0.001mm	0.005mm	600-6714

Point Micrometers

尖头外径千分尺

- Designed to measure small grooves, keyways and other hard-to-reach diameters.
- Enamel frame.
- Positive lever locking clamp.

D: 15° point
SR0.3mm tip

A: 30° point
SR0.3mm tip



Range	Grad.	30° Point Order No.	Grad.	30° Point Order No.	15° Point Order No.
0-1"	.001"	600-6601	.0001"	600-6611	600-6681
1-2"	.001"	600-6602	.0001"	600-6612	600-6682
2-3"	.001"	600-6603	.0001"	600-6613	600-6683
3-4"	.001"	600-6604	.0001"	600-6614	600-6684

Range	Grad.	30° Point Order No.	15° Point Order No.
0-25mm	.01mm	600-6631	600-6676
25-50mm	.01mm	600-6632	600-6677
50-75mm	.01mm	600-6633	600-6678
75-100mm	.01mm	600-6634	600-6679

Electronic Point Micrometers

小孔内径千分尺

- Friction Thimble (ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys Deluxe Model micrometer head.



Range	Graduation	Order No.
0-1"/0-25mm	0.00005"/0.001mm	600-6621
1-2"/25-50mm	0.00005"/0.001mm	600-6622
2-3"/50-75mm	0.00005"/0.001mm	600-6623
3-4"/75-100mm	0.00005"/0.001mm	600-6624

Electronic Spline Micrometers

电子数显小头外径千分尺

- Friction thimble (Ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys Deluxe Model micrometer head.
- Graduation: .00005"/.001mm



Range	Measuring tip φ 2x5mm Order No.	Measuring tip φ 3x5mm Order No.
0-1"/0-25mm	600-1361	600-1371
1-2"/25-50mm	600-1362	600-1372
2-3"/50-75mm	600-1363	600-1373
3-4"/75-100mm	600-1364	600-1374
4-5"/100-125mm	600-1365	600-1375
5-6"/125-150mm	600-1366	600-1376
6-7"/150-175mm	600-1367	600-1377

Spline Micrometers

小头外径千分尺

- Ideal for measuring splines, slots and keyways.
- Enamel frame.
- Carbide tipped anvils.
- Laser engraved graduations.
- Ratchet stop (friction thimble or ratchet friction thimble available).



Tip 2x5mm

Range	.001" Order No.	.0001" Order No.
0-1"	600-1301	600-1311
1-2"	600-1302	600-1312
2-3"	600-1303	600-1313
3-4"	600-1304	600-1314
4-5"	600-1305	600-1315
5-6"	600-1306	600-1316
6-7"	600-1307	600-1317

Tip 3x10mm

Range	.001" Order No.	.0001" Order No.
0-1"	600-1341	600-1351
1-2"	600-1342	600-1352
2-3"	600-1343	600-1353
3-4"	600-1344	600-1354
4-5"	600-1345	600-1355
5-6"	600-1346	600-1356
6-7"	600-1347	600-1357

Range	Grad.	Tip 2x5mm Order No.	Tip 3x10mm Order No.
0-25mm	.01mm	600-1321	600-1331
25-50mm	.01mm	600-1322	600-1332
50-75mm	.01mm	600-1323	600-1333
75-100mm	.01mm	600-1324	600-1334
100-125mm	.01mm	600-1325	600-1335
125-150mm	.01mm	600-1326	600-1336
150-175mm	.01mm	600-1327	600-1337

Sheet Metal Micrometers

深弓架外径千分尺-带指示盘

- For measuring thickness of sheet metal, paper, plastic and rubber taparts especially for a hot metal sheet.
- With a dial.
- Carbide tipped anvils.



Range	Grad.	Depth of Throat	Order No.
0-0.6"	0.001"	50mm	600-1771
0-1"	0.001"	50mm	600-1772
0-1"	0.001"	100mm	600-1773
0-1"	0.001"	150mm	600-1774
1-2"	0.001"	50mm	600-1775

Range	Grad.	Depth of Throat	Order No.
0-15mm	0.01mm	50mm	600-1745
0-25mm	0.01mm	50mm	600-1755
0-25mm	0.01mm	100mm	600-1756
0-25mm	0.01mm	150mm	600-1757
25-50mm	0.01mm	50mm	600-1766

Disc Micrometers

直进式公法线外径千分尺

- Non-Rotating or Rotating Spindle.
- Disk for measuring gears and thickness of paper.
- Ratchet stop (friction thimble or ratchet friction thimble available).



Non-rotating Spindle Type

Range	.001" Order No.	.0001" Order No.
0-1"	600-7031	600-7041
1-2"	600-7032	600-7042
2-3"	600-7033	600-7043
3-4"	600-7034	600-7044
4-5"	600-7035	600-7045
5-6"	600-7036	600-7046
6-7"	600-7037	600-7047
7-8"	600-7038	600-7048

Rotating Spindle Type

Range	.001" Order No.	.0001" Order No.
0-1"	600-7001	600-7011
1-2"	600-7002	600-7012
2-3"	600-7003	600-7013
3-4"	600-7004	600-7014
4-5"	600-7005	600-7015
5-6"	600-7006	600-7016
6-7"	600-7007	600-7017
7-8"	600-7008	600-7018

Range	Grad.	Non-Rotating Order No.	Rotating Order No.
0-25mm	.01mm	600-7051	600-7021
25-50mm	.01mm	600-7052	600-7022
50-75mm	.01mm	600-7053	600-7023
75-100mm	.01mm	600-7054	600-7024
100-125mm	.01mm	600-7055	600-7025
125-150mm	.01mm	600-7056	600-7026
150-175mm	.01mm	600-7057	600-7027
175-200mm	.01mm	600-7058	600-7028

Disc Micrometers

公法线千分尺-带转扭

- With ring-type knurled lock nut

NEW



Range	Graduation	Accuracy	Order No.
0-25mm	0.001mm	0.004mm	600-7061
25-50mm	0.001mm	0.004mm	600-7062
50-75mm	0.001mm	0.004mm	600-7063
75-100mm	0.001mm	0.005mm	600-7064

Digital Disc Micrometers

数显公法线千分尺

- With disc measuring faces, easy to obtain the dimensions of gear tooth span.
- Metric/Inch system conversion at any position.
- Zero setting at any position.
- With data output interface.



Range (Inch/mm)	Graduation (Inch/mm)	Accuracy (mm)	Order No.
0-1"/0-25	0.00005"/0.001	+/-4μm	600-7221
1-2"/25-50	0.00005"/0.001	+/-5μm	600-7222
2-3"/50-70	0.00005"/0.001	+/-6μm	600-7223
3-4"/75-100	0.00005"/0.001	+/-6μm	600-7224

Digital Electronic Disc Micrometers

电子数显直进式公法线千分尺

- Friction thimble (ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys deluxe model micrometer head.



Non-rotating Spindle Type

Range	Grad.	Order No.
0-1"/0-25mm	0.00005"/.001mm	600-7211
1-2"/25-50mm	0.00005"/.001mm	600-7212
2-3"/50-75mm	0.00005"/.001mm	600-7213
3-4"/75-100mm	0.00005"/.001mm	600-7214
4-5"/100-125mm	0.00005"/.001mm	600-7215
5-6"/125-150mm	0.00005"/.001mm	600-7216
6-7"/150-175mm	0.00005"/.001mm	600-7217
7-8"/175-200mm	0.00005"/.001mm	600-7218

Rotating Spindle Type

Range	Grad.	Order No.
0-1"/0-25mm	0.00005"/.001mm	600-7201
1-2"/25-50mm	0.00005"/.001mm	600-7202
2-3"/50-75mm	0.00005"/.001mm	600-7203
3-4"/75-100mm	0.00005"/.001mm	600-7204
4-5"/100-125mm	0.00005"/.001mm	600-7205
5-6"/125-150mm	0.00005"/.001mm	600-7206
6-7"/150-175mm	0.00005"/.001mm	600-7207
7-8"/175-200mm	0.00005"/.001mm	600-7208

Blade Micrometers

直进式刀口叶片外径千分尺

- No-rotating spindle.
- Laser engraved graduations.
- Ratchet friction thimble (friction thimble or ratchet stop available).
- Enamel frame.



Range	.001" Order No.	.0001" Order No.
0-1"	600-1801	600-1811
1-2"	600-1802	600-1812
2-3"	600-1803	600-1813
3-4"	600-1804	600-1814
4-5"	600-1805	600-1815
5-6"	600-1806	600-1816
6-7"	600-1807	600-1817

Range	Grad.	Order No.
0-25mm	.01mm	600-1831
25-50mm	.01mm	600-1832
50-75mm	.01mm	600-1833
75-100mm	.01mm	600-1834
100-125mm	.01mm	600-1835
125-150mm	.01mm	600-1836
150-175mm	.01mm	600-1837

Electronic Blade Micrometers

电子数显刀口叶片外径千分尺

- Friction thimble (Ratchet friction thimble available).
- Chrome-plated frame.
- With 5 keys deluxe model micrometer head.



Range	Graduation	Order No.
0-1"/0-25mm	0.00005"/0.001mm	600-1821
1-2"/25-50mm	0.00005"/0.001mm	600-1822
2-3"/50-75mm	0.00005"/0.001mm	600-1823
3-4"/75-100mm	0.00005"/0.001mm	600-1824
4-5"/100-125mm	0.00005"/0.001mm	600-1825
5-6"/125-150mm	0.00005"/0.001mm	600-1826
6-7"/150-175mm	0.00005"/0.001mm	600-1827

Jaw Type Micrometers

直进式爪型千分尺

- No-rotating spindle.
- Enamel frame.
- Jaw Type measuring face.
- Ratchet friction thimble (friction thimble or ratchet stop available).
- Laser engraved graduations.



Range	.001"	.0001"	Range	Grad.	Order No.
0-1"	600-7401	600-7411	0-25mm	.01mm	600-7441
1-2"	600-7402	600-7412	25-50mm	.01mm	600-7442
2-3"	600-7403	600-7413	50-75mm	.01mm	600-7443
3-4"	600-7404	600-7414	75-100mm	.01mm	600-7444
4-5"	600-7405	600-7415	100-125mm	.01mm	600-7445
5-6"	600-7406	600-7416	125-150mm	.01mm	600-7446
6-7"	600-7407	600-7417	150-175mm	.01mm	600-7447
7-8"	600-7408	600-7418	175-200mm	.01mm	600-7448

Electronic Jaw Type Micrometers

电子数显直进式爪型千分尺

- Chrome-Plated frame.
- Friction thimble (ratchet friction thimble available).
- With 5 keys deluxe model micrometer head



Range	Grad.	Jaw Size	Order No.
0-1"/0-25mm	.00005"/.001mm	R 0.5"/12.5mm	600-7421
1-2"/25-50mm	.00005"/.001mm	R 0.5"/12.5mm	600-7422
2-3"/50-75mm	.00005"/.001mm	R 0.5"/12.5mm	600-7423
3-4"/75-100mm	.00005"/.001mm	R 0.5"/12.5mm	600-7424
4-5"/100-125mm	.00005"/.001mm	R 0.6"/15mm	600-7425
5-6"/125-150mm	.00005"/.001mm	R 0.6"/15mm	600-7426
6-7"/150-175mm	.00005"/.001mm	R 0.6"/15mm	600-7427
7-8"/175-200mm	.00005"/.001mm	R 0.6"/15mm	600-7428

Deep Throat Micrometers

深弓架外径千分尺

- Deep throat frame for measuring thickness of sheet metal, paper, and sheet plastic.
- Ratchet stop (friction thimble or ratchet friction thimble available).



Range	Throat Depth	.001" Order No.	.0001" Order No.
0-1"	2"	600-1701	600-1711
1-2"	2"	600-1702	600-1712
0-1"	4"	600-1703	600-1713
1-2"	4"	600-1704	600-1714
0-1"	6"	600-1705	600-1715
1-2"	6"	600-1706	600-1716
0-1"	8"	600-1707	600-1717
1-2"	8"	600-1708	600-1718

Range	Grad.	Throat Depth	Order No.
0-25mm	.01mm	50mm	600-1721
25-50mm	.01mm	50mm	600-1722
0-25mm	.01mm	100mm	600-1723
25-50mm	.01mm	100mm	600-1724
0-25mm	.01mm	150mm	600-1725
25-50mm	.01mm	150mm	600-1726
0-25mm	.01mm	300mm	600-1727
25-50mm	.01mm	300mm	600-1728

Electronic Deep Throat Micrometers

电子数显深弓架外径千分尺

- Painted frame.
- Friction thimble (ratchet friction thimble available).
- With 5 keys Deluxe Model micrometer head.
- Graduation .00005"/.001mm.



Range	Throat Depth Description	Graduation	Order No.
0-1"/0-25mm	2"/50mm	0.00005"/.001mm	600-1731
1-2"/25-50mm	2"/50mm	0.00005"/.001mm	600-1732
0-1"/0-25mm	4"/100mm	0.00005"/.001mm	600-1733
1-2"/25-50mm	4"/100mm	0.00005"/.001mm	600-1734
0-1"/0-25mm	6"/150mm	0.00005"/.001mm	600-1735
1-2"/25-50mm	6"/150mm	0.00005"/.001mm	600-1736
0-1"/0-25mm	8"/200mm	0.00005"/.001mm	600-1737
1-2"/25-50mm	8"/200mm	0.00005"/.001mm	600-1738

Micrometer Heads Ratchet Stop

棘轮测力计数器微分头

- Mechanical digital counter for quick and error-free reading.
- Carbide measuring faces
- Flat or spherical measuring faces.



Range	Grad.	Install Dimension	Install Dimension	Order No.
0-1"	.0001"	12x17mm	12x17mm	601-9766

Range	Grad.	Install Dimension	Install Dimension	Order No.
0-25mm	.01mm	12x17mm	12x17mm	601-9765

Read Out Micrometer Heads

读数测微头



Range	Graduations	Order No.
0-1"	.00005"	600-7951
0-2"	.00005"	600-7952

Range	Graduations	Order No.
0-25mm	.001mm	600-7925
0-50mm	.001mm	600-7950

Ratchet Stop Micrometer Heads

棘轮测力标准微分头

- Direct digital reading.
- Carbide measuring faces.
- Laser engraved graduations.
- Flat or spherical measuring face.



Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-1"	.001"	11x16mm	110mm	6.5mm	601-9501
0-1"	.0001"	11x16mm	110mm	6.5mm	601-9502
0-1"	.001"	12x17mm	113mm	6.5mm	601-9503
0-1"	.0001"	12x17mm	113mm	6.5mm	601-9504
0-1"	.001"	12x20mm	116mm	6.5mm	601-9505
0-1"	.0001"	12x20mm	116mm	6.5mm	601-9506

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-25mm	.01mm	11x16mm	110mm	6.5mm	601-9524
0-25mm	.002mm	11x16mm	110mm	6.5mm	601-9525
0-25mm	.01mm	12x17mm	113mm	6.5mm	601-9526
0-25mm	.002mm	12x17mm	113mm	6.5mm	601-9527
0-25mm	.01mm	12x20mm	116mm	6.5mm	601-9528
0-25mm	.002mm	12x20mm	116mm	6.5mm	601-9529

Ratchet Friction Thimble Micrometer Heads

棘轮套测力标准微分头

- Carbide measuring faces
- Laser engraved graduations.
- Flat or spherical measuring faces.



Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-1"	.001"	11x16mm	110mm	6.5mm	601-9507
0-1"	.0001"	11x16mm	110mm	6.5mm	601-9508

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-25mm	.01mm	11x16mm	110mm	6.5mm	601-9522
0-25mm	.002mm	11x16mm	110mm	6.5mm	601-9523

Mini-Micrometer Heads

小形微分头

- Carbide measuring faces
- Laser engraved graduations.
- Flat or spherical measuring faces.

0-5mm(0-0.2")-Flat Spindle(FS)



0-6.5mm(0-0.25") -Flat Spindle(FS)



0-13mm(0-0.5")-Flat Spindle(FS)



0-13mm(0-0.5")-Spherical Spindle(SS)



Inch

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Face Shapes	Order No.
0-.2"	.001"	3.5x5mm	32mm	2mm	Flat	601-9105
0-.2"	.001"	3.5x5mm	32mm	2mm	SR1.5mm	601-9106
0-.25"	.001"	6x6mm	37mm	3.5mm	Flat	601-9165
0-.25"	.001"	6x6mm	37mm	3.5mm	SR3mm	601-9166
0-.5"	.001"	9.5x9.5mm	58.5mm	5mm	Flat	601-9113
0-.5"	.001"	9.5x9.5mm	58.5mm	5mm	SR4mm	601-9114
0-.6"	.001"	9.5x9.5mm	61mm	5mm	Flat	601-9115
0-.6"	.001"	9.5x9.5mm	61mm	5mm	SR4mm	601-9116

Metric

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Face Shapes	Order No.
0-5mm	.01mm	3.5x5mm	32mm	2mm	Flat	601-9120
0-5mm	.01mm	3.5x5mm	32mm	2mm	SR1.5mm	601-9121
0-6.5mm	.01mm	6x6mm	37mm	3.5mm	Flat	601-9125
0-6.5mm	.01mm	6x6mm	37mm	3.5mm	SR3mm	601-9126
0-13mm	.01mm	9.5x9.5mm	58.5mm	5mm	Flat	601-9150
0-13mm	.01mm	9.5x9.5mm	58.5mm	5mm	SR4mm	601-9151
0-15mm	.01mm	9.5x9.5mm	61mm	5mm	Flat	601-9160
0-15mm	.01mm	9.5x9.5mm	61mm	5mm	SR4mm	601-9161

Electronic Micrometer Heads

数显微分头

- Absolute and incremental conversion.
- Friction thimble(Ratchet friction thimble available).
- Data hold and Tolerance set.



Range	Grad.	Install Dimension	Total Length	Order No.
0-1"/0-25mm	.00005"/.001mm	12x17mm	154mm	601-9785
0-1"/0-25mm	.00005"/.001mm	12x17mm	157mm	601-9786

7 Pc. Micrometer Anvil Attachment Kit

千分尺测头

- Turns your micrometer into 7 different tools.
- Fits all brand micrometers from 1" to 12" or metric sizes.



Specification

Order No.

7 Pcs/set: spline, knife, super spline, blade, comparator, disc & ball attachment

600-0107

Non-Rotating Spindle Micrometer Heads Ratchet Stop

棘轮测力直进式标准微分头



- Carbide measuring faces
- Laser engraved graduations.
- Flat or spherical measuring faces.

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-25mm	.01mm	12x10mm	113mm	8mm	601-9625
0-25mm	.002mm	12x10mm	113mm	8mm	601-9626
0-1"	.001"	12x10mm	113mm	8mm	601-9621
0-1"	.0001"	12x10mm	113mm	8mm	601-9622

Non-Rotating Spindle Micrometer Heads Ratchet Friction Thimble

棘轮套测力直进式标准微分头



- Carbide measuring faces
- Laser engraved graduations.
- Flat or spherical measuring faces.

Range	Grad.	Install Dimension	Total Length	Spindle Diameter	Order No.
0-1	.001"	12x10mm	113mm	8mm	601-9631
0-1	.0001"	12x10mm	113mm	8mm	601-9632
0-25mm	.01mm	12x10mm	113mm	8mm	601-9635
0-25mm	.002mm	12x10mm	113mm	8mm	601-9636

Interchangeable Anvil Micrometer Standards

可换测杆千分尺附件



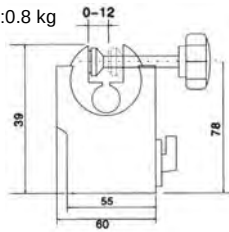
Range	Order No.	Range	Order No.
for 0-4x.001"	6MS-9414	for 40-48"x.001"	6MS-9308
for 0-6x.001"	6MS-9416	for 48-56"x.001"	6MS-9309
for 6-12x.001"	6MS-9300	for 56-64"x.001"	6MS-9310
for 12-16x.001"	6MS-9301	for 64-72"x.001"	6MS-9311
for 16-20x.001"	6MS-9302	for 72-80"x.001"	6MS-9312
for 20-24"x.001"	6MS-9303	for 80-88"x.001"	6MS-9313
for 24-28"x.001"	6MS-9304	for 88-96"x.001"	6MS-9314
for 28-32"x.001"	6MS-9305	for 96-104"x.001"	6MS-9315
for 32-36"x.001"	6MS-9306	for 104-112"x.001"	6MS-9316
for 36-40"x.001"	6MS-9307	for 112-120"x.001"	6MS-9317

Range	Order No.	Range	Order No.
for 0-100x.01mm	6MS-9404	for 1000-1200x.01mm	6MS-9008
for 0-150x.01mm	6MS-9406	for 1200-1400x.01mm	6MS-9009
for 150-300x.01mm	6MS-9000	for 1400-1600x.01mm	6MS-9010
for 300-400x.01mm	6MS-9001	for 1600-1800x.01mm	6MS-9011
for 400-500x.01mm	6MS-9002	for 1800-2000x.01mm	6MS-9012
for 500-600x.01mm	6MS-9003	for 2000-2200x.01mm	6MS-9013
for 600-700x.01mm	6MS-9004	for 2200-2400x.01mm	6MS-9014
for 700-800x.01mm	6MS-9005	for 2400-2600x.01mm	6MS-9015
for 700-900x.01mm	6MS-9006	for 2600-2800x.01mm	6MS-9016
for 900-1000x.01mm	6MS-9007	for 2800-3000x.01mm	6MS-9017

Micrometer Stands With Mag. Base

磁性千分尺托架

- Magnetic base with on/off button
- Clamp can be vertically rotated and locked
- Used for 0-300 mm micrometer
- Weight: 0.8 kg



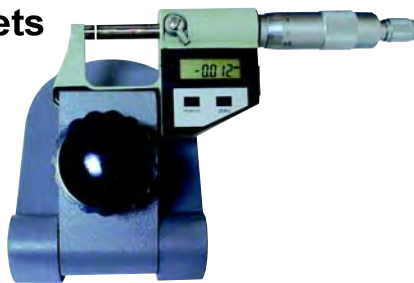
NEW



Order No. 600-1002

Electronic Micrometer and Base Sets

套装千分尺 + 托架



Pieces	Specifications	Individual Order No.	Set Order No.
2 Pcs/set	0-1"/0-25mm 2keys Ele. Micrometer Adj. Micrometer Stand	600-8001 600-0105	135-2012
2 Pcs/set	0-1"/0-25mm 5keys Ele. Micrometer Adj. Micrometer Stand	600-8005 600-0105	135-2015
2 Pcs/set	0-1"/0-25mm 7keys Ele. Micrometer Adj. Micrometer Stand	600-8031 600-0105	135-2017

Adjustable Micrometer Stand

Steel Body

千分尺托架

- Foldable design for portable using, folded size: 31/8"W x 43/4L x 13/4H.
- Clamp can be adjusted and locked at any positions.
- Angle locking and micrometer locking are in one process by fastening locking nut.
- Used for 0-4"/0-100mm micrometers.



Specification	Order No.
Steel Body 3-1/8"W x 4-3/4L x 1-3/4H	600-0105

Micrometer Standards

外径千分尺校对量杆

Standard



Inch

Range	Accuracy	Dia.	Order No.
1"	+/-0.00008"	7mm	6MS-0001
2"	+/-0.00008"	7mm	6MS-0002
3"	+/-0.00008"	7mm	6MS-0003
4"	+/-0.00012"	8mm	6MS-0004
5"	+/-0.00016"	8mm	6MS-0005
6"	+/-0.00016"	8mm	6MS-0006
7"	+/-0.0002"	8mm	6MS-0007
8"	+/-0.0002"	8mm	6MS-0008
9"	+/-0.00024"	8mm	6MS-0009
10"	+/-0.00024"	8mm	6MS-0010
11"	+/-0.00028"	8mm	6MS-0011
12"	+/-0.00016"	16mm	6MS-0012
13"	+/-0.00016"	16mm	6MS-0013
14"	+/-0.00016"	16mm	6MS-0014
15"	+/-0.00016"	16mm	6MS-0015
16"	+/-0.0002"	16mm	6MS-0016
17"	+/-0.0002"	16mm	6MS-0017
18"	+/-0.0002"	16mm	6MS-0018
19"	+/-0.0002"	16mm	6MS-0019
20"	+/-0.00024"	16mm	6MS-0020
21"	+/-0.00024"	16mm	6MS-0021
22"	+/-0.00024"	16mm	6MS-0022
23"	+/-0.00024"	16mm	6MS-0023
24"	+/-0.00024"	16mm	6MS-0024

Metric

Range	Accuracy	Dia.	Order No.
25mm	+/-0.0020mm	7mm	6MS-1025
50mm	+/-0.0020mm	7mm	6MS-1050
75mm	+/-0.0020mm	7mm	6MS-1075
100mm	+/-0.0025mm	8mm	6MS-1100
125mm	+/-0.0025mm	8mm	6MS-1125
150mm	+/-0.0030mm	8mm	6MS-1150
175mm	+/-0.0030mm	8mm	6MS-1175
200mm	+/-0.0035mm	8mm	6MS-1200
225mm	+/-0.0035mm	8mm	6MS-1225
250mm	+/-0.0035mm	8mm	6MS-1250
275mm	+/-0.0035mm	8mm	6MS-1275

Micrometer Stands 千分尺托架

- Designed to allow bench-top using with micrometers or other gages which have frame area sufficient to be hold.
- Used for 0-4"/0-100mm micrometers.

Type "A"

Specification	Order No.
Aluminum Body	600-0000
Cast Iron Body	600-1000



Type "B"

Specification	Order No.
Steel Body & Cast Iron Base	600-1001



Inside Diameter Micrometers

小孔内径千分尺

Tubular Type

- Carbide measuring faces.
- Laser engraved graduations.



Range	Grad.	Order No.
2-10"	0.001"	600-6600

- Chrome-plated.
- Each rod marked with length.
- Thermal insulator on each rod.
- Carbide measuring faces.
- Laser engraved graduations.

Range	Grad.	Order No.
50-75mm	.01mm	600-6507
50-100mm	.01mm	600-6508
50-175mm	.01mm	600-6509
50-250mm	.01mm	600-6510
50-600mm	.01mm	600-6511



Range	Grad.	Order No.
4-36"	.001"	600-6520
6-55"	.001"	600-6521
6-80"	.001"	600-6522
6-84"	.001"	600-6523
40-120	.001"	600-6524

Range	Grad.	Order No.
150-1400mm	.01mm	600-6501
150-2000mm	.01mm	600-6502
150-2100mm	.01mm	600-6503
1000-3000mm	.01mm	600-6504

Tubular & Single Body Type 单体内径千分尺



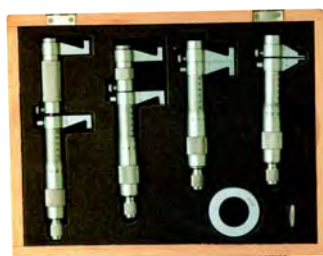
Range	Grad.	Order No.
100-125mm	.01mm	600-6512
125-150mm	.01mm	600-6513
150-175mm	.01mm	600-6514
175-200mm	.01mm	600-6515

Range	Grad.	Order No.
200-225mm	.01mm	600-6516
225-250mm	.01mm	600-6517
250-275mm	.01mm	600-6518
275-300mm	.01mm	600-6519

Inside Micrometer Sets

套装内测千分尺

- Caliper type jaws.
- Chrome-plated.
- Carbide measuring faces.
- Ratchet stop for exact repetitive readings.
- Complete with fitted case.



Piece	Range	Grad.	Order No.
3Pcs/set	.2 to 3"	.001"	600-5021
4Pcs/set	.2 to 4"	.001"	600-5022

Piece	Range	Grad.	Order No.
3Pcs/set	5 to 75mm	.01mm	600-4021
4Pcs/set	5 to 100mm	.01mm	600-4022

Inside Micrometers

内测千分尺

Basic Model

- Caliper type jaws.
- Chrome-plated.
- Carbide measuring faces.
- Ratchet stop for exact repetitive readings.
- Complete with fitted case.



Setting				Setting			
Range	Grad.	Ring	Order No.	Range	Grad.	Ring	Order No.
0.2-1.2"	.001"	0.2"	600-5005	5-30mm	.01mm	5mm	600-4005
1-2"	.001"	1"	600-5010	25-50	.01mm	25mm	600-4010
2-3"	.001"		600-5015	50-75	.01mm		600-4015
3-4"	.001"		600-5020	75-100	.01mm		600-4020
4-5"	.001"		600-5026	100-125	.01mm		600-4026
5-6"	.001"		600-5030	125-150	.01mm		600-4030
6-7"	.001"		600-5035	150-175	.01mm		600-4035
7-8"	.001"		600-5040	175-200	.01mm		600-4042
8-9"	.001"		600-5045	200-225	.01mm		600-4045
9-10"	.001"		600-5046	225-250	.01mm		600-4046
10-11"	.001"		600-5047	250-275	.01mm		600-4047
11-12"	.001"		600-5048	275-300	.01mm		600-4048

Digital Inside Micrometers

计数器内测千分尺

- Mechanical digital counter for quick and error-free reading.
- Caliper type jaws.
- Chrome-plated.
- Carbide measuring faces.
- Laser engraved graduations.



Setting				Setting			
Range	Grad.	Ring	Order No.	Range	Grad.	Ring	Order No.
.2-1.2"	.001"	0.2"	600-5605	5-30mm	.01mm	5mm	600-4605
1-2"	.001"	1"	600-5610	25-50	.01mm	25mm	600-4610
2-3"	.001"		600-5615	50-75	.01mm		600-4615
3-4"	.001"		600-5620	75-100	.01mm		600-4620
4-5"	.001"		600-5626	100-125	.01mm		600-4626
5-6"	.001"		600-5630	125-150	.01mm		600-4630
6-7"	.001"		600-5635	150-175	.01mm		600-4635
7-8"	.001"		600-5640	175-200	.01mm		600-4640
8-9"	.001"		600-5645	200-225	.01mm		600-4645
9-10"	.001"		600-5646	225-250	.01mm		600-4646
10-11"	.001"		600-5647	250-275	.01mm		600-4647
11-12"	.001"		600-5648	275-300	.01mm		600-4648

Electronic Inside Micrometers

电子数显内测千分尺

- With 5 keys Deluxe Model micrometer head.
- Graduation .00005"/.001mm



Range	Setting Ring	Order No.
0.2-1.2"/5-30mm	0.2"/5mm	600-5101
1-2"/25-50mm	1"/25mm	600-5102
2-3"/50-75mm		600-5103
3-4"/75-100mm		600-5104
4-5"/100-125mm		600-5106
5-6"/125-150mm		600-5107

Range	Order No.
6-7"/150-175mm	600-5108
7-8"/175-200mm	600-5109
8-9"/200-225mm	600-5111
9-10"/225-250mm	600-5112
10-11"/250-275mm	600-5113
11-12"/275-300mm	600-5114

Interchangeable Rods Type Depth Micrometers

深度千分尺（前插入式）

Normal Type

- Spherical end (flat end available).
- High accuracy interchangeable rods changed from hole of base end.



Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-1"	.001"	1	2-1/2"	602-3005	4"	602-3006
0-2"	.001"	2	2-1/2"	602-3008	4"	602-3009
0-4"	.001"	4	2-1/2"	602-3015	4"	602-3030
0-6"	.001"	6	2-1/2"	602-3025	4"	602-3020
0-8"	.001"	8	2-1/2"	602-3026	4"	602-3027
0-12"	.001"	12	2-1/2"	602-3028	4"	602-3029

Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-25mm	.01mm	1	63mm	602-3105	101.5mm	602-3106
0-50mm	.01mm	2	63mm	602-3108	101.5mm	602-3109
0-100mm	.01mm	4	63mm	602-3110	101.5mm	602-3111
0-150mm	.01mm	6	63mm	602-3115	101.5mm	602-3116
0-200mm	.01mm	8	63mm	602-3120	101.5mm	602-3121
0-300mm	.01mm	12	63mm	602-3125	101.5mm	602-3126

Interchangeable Rods type Depth Micrometers

深度千分尺（后插入式）

Run through rod Type

- Ratchet stop.
- Run through interchangeable rods, provide a wide measuring range.
- Spherical end (flat end available).
- High accuracy interchangeable rods.



Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-1"	.001"	1	2-1/2"	602-4005	4"	602-4006
0-2"	.001"	2	2-1/2"	602-4008	4"	602-4009
0-4"	.001"	4	2-1/2"	602-4015	4"	602-4030
0-6"	.001"	6	2-1/2"	602-4025	4"	602-4020
0-8"	.001"	8	2-1/2"	602-4026	4"	602-4027
0-12"	.001"	12	2-1/2"	602-4028	4"	602-4029

Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-25mm	.01mm	1	63mm	602-4105	101.5mm	602-4106
0-50mm	.01mm	2	63mm	602-4108	101.5mm	602-4109
0-100mm	.01mm	4	63mm	602-4110	101.5mm	602-4111
0-150mm	.01mm	6	63mm	602-4115	101.5mm	602-4116
0-200mm	.01mm	8	63mm	602-4120	101.5mm	602-4121
0-300mm	.01mm	12	63mm	602-4125	101.5mm	602-4126

Electronic Depth Micrometers

电子数显深度千分尺

- With 5 keys deluxe model micrometer head.
- Spherical end (flat end available).
- High accuracy interchangeable rods.
- Friction thimble (Ratchet friction thimble available).
- .00005"/.001mm.

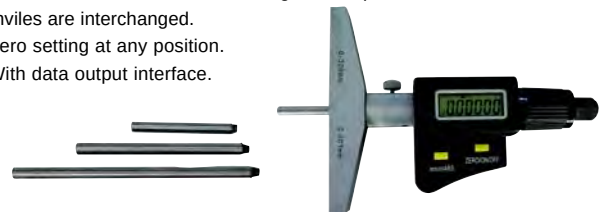


Range	No. of Rods	Base size	Order No.	Base size	Order No.
0-1"/0-25mm	1	4"	602-3311	2-1/2"	602-3301
0-2"/0-50mm	2	4"	602-3312	2-1/2"	602-3302
0-4"/0-100mm	4	4"	602-3314	2-1/2"	602-3304
0-6"/0-150mm	6	4"	602-3316	2-1/2"	602-3306
0-8"/0-200mm	8	4"	602-3318	2-1/2"	602-3308
0-12"/0-300mm	12	4"	602-3319	2-1/2"	602-3309

Digital Depth Micrometers

电子深度千分尺

- With interchangeable anvils for wide range measurements.
- Micrometers need not be set zero again after precision anvils are interchanged.
- Zero setting at any position.
- With data output interface.



Range	Graduation	No. of Rods	Order No.
0-1"/25mm	.000005"/.0001mm	1	602-3501
0-2"/50mm	.000005"/.0001mm	2	602-3502
0-3"/75mm	.000005"/.0001mm	3	602-3503
0-4"/100mm	.000005"/.0001mm	4	602-3504
0-6"/150mm	.000005"/.0001mm	6	602-3506
0-8"/200mm	.000005"/.0001mm	8	602-3508
0-12"/300mm	.000005"/.0001mm	12	602-3509

Digital Depth Micrometers

计数器深度千分尺

- Digit counter for quick and error-free reading.
- Zero-set button.
- Spherical end (flat end available).
- High accuracy interchangeable rods.



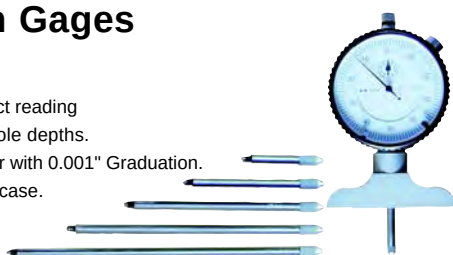
Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-1"	.001"	1	2-1/2"	602-3401	4"	602-3411
0-2"	.001"	2	2-1/2"	602-3402	4"	602-3412
0-4"	.001"	4	2-1/2"	602-3404	4"	602-3414
0-6"	.001"	6	2-1/2"	602-3406	4"	602-3416
0-8"	.001"	8	2-1/2"	602-3408	4"	602-3418
0-12"	.001"	12	2-1/2"	602-3409	4"	602-3419

Range	Grad.	No. of Rods	Base size	Order No.	Base size	Order No.
0-25mm	.01mm	1	63mm	602-3421	101.5mm	602-3431
0-50mm	.01mm	2	63mm	602-3422	101.5mm	602-3432
0-100mm	.01mm	4	63mm	602-3424	101.5mm	602-3434
0-150mm	.01mm	6	63mm	602-3426	101.5mm	602-3436
0-200mm	.01mm	8	63mm	602-3428	101.5mm	602-3438
0-300mm	.01mm	12	63mm	602-3429	101.5mm	602-3439

Dial Depth Gages

带表深度规

- Provides rapid, direct reading measurements of hole depths.
- 0-1" Travel indicator with 0.001" Graduation.
- Supplied with fitted case.



Range	Base Size	No. of Rods	Order No.
0-4"	2-1/2"	4	615-6130
0-4"	4"	4	615-6131
0-6"	2-1/2"	6	615-6132
0-6"	4"	6	615-6133
0-8"	2-1/2"	8	615-6134
0-8"	4"	8	615-6135
0-12"	2-1/2"	12	615-6136
0-12"	4"	12	615-6137

Dial Indicator Depth Gage

带表深度规

- Provides rapid, direct reading measurements of hole depth
- 2 extra points: one 0.078" dia x 1" long, one needle point x 1" long (Order No. 605-0068)
- Furnished in fitted case



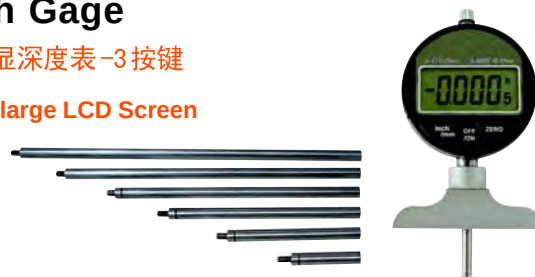
Range	Rod Size	No. of Rods	Base Size	Grad.	Order No.
0-8"	1,2,4"	3	2-1/2"	0.001"	615-6144
0-8"	1,2,4"	3	4"	0.001"	615-6145
0-22"	1-6"	6	2-1/2"	0.001"	615-6139
0-22"	1-6"	6	4"	0.001"	615-6138

Electronic Digital Indicator

Depth Gage

电子数显深度表-3 按键

3 keys, large LCD Screen



Range	Graduation	Base Size	No. of Rods	Rod Size	Order No.
0-200mm/8"	0.01mm/0.0005"	2-1/2"	3	1,2,4"	605-6813
0-200mm/8"	0.01mm/0.0005"	4"	3	1,2,4"	605-6814
0-550mm/22"	0.01mm/0.0005"	2-1/2"	6	1-6"	605-6815
0-550mm/22"	0.01mm/0.0005"	4"	6	1-6"	605-6816

- Provides rapid, direct reading measurements of hole depth
- 2 extra points: one 0.078" dia x 1" long, one needle point x 1" long (Order No. 605-0068)
- Furnished in fitted case



Range	Graduation	Base Size	No. of Rods	Rod Size	Order No.
0-550mm/22"	0.001mm/0.00005"	2-1/2"	6	1-6"	605-6809
0-550mm/22"	0.001mm/0.00005"	4"	6	1-6"	605-6810

Accessories For Three Point Inside Micrometers

三点内径千分尺附件

Internal Gage for Three Point Micrometers



For Range	Specifications	Order No.	Specifications	Order No.
6-12mm x .005mm	Dia. 32x10x8	600-9524	Dia. 32x10x10	600-9525
11-20mm x .005mm	Dia. 35x13x11	600-9534	Dia. 45x15x17	600-9535
20-40mm x .005mm	Dia. 53x20x25	600-9544	Dia. 68x20x35	600-9545
40-100 x .005mm	Dia.100x30.2x50	600-9564	Dia.112x32.2x70	600-9565
40-100x .005mm	Dia.140x35.2x90	600-9566		

Arbor, Arbor Socket & Wrench for Basic Model Three Point Micrometers

Range	Arbor & Socket Order No.	Wrench Order No.
For .24-.48"	600-9521	600-9523
For .44-.80"	600-9531	600-9533
For .80-1.6"	600-9541	600-9543
For 1.6-4.0"	600-9561	600-9563
for 6-12mm	600-9221	600-9223
for 11-20mm	600-9231	600-9233
for 20-40mm	600-9241	600-9243
for 40-100mm	600-9261	600-9263

Three-point Internal Micrometers

三点内径千分尺

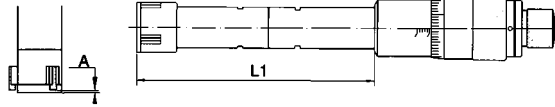
- Self-centering 3-point for accurate measurement of internal diameters.
- Highly durable because of carbide-tipped contact points.
- Measurement can be taken closer to the bottom of the blind bore, and can be taken into a deep hole with an extension rods.
- Supplied with setting rings.

Within 12mm/0.5".

Resolution: 0.001mm(Metric); 0.0001"(Inch).

Over 12mm/0.5".

Resolution: 0.005mm(Metric); 0.0002"(Inch).



Metric

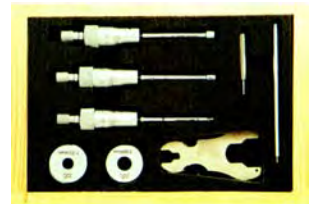
Range	Grad.	Accuracy	Setting Rings	L1	A	Order No.
6-8mm	.001mm	0.004mm	φ8mm	53.5mm	0.5mm	600-9660
8-10mm	.001mm	0.004mm	φ8mm	53.5mm	0.5mm	600-9661
10-12mm	.001mm	0.004mm	φ10mm	53.5mm	0.5mm	600-9662
12-16mm	.005mm	0.004mm	φ16mm	80mm	0.5mm	600-9663
16-20mm	.005mm	0.004mm	φ16mm	80mm	0.5mm	600-9664
20-25mm	.005mm	0.004mm	φ25mm	90mm	0.5mm	600-9665
25-30mm	.005mm	0.004mm	φ25mm	90mm	0.5mm	600-9666
30-40mm	.005mm	0.004mm	φ40mm	97mm	0.5mm	600-9667
40-50mm	.005mm	0.005mm	φ40mm	97mm	0.5mm	600-9668
50-63mm	.005mm	0.005mm	φ62mm	114mm	0.5mm	600-9669
62-75mm	.005mm	0.005mm	φ62mm	114mm	0.5mm	600-9670
75-88mm	.005mm	0.005mm	φ87mm	114mm	0.5mm	600-9671
87-100mm	.005mm	0.005mm	φ87mm	114mm	0.5mm	600-9672

Inch

Range	Grad.	Accuracy	Setting Rings	L1	A	Order No.
0.275-0.35"	.0001"	0.004mm	0.275"	63.5mm	1.5mm	600-9860
0.35-0.425"	.0001"	0.004mm	0.35"	63.5mm	1.5mm	600-9861
0.425-0.5"	.0001"	0.004mm	0.5"	63.5mm	0.5mm	600-9862
0.5-0.65"	.0002"	0.004mm	0.65"	79.5mm	0.5mm	600-9863
0.65-0.8"	.0002"	0.004mm	0.65"	79.5mm	0.5mm	600-9864
0.8-1"	.0002"	0.004mm	1	104.5mm	0.5mm	600-9865
1-1.2"	.0002"	0.004mm	1	104.5mm	0.5mm	600-9866
1.2-1.6"	.0002"	0.004mm	1.6"	110mm	0.5mm	600-9867
1.6-2"	.0002"	0.005mm	1.6"	110mm	0.5mm	600-9868
2-2.5"	.0002"	0.005mm	2.5"	127mm	0.5mm	600-9869
2.5-3"	.0002"	0.005mm	2.5"	127mm	0.5mm	600-9870
3-3.5"	.0002"	0.005mm	3.5"	127mm	0.5mm	600-9871
3.5-4"	.0002"	0.005mm	3.5"	127mm	0.5mm	600-9872

Three-point Internal Micrometers Sets

三点内径千分尺套装



Metric

Range	Grad.	Extension Rods	Desc.	Order No.
6-12mm(A=0.5mm)	.001mm	100mm	3 Heads	600-9675
12-20mm(A=0.5mm)	.005mm	150mm	2 Heads	600-9676
20-50mm(A=0.5mm)	.005mm	150mm	3 Heads	600-9677
50-100mm(A=0.5mm)	.005mm	150mm	5 Heads	600-9678

Inch

Range	Grad.	Extension Rods	Desc.	Order No.
0.275-0.5"(A=0.5mm)	.0001"	3.9"	3 Heads	600-9875
0.5-0.8"(A=0.5mm)	.0002"	5.9"	2 Heads	600-9876
0.8-2"(A=0.5mm)	.0002"	5.9"	4 Heads	600-9877
2-4"(A=0.5mm)	.0002"	5.9"	4 Heads	600-9878

Electronic Three Point Inside Micrometers & Sets

电子数显三点内径千分尺

- Both electronic digital reading and analog indication on the micrometer Heads.



Individuals

Range	Graduation	Order No.	Range	Graduation	Order No.
6-8mm/.24-.3"	.005mm/.0002"	600-9731	30-35mm/1.18-1.37"	.005mm/.0002"	600-9739
8-10mm/.3-.39"	.005mm/.0002"	600-9732	35-40mm/1.37-1.57"	.005mm/.0002"	600-9740
10-12mm/.39-.47"	.005mm/.0002"	600-9733	40-50mm/1.57-1.97"	.005mm/.0002"	600-9741
11-14mm/.43-.55"	.005mm/.0002"	600-9734	50-60mm/1.97-2.36"	.005mm/.0002"	600-9742
14-17mm/.55-.66"	.005mm/.0002"	600-9735	60-70mm/2.36-2.76"	.005mm/.0002"	600-9743
17-20mm/.66-.78"	.005mm/.0002"	600-9736	70-80mm/2.76-3.15"	.005mm/.0002"	600-9744
20-25mm/.78-.98"	.005mm/.0002"	600-9737	80-90mm/3.15-3.54"	.005mm/.0002"	600-9745
25-30mm/.98-1.18"	.005mm/.0002"	600-9738	90-100mm/3.54-3.94"	.005mm/.0002"	600-9746

Sets

Range	Graduations	Heads	Order No.
6-12mm/.24-.47"	.005mm/.0002"	3	600-9751
11-20mm/.43-.78"	.005mm/.0002"	3	600-9752
20-40mm/.78-1.57"	.005mm/.0002"	4	600-9753
40-100mm/1.57-3.94"	.005mm/.0002"	6	600-9754

Three Point Inside Micrometers & Sets

三点内径千分尺

Basic Type, Individuals

- Three point self-centering heads.
- Each size with one Setting Ring.
- Basic type for through holes.
- Ratchet stop

Range	Grad.	Order No.
.24-.3"	.0002"	600-9501
.3-.39"	.0002"	600-9502
.39-.47"	.0002"	600-9503
.43-.55"	.0002"	600-9504
.55-.66"	.0002"	600-9505
.66-.78"	.0002"	600-9506
.78-.98"	.0002"	600-9507
.98-1.18"	.0002"	600-9508
1.18-1.37"	.0002"	600-9509
1.37-1.57"	.0002"	600-9510
1.57-1.97"	.0002"	600-9511
1.97-2.36"	.0002"	600-9512
2.36-2.76"	.0002"	600-9513
2.76-3.15"	.0002"	600-9514
3.15-3.54"	.0002"	600-9515
3.54-3.94"	.0002"	600-9516

Range	Grad.	Order No.
6-8mm	.005mm	600-9201
8-10mm	.005mm	600-9202
10-12mm	.005mm	600-9203
11-14mm	.005mm	600-9204
14-17mm	.005mm	600-9205
17-20mm	.005mm	600-9206
20-25mm	.005mm	600-9207
25-30mm	.005mm	600-9208
30-35mm	.005mm	600-9209
35-40mm	.005mm	600-9210
40-50mm	.005mm	600-9211
50-60mm	.005mm	600-9212
60-70mm	.005mm	600-9213
70-80mm	.005mm	600-9214
80-90mm	.005mm	600-9215
90-100mm	.005mm	600-9216

Basic Type, Sets

- Three point self-centering heads.
- Including Arbor, Arbor Socket & Internal Ring gage not included.
- Blind Hole Type for measuring blind holes.

Range	Grad.	Desc.	Order No.
.24-.48	.0002"	3 heads	600-9520
.44-.80	.0002"	3 heads	600-9530
.80-1.6	.0002"	4 heads	600-9540
1.6-4.0	.0002"	6 heads	600-9560

Range	Grad.	Desc.	Order No.
6-12mm	.005mm	3 heads	600-9220
11-20mm	.005mm	3 heads	600-9230
20-40mm	.005mm	4 heads	600-9240
40-100mm	.005mm	6 heads	600-9260

Blind Hole Type, Individuals

- Arbor, Arbor Socket & Internal Ring gage not included.

Range	Grad.	Order No.
.24-.3"	.0002"	600-2501
.3-.39"	.0002"	600-2502
.39-.47"	.0002"	600-2503
.43-.55"	.0002"	600-2504
.55-.66"	.0002"	600-2505
.66-.78"	.0002"	600-2506
.78-.98"	.0002"	600-2507
.98-1.18"	.0002"	600-2508
1.18-1.37"	.0002"	600-2509
1.37-1.57"	.0002"	600-2510
1.57-1.97"	.0002"	600-2511
1.97-2.36"	.0002"	600-2512
2.36-2.76"	.0002"	600-2513
2.76-3.15"	.0002"	600-2514
3.15-3.54"	.0002"	600-2515
3.54-3.94"	.0002"	600-2516

Range	Grad.	Order No.
6-8mm	.005mm	600-2201
8-10mm	.005mm	600-2202
10-12mm	.005mm	600-2203
11-14mm	.005mm	600-2204
14-17mm	.005mm	600-2205
17-20mm	.005mm	600-2206
20-25mm	.005mm	600-2207
25-30mm	.005mm	600-2208
30-35mm	.005mm	600-2209
35-40mm	.005mm	600-2210
40-50mm	.005mm	600-2211
50-60mm	.005mm	600-2212
60-70mm	.005mm	600-2213
70-80mm	.005mm	600-2214
80-90mm	.005mm	600-2215
90-100mm	.005mm	600-2216

Blind Hole Type, Sets

- Including internal ring gage .
- Arbor & arbor socket not Included.
- Chrome-plated.
- Carbide measuring faces.
- Laser engraved graduations.

Range	Grad.	Desc.	Order No.
.24-.48	.0002"	3 heads	600-2520
.44-.80	.0002"	3 heads	600-2530
.80-1.6	.0002"	4 heads	600-2540
1.6-4.0	.0002"	6 heads	600-2560

Range	Grad.	Desc.	Order No.
6-12mm	.005mm	3heads	600-2220
11-20mm	.005mm	3 heads	600-2230
20-40mm	.005mm	4 heads	600-2240
40-100mm	.005mm	6 heads	600-2260

Quality Hardened Steel Squares

Blades with Straight Edges, Accuracy Class 2

平口角尺

- **Accuracy:** .0008" + L/10,000
- Beam is grooved at inner corner.
- Beams and blades are accurately ground and lapped.
- Hardness: HRC55.

Blade	Beam	Order No.
1-3/8"	1"	650-7505
2-3/8"	1-3/8"	650-7510
3-1/8"	2"	650-7537
5"	3"	650-7552
6-3/4"	4"	650-7560
8-1/2"	5-1/8"	650-7586
10-1/2"	6-3/8"	650-7602
14"	6"	650-7610
18"	8"	650-7615

Blades with Two Straight Bevelled Edges, Accuracy Class N

宽座角尺

- **Accuracy:** .0002" + L/50,000
- Class N Squares have accurate right angles both inside and outside.
- Beam is grooved at inner corner for clearance of burr and dirt.
- Beams and blades are accurately ground and lapped for straightness and parallelism.
- All squares are fully hardened (HRC55).

Blade	Beam	Order No.
1-3/8"	1"	650-6205
2-3/8"	1-3/8"	650-6210
2-1/2"	1-1/2"	650-6224
3-1/8"	2"	650-6232
5"	3"	650-6257
6-1/4"	4"	650-6265
6-3/4"	4"	650-6270
7-7/8"	5"	650-6281
8-1/2"	5-1/8"	650-6285
10-1/2"	6-3/8"	650-6290

Blades with Two Straight Bevelled Edges, Accuracy Class H

刀口角尺

- **Accuracy:** .0008" + L/10,000
- Squares have accurate right angles both inside and outside.
- Made from a single piece of fully seasoned tool steel.
- Class H Blades are beveled on both edges of each side.
- Beam is grooved at inner corner for clearance of burr and dirt.
- Beams and blades are ground and accurately lapped for straightness and parallelism.
- All squares are fully hardened (HRC55).

Blade	Beam	Order No.
1-3/8"	1"	650-7205
2-3/8"	1"	650-7210
2-3/8"	1-3/8"	650-7211
2-1/2"	1-1/2"	650-7222
3-1/8"	2"	650-7230
5"	3"	650-7255
6-1/4"	4"	650-7263
7-7/8"	5"	650-7289
8-1/2"	5-1/8"	650-7293
10-1/2"	6-3/8"	650-7296

Machinist's Steel Squares & Sets

钳工宽座角尺 (碳钢, 铆接)

Plain Type

- **Accuracy:** Workshop Grade/Plain Type
- Made from the finest steel.
- Beams and blades are ground and accurately lapped for straightness and parallelism.
- Hardened blade only.

Individuals

Blade	Beam	Order No.
2"	1-1/2"	650-8022
3"	2-1/2"	650-8030
4"	3"	650-8048
6"	4"	650-8063
9"	5-1/2"	650-8097
12"	7"	650-8121
18"	10"	650-8147
24"	12"	650-8162



Sets

No. of Piece	Size	Order No.
4Pcs/set	2-6"	650-8014
4Pcs/set	4-12"	650-8006

Die Maker's Square Set

四件套组合角尺

"Die Maker's Square set" is ideal for the toolmaker working on precise miniature layouts. Sets consist of 3 hardened beveled edge squares 3/4", 1-1/4" and 2-3/8" plus a 1-1/2" triangular straight edge with handle. Sides of triangular straight edge are grooved in middle for clearance of burr and dirt.

- All tools are hardened and ground, very finely finished and extremely accurate.
- 1-1/2" triangular straight edge with a removable handle (length 2-1/2").
- Beam is grooved at inner corner for clearance of burr and dirt.

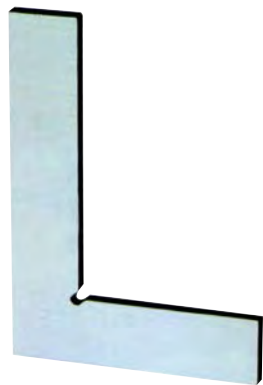
Description	Order No.
Beveled Edge Squares : 3/4", 1-1/4", 2-3/8"	650-7200
Triangular straight edge: 1-1/2" OAL: 4"	

DIN875 Squares

45° & 60° Flat Squares 平口角尺



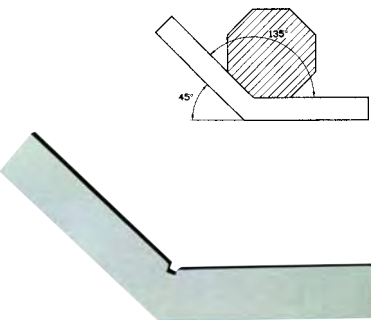
Blade (mm)	Beam (mm)	45°				60°			
		Carbon Steel		Stainless Steel		Carbon Steel		Stainless Steel	
		Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.
100	70	639-2710	639-2810	638-2710	638-2810	639-6310	639-6410	638-6310	638-6410
125	80	639-2712	639-2812	638-2712	638-2812	639-6312	639-6412	638-6312	638-6412
150	100	639-2715	639-2815	638-2715	638-2815	639-6315	639-6415	638-6315	638-6415
200	130	639-2720	639-2820	638-2720	638-2820	639-6320	639-6420	638-6320	638-6420
250	160	639-2725	639-2825	638-2725	638-2825	639-6325	639-6425	638-6325	638-6425
300	200	639-2730	639-2830	638-2730	638-2830	639-6330	639-6430	638-6330	638-6430



90° Flat Squares

Blade (mm)	Beam (mm)	Carbon Steel			Stainless Steel		
		Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.
50	40	639-4105	639-4205	639-4305	638-4105	638-4205	638-4305
75	50	639-4110	639-4210	639-4310	638-4110	638-4210	638-4310
100	70	639-4115	639-4215	639-4315	638-4115	638-4215	638-4315
150	100	639-4120	639-4220	639-4320	638-4120	638-4220	638-4320
200	130	639-4130	639-4230	639-4330	638-4130	638-4230	638-4330
250	160	639-4132	639-4232	639-4332	638-4132	638-4232	638-4332
300	175	639-4136	639-4236	639-4336	638-4136	638-4236	638-4336
300	200	639-4135	639-4235	639-4335	638-4135	638-4235	638-4335

135° & 120° Flat Squares



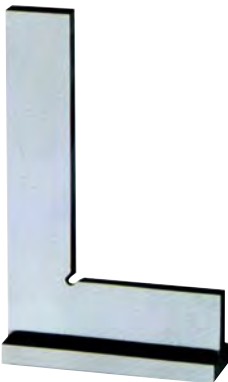
Blade (mm)	Beam (mm)	135°				120°			
		Carbon Steel		Stainless Steel		Carbon Steel		Stainless Steel	
		Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.
100	70	639-5005	639-5105	638-5005	638-5105	639-5055	639-5155	638-5055	638-5155
120	80	639-5010	639-5110	638-5010	638-5110	639-5060	639-5160	638-5060	638-5160
150	100	639-5015	639-5115	638-5015	638-5115	639-5065	639-5165	638-5065	638-5165
200	130	639-5020	639-5120	638-5020	638-5120	639-5070	639-5170	638-5070	638-5170
50	50	639-3005	639-3105	638-3005	638-3105	639-3205	639-3305	638-3205	638-3305
75	75	639-3010	639-3110	638-3010	638-3110	639-3210	639-3310	638-3210	638-3310
100	100	639-3015	639-3115	638-3015	638-3115	639-3215	639-3315	638-3215	638-3315
150	150	639-3020	639-3120	638-3020	638-3120	639-3220	639-3320	638-3220	638-3320
200	200	639-3025	639-3125	638-3025	638-3125	639-3225	639-3325	638-3225	638-3325

135° & 120° Wide Base Squares 宽座角尺



Blade (mm)	Beam (mm)	135°				120°			
		Carbon Steel		Stainless Steel		Carbon Steel		Stainless Steel	
		Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 1 Order No.	Grade 2 Order No.
100	70	639-6005	639-6105	638-6005	638-6105	639-6055	639-6155	638-6055	638-6155
120	80	639-6007	639-6107	638-6007	638-6107	639-6060	639-6160	638-6060	638-6160
150	100	639-6010	639-6110	638-6010	638-6110	639-6065	639-6165	638-6065	638-6165
200	130	639-6015	639-6115	638-6015	638-6115	639-6070	639-6170	638-6070	638-6170
250	160	639-6020	639-6120	638-6020	638-6120	639-6075	639-6175	638-6075	638-6175
300	175	639-6025	639-6125	638-6025	638-6125	639-6080	639-6180	638-6080	638-6180

DIN875 Squares



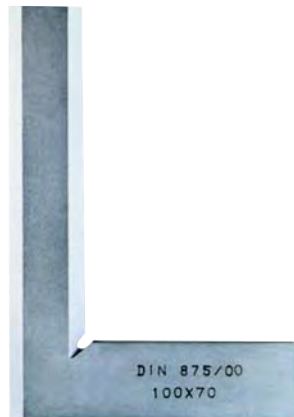
90° Wide Base Squares 90 度带座角尺

Blade (mm)	Beam (mm)	Carbon Steel			Stainless Steel		
		Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.
50	40	639-2105	639-2205	639-2305	638-2105	638-2205	638-2305
75	50	639-2110	639-2210	639-2310	638-2110	638-2210	638-2310
100	70	639-2115	639-2215	639-2315	638-2115	638-2215	638-2315
125	80	639-2116	639-2216	639-2316	638-2116	638-2216	638-2316
150	100	639-2120	639-2220	639-2320	638-2120	638-2220	638-2320
200	130	639-2130	639-2230	639-2330	638-2130	638-2230	638-2330
250	160	639-2132	639-2232	639-2332	638-2132	638-2232	638-2332
300	175	639-2136	639-2236	639-2336	638-2136	638-2236	638-2336
300	200	639-2135	639-2235	639-2335	638-2135	638-2235	638-2335



90° Heavy Base Squares 90 度宽座角尺（加重底座）

Blade (mm)	Beam (mm)	Carbon Steel			Stainless Steel		
		Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.	Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.
50	40	639-2155	639-2255	639-2355	638-2155	638-2255	638-2355
75	50	639-2160	639-2260	639-2360	638-2160	638-2260	638-2360
100	70	639-2165	639-2265	639-2365	638-2165	638-2265	638-2365
125	80	639-2166	639-2266	639-2366	638-2166	638-2266	638-2366
150	100	639-2170	639-2270	639-2370	638-2170	638-2270	638-2370
200	130	639-2175	639-2275	639-2375	638-2175	638-2275	638-2375
300	200	639-2180	639-2280	639-2380	638-2180	638-2280	638-2380



90° Knife Edge Squares 90 度刀口角尺

Blade (mm)	Beam (mm)	Carbon Steel		Stainless Steel		Carbon Steel Black Chrome Blades	
		Grade 0 Order No.	Grade 00 Order No.	Grade 0 Order No.	Grade 00 Order No.	Grade 0 Order No.	Grade 00 Order No.
25	20	639-1102	639-1002	638-1102	638-1002	639-1152	639-1052
40	28	639-1103	639-1003	638-1103	638-1003	639-1153	639-1053
50	32	639-1104	639-1004	638-1104	638-1004	639-1154	639-1054
50	40	639-1105	639-1005	638-1105	638-1005	639-1155	639-1055
63	40	639-1106	639-1006	638-1106	638-1006	639-1156	639-1056
75	50	639-1110	639-1010	638-1110	638-1010	639-1160	639-1060
80	50	639-1111	639-1011	638-1111	638-1011	639-1161	639-1061
100	63	639-1112	639-1012	638-1112	638-1012	639-1162	639-1062
100	70	639-1115	639-1015	638-1115	638-1015	639-1165	639-1065
125	80	639-1116	639-1016	638-1116	638-1016	639-1166	639-1066
150	100	639-1120	639-1020	638-1120	638-1020	639-1170	639-1070
160	100	639-1121	639-1021	638-1121	638-1021	639-1171	639-1071
200	125	639-1122	639-1022	638-1122	638-1022	639-1172	639-1072
200	130	639-1125	639-1025	638-1125	638-1025	639-1175	639-1075
300	200	639-1135	639-1035	638-1135	638-1035	639-1180	639-1080



90° Wide Base Knife Edge Squares 90 度刀口宽座角尺

Blade (mm)	Beam (mm)	Carbon Steel			Stainless Steel			Carbon Steel Black Chrome Blades		
		Grade 00 Order No.	Grade 0 Order No.	Grade 1 Order No.	Grade 00 Order No.	Grade 0 Order No.	Grade 1 Order No.	Grade 00 Order No.	Grade 0 Order No.	Grade 1 Order No.
50	40	639-4055	639-4155	639-4255	638-4055	638-4155	638-4255	639-4655	639-4755	639-4855
75	50	639-4060	639-4160	639-4260	638-4060	638-4160	638-4260	639-4660	639-4760	639-4860
100	70	639-4065	639-4165	639-4265	638-4065	638-4165	638-4265	639-4665	639-4765	639-4865
125	80	639-4067	639-4167	639-4267	638-4067	638-4167	638-4267	639-4667	639-4767	639-4867
150	100	639-4070	639-4170	639-4270	638-4070	638-4170	638-4270	639-4670	639-4770	639-4870
200	130	639-4074	639-4175	639-4275	638-4075	638-4175	638-4275	639-4675	639-4775	639-4875

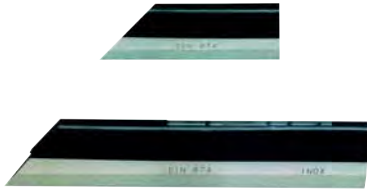
DIN875 Squares 带座角尺

45° & 60° Squares with Wide Base



Blade (mm)	Beam (mm)	45°				60°			
		Carbon Steel		Stainless Steel		Carbon Steel		Stainless Steel	
		Grade 1	Grade 2	Grade 1	Grade 2	Grade 1	Grade 2	Grade 1	Grade 2
		Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
100	70	639-1710	639-1810	638-1710	638-1810	639-6610	639-6710	638-6610	638-6710
125	80	639-1712	639-1812	638-1712	638-1812	639-6612	639-6712	638-6612	638-6712
150	100	639-1715	639-1815	638-1715	638-1815	639-6615	639-6715	638-6615	638-6715
200	130	639-1720	639-1820	638-1720	638-1820	639-6620	639-6720	638-6620	638-6720
250	160	639-1725	639-1825	638-1725	638-1825	639-6625	639-6725	638-6625	638-6725
300	200	639-1730	639-1830	638-1730	638-1830	639-6630	639-6730	638-6630	638-6730

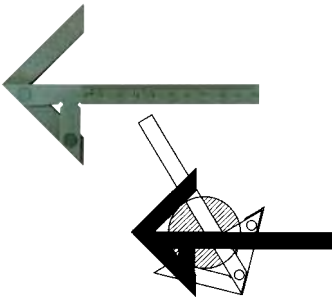
DIN874 Straight Edges 刀口直尺



Length	Carbon Steel		Stainless Steel		Carbon Steel Black Chrome Blades	
	Grade 00	Grade 0	Grade 00	Grade 0	Grade 00	Grade 0
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
50mm	639-7003	639-7103	638-7003	638-7103	639-7053	639-7153
75mm	639-7005	639-7105	638-7005	638-7105	639-7055	639-7155
100mm	639-7010	639-7110	638-7010	638-7110	639-7060	639-7160
125mm	639-7015	639-7115	638-7015	638-7115	639-7065	639-7165
150mm	639-7020	639-7120	638-7020	638-7120	639-7070	639-7170
200mm	639-7025	639-7125	638-7025	638-7125	639-7075	639-7175
250mm	639-7030	639-7130	638-7030	638-7130	639-7080	639-7180
300mm	639-7035	639-7135	638-7035	638-7135	639-7085	639-7185
400mm	639-7040	639-7140	638-7040	638-7140	639-7090	639-7190

DIN875/1 Centering Squares 中心规 (中心角尺)

- Satin chromed finish.
- Special steel.
- Determine the center of shaft and discs rapidly.
- Graduation: 0.1mm



Blade	Angle length	Carbon Steel Order No.	Stainless Steel Order No.
100mm	70mm	639-2410	638-2410
150mm	130mm	639-2415	638-2415
200mm	150mm	639-2420	638-2420
250mm	160mm	639-2425	638-2425
300mm	180mm	639-2430	638-2430

Locking Type Protractors 紧固式角度尺

- Graduated from 0°-180° in opposite directions.
- Features a knurled thumb locking nut.
- Graduation 1°.



Dia. of Protractor	Length of Blade	Chrome-Plated Tool Steel Order No.	Stainless Steel Order No.	Dia. of Protractor	Length of Blade	Chrome-Plated Tool Steel Order No.	Stainless Steel Order No.
80mm	120mm	635-7781	635-7881	300mm	600mm	635-7786	635-7886
120mm	150mm	635-7782	635-7882	300mm	800mm	635-7787	635-7887
150mm	200mm	635-7783	635-7883	400mm	600mm	635-7788	635-7888
200mm	300mm	635-7784	635-7884	400mm	800mm	635-7789	635-7889
300mm	500mm	635-7785	635-7885	400mm	1000mm	635-7790	635-7890

Universal Bevel Protractors 320度万能角度尺



Range	Reading Value	Order No.
0° to 320°	2"	635-7780

Riveting Type Protractors

铆钉式角度尺

- Graduated from 0°-180° in opposite directions.
- Features a rivet in jointing of head and arm.



Dia. of Protractor	Length of Blade	Chrome-Plated Tool Steel Order No.	Stainless Steel Order No.
80mm	120mm	635-8010	635-8110
120mm	150mm	635-8015	635-8115
150mm	200mm	635-8020	635-8120
200mm	300mm	635-8025	635-8125

Adjustable Protractors

可调式角度尺

- Measuring Range: 10-170°



Range	Grad.	Chrome-Plated Tool Steel Order No.	Stainless Steel Order No.
100-150mm	1°	635-9010	635-9110
150-300mm	1°	635-9015	635-9115
200-400mm	1°	635-9020	635-9120
250-500mm	1°	635-9025	635-9125
300-600mm	1°	635-9030	635-9130

Protractor and Depth Gage

Locking Type

带6"深度尺杆紧固式角度尺

- 0-180° Graduation on head
- Rectangular Head, Stainless steel
- 6x1/4" Depth gage at 32nds, & 64ths.



Specifications	Order No.
Rectangular Head, 2-1/2" Base	635-7864
Round Head	635-7865

Angle Finder

数显量角仪

Four holes for locking when measuring specifically angle; screw off the locking knob, the measuring range could reach 360°. Lock the moving blade at any angle, make precise drawing and cutting directly. Both inside and outside angle measuring

- Metal moving blade on the front
- Aluminium fixing blade
- LCD display
- Locking knob
- High resolution 0.05°
- Power: 3VCR2032 Lithium battery



Order No. 638-8000

Cylindrical Squares

圆柱角尺

- Use in surface plate as 90° reference angle.
- Used for checking squares, height gages and many instruments.
- The squares are hardened and the ends are lapped to 90° angular accuracy with the cylinders as follow: 6" square to +/- .00010" and 12" square to +/- .00015".

Diameter	Height	Order No.
3"	6"	605-5003
4"	12"	605-5004



Locking Type Protractors

紧固式量角器

- Graduated from 0°-180° in opposite directions.
- Used for mechinists,draftsmen, layoutmen and other mechanics.
- Carbon steel.
- Graduation 1°.

"*" square head type

"**" Round head type

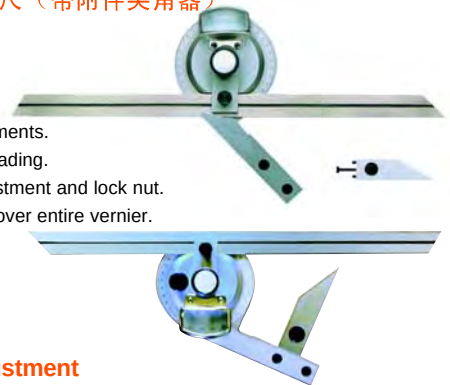


Dia. of Protractors	Length of Blade	Carbon Steel Order No.	Stainless Steel Order No.
85mm	150mm	635-7700*	635-7860*
85mm	150mm	635-7710**	635-7870**

Parallax Free Universal Bevel Protractors

带放大镜万能角度尺 (带附件尖角器)

- 360° scale in 1° increments.
- 5 minutes minimum reading.
- With/without fine adjustment and lock nut.
- Mangnifier moveable over entire vernier.
- stainless steel.



Without Fine Adjustment

Specifications	Order No.
150mm/6" Blade, Protractor Head, acute angle attachment	635-6545
200mm/8" Blade, Protractor Head, acute angle attachment	635-6547
300mm/12" Blade, Protractor Head, acute angle attachment	635-6549
5 Pcs/set: 1 Protractor Head, 1 acute angle attachment, 3 Blades: 150mm/6", 200mm/8" & 300mm/12"	635-6509

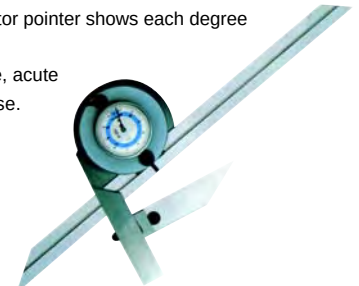
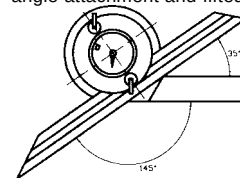
With Fine Adjustment

Specifications	Order No.
150mm/6" Blade, Protractor Head, acute angle attachment	635-6552
200mm/8" Blade, Protractor Head, acute angle attachment	635-6554
300mm/12" Blade, Protractor Head, acute angle attachment	635-6557
5 Pcs/set: 1 Protractor Head, 1 acute angle attachment, 3 Blades: 150mm/6", 200mm/8" & 300mm/12"	635-6508

Universal Dial Bevel Protractors

360度带表万能角度尺 (带附件尖角器)

- Dial reads each 10° and indicator pointer shows each degree and 5 minutes of angle.
- Includes protractor head, blade, acute angle attachment and lifted case.



Specifications	Order No.
150mm/6" Blade, Protractor Head, acute angle attachment	635-6601
200mm/8" Blade, Protractor Head, acute angle attachment	635-6602
300mm/12" Blade, Protractor Head, acute angle attachment	635-6603
5 Pcs/set: 1 Protractor Head, 1 acute angle attachment, 3 Blades: 150mm/6", 200mm/8" & 300mm/12"	635-6604

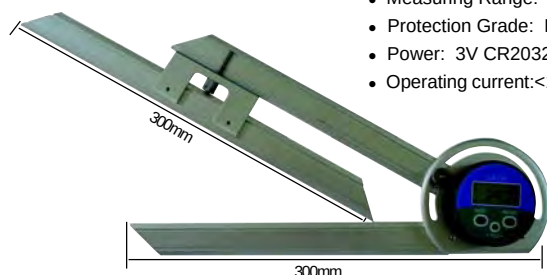
Digital Protractor 数显角度尺

Main Functions:

The line drawing function

The exterior angle measuring function

The interior angle measuring function



Order No. 638-8010

Technical parameter

- Display resolution: 0.1°
- Duplication accuracy: 0.1°
- Measuring Range: 0°-180°
- Protection Grade: IP54
- Power: 3V CR2032 lithium
- Operating current: <100μA

Digital Protractor 数显倾角仪

- 360 degree measure range
- Display always read upright, no matter which way the level is turned
- Precision machined stainless frame
- Simple calibration requiring no special fixtures
- Versatile measuring too, angle finder, protractor, level three in one.

Functions	Ranges
Range	4x90°(0°-360°)
temperature	-5~50°C
humidity	<=85%RH
Resolution	0.1°
Accuracy	0° and 90° <=0.1° the rest <=0.2°



Order No. 638-8801

- Stainless Steel
- 0-360Deg, Grad 0.1Deg
- 5 Keys



Order No. 638-8815

- Stainless Steel
- 0-360Deg, Grad 0.1Deg
- 5 Keys
- Mag.V-base



Order No. 638-8817

Mini Digital Protractors 电子倾角仪

- Water Proof: IP54
- Resolution 0.1°
- Measuring range 4x90°
- Power: 3V CR2032X3 battery
- Working Temperature: 0°C~40°C
- Relative Humidity: 40%~80%
- Dimension: 2 x 2 x 1"



Order No. 638-8806

with bubble level

Order No. 638-8809

Digital Universal Protractors

- USB data output
- Setting preset value
- Removable blade
- Changeable direction
- Zero setting at any position
- (for -quadrant) 3 measurement patterns (1 x 360°, 2 x 180°, 4 x 90°)
- Battery: Button Cell (lithium) 3V (CR2032) x 1pc.

Range	Resolution	Blade Length	Order No.
-360°~+360°	30" (0.008°)	150mm	638-8015
-360°~+360°	30" (0.008°)	200mm	638-8020
-360°~+360°	30" (0.008°)	300mm	638-8030



Universal Set

two blades: 150& 300mm, one Square: 50x60mm, range: -360Deg.+360Deg

Order No. 638-8040



Bevel Box 电子倾角盒

Bevel Box is an innovative tool that provides digital reading between +/-150°. Extra LCD is convenient to read. Small and light, it is read easy to be carried and used. Measuring plane containing disk magnet can stick to the surface to be measured. It is especially easy to measure bevel angle of miter saw, automobile test and repair and so on.

- Resolution 0.1°
- Repeatability +/-0.1°
- Measuring range +/-150.0° (0-180°)
- Water Proof: IP54
- Power: 3V CR2032 Lithium battery
- Working current: <100μA
- Dimension: 2 x 2 x 1.3"
- Measuring plane containing disk magnet can stick to the surface to be measured.



Order No. 638-8802

Metal Structure

Order No. 638-8804



with magnetic stand

Order No. 638-8805

Level Box 电子倾角盒, 带水泡

Technical Data:

- Measuring range : (0-180°)
- Resolution: 0.1°
- Accuracy of Levelval: 2'
- Repeatability: 0.1°
- Working Temperature: +5°C~+50°C
- Working current: <100μA
- Power: 3V Lithium battery (RS2302)
- Dimension: 2 x 2.5 x 1.3"



Order No. 638-8803

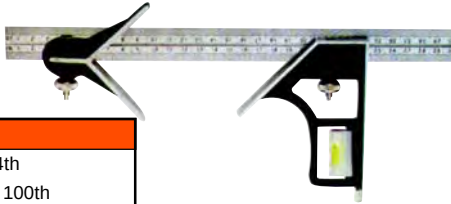
Combination Squares 180度组合角尺

2Pcs/set, Stainless Steel Blade

Measuring Range 0-180°



3Pcs/set, Stainless Steel Blade



Graduation

4R: 8th, 16th, 32nd, 64th

16R: 32nd, 64th, 50th, 100th

Inch/Metric: 64th, 1mm, 32nd, .5mm

Metric: Single Size .5mm/1.0mm

Metric/Inch: 0.5mm/1/32"

Blade Length	Graduation	2 Piece Set Order No.	3 Piece Set Order No.
6"	4R		635-7779
12"	4R	635-7765	635-7773
12"	16R	635-7761	635-7748
12"/300mm	Inch/Metric	635-7762	635-7749
500mm/20"	Metric/Inch	635-7766	635-7774
300mm	Metric	635-7767	635-7775
500mm	Metric	635-7768	635-7776

Combination Square Sets 组合角尺

4Pcs/set, Stainless Steel Blade, Measuring Range 0-180°

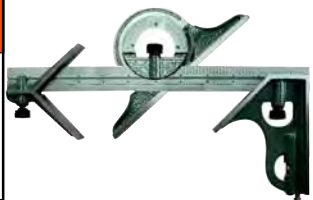
Normal Type - Blades cannot rotate 360°

Length of Blade	Graduation	Order No.
12"	4R	638-7756
12"	16R	638-7755
12"/300mm	Inch/Metric	638-7754
300mm/12"	Metric/Inch	638-7761
500mm/20"	Metric/Inch	638-7762
20"/500mm	Inch/Metric	638-7764
300mm	Metric	638-7763
500mm	Metric	638-7760



Open Type- Blades can rotate 360°

Length of Blade	Graduation	Order No.
12"	4R	638-8756
12"	16R	638-8755
12"/300mm	Inch/Metric	638-8754
300mm/12"	Metric/Inch	638-8761
300mm	Metric	638-8762



Blade	Specifications	Order No.
6"	2pcs, square head and rule Grad 1/8, 1/16, 1/32 & 1/64"	638-7706
12"	2pcs, square head and rule Grad 1/8, 1/16, 1/32 & 1/64"	638-7712
12"	3pcs, square head, center head and rule Grad 1/8, 1/16, 1/32 & 1/64"	638-7714

Digital Level Module 数显水平仪模块

The digital level that combined with laser technology is the most advanced and easy use instrument today. It can display both degree and slope. The digital level can measure all angles in either a 360 degree range or 90 degree quadrants. The digital level also includes a backlight so the unit can be used day or night. Not only can this instrument measure with a surface at level or at right angles, it can measure the angles of all slopes rise and fall.

Functions	Ranges
Range	4x90°(0°-360°)
Temperature	-5~50°C
Humidity	<=85%RH
Resolution	0.1°
Accuracy	0° and 90° <=0.1° the rest <=0.2°



• Power: AAA3V (1.5v x2)

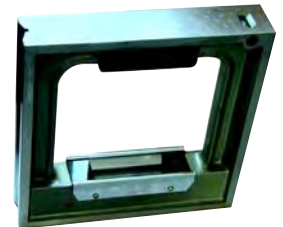
Length 165mm

Order No. 638-8807

Precision Frame Spirit Levels

框式水平仪

- Used for adjusting and checking horizontal and vertical surfaces and shafts.
- High accuracy: 0.0002" per 10", 0.0005" per 10", 0.02mm per 1000mm, 0.05mm per 1000mm.
- 2 sides with flat bearing surfaces and 2 sides with flat plus Vee bearing surfaces.
- Heat insulating top handle.



	.0002" per 10"	.0005" per 10"		.02mm per 1m	0.05mm per 1m
Sizes	Order No.	Order No.	Sizes	Order No.	Order No.
6x6"	639-3906	639-3916	150x150mm	639-3706	639-3806
8x8"	639-3908	639-3918	200x200mm	639-3708	639-3808
10x10"	639-3910	639-3920	250x250mm	639-3710	639-3810
12x12"	639-3912	639-3922	300x300mm	639-3712	639-3812

Master Precision Levels 条式钳工水平仪

- Use for accurately checking the work of machinists and toolmakers, the setting up of machinery, and other work that requires extreme level accuracy.
- The body of level is made of cast iron.
- Base is lapped for extreme accuracy as table.



	0.0002" per 10"	0.0005" per 10"		0.02mm per 1m	0.05mm per 1m
Sizes	Order No.	Order No.	Sizes	Order No.	Order No.
6"	639-3606	639-3616	150mm	639-3406	639-3506
8"	639-3608	639-3618	200mm	639-3408	639-3508
10"	639-3610	639-3620	250mm	639-3410	639-3510
12"	639-3612	639-3622	300mm	639-3412	639-3512



Order No. 639-2030

Mfr's # HR-150A

3R-Type Hardness Tester 硬度计

with Automatic Dial Weight Selection

- Designed for measuring hardness of metals and alloys of all kinds, hard or soft whether flat, round or irregular in shape.
- Simple in design and easy to operate, yet sensitive and accurate testing results can be obtained with these testers.
- They are ideally suitable for schools, laboratories, tool rooms, inspection and heat treatment departments and factories.
- Conforms to ISO 33804-1966 and BS: 891-1962 Part I and Part II for Rockwell test.

Loads and Indicators

Description	
Maximum Load (kgf)	150
Load Range (kgf)	60, 100, 150
Initial Range Load (kgf)	10
Maximum Test Height	4-1/4"
Depth of Throat	5-1/4"
Max. Depth of Spindle Below Base	2"
Size of Base	7x18"
Machine Height	24-1/2"
Approximate Net Weight (lbs)	150

Standard Accessories Included:

Description	Order No.
5-3/4" Testing Table	HARD-100
2-3/16" Testing Table	HARD-101
2-3/16" Testing Table with "V" groove	HARD-102
120° Diamond Penetrator	HARD-103
1/16" Steel Ball Penetrator	HARD-104
Rockwell Test Block HRA80-88	HARD-106
Rockwell Standard Block HRB 85-95	HARD-107
Rockwell Test Block HRC60-70	HARD-108
Rockwell Standard Block HRC35-55	HARD-109
Rockwell Standard Block HRC20-30	HARD-110
Large Screw Driver	HARD-111
Small Screw Driver	HARD-112
Accessory case	HARD-113

Different Rockwell Hardness Scales

Scale	Penetrator	Loading (kgf)	Applications	Brinell value	Working Range
A	Diamond 120°	60	Carbide, Thin steel, Shallow Case-Hardened steel, Case-Carbonized surfaces	Over HB400	40-91 for hardness greater than C65
B	1/16" Ball	100	Aluminum alloys, Copper alloys, Unhardened steel etc. In rolled, Draw, Extruded or Cast metal	HRB 100-240	30-100 for hardness lower than C20
C	Diamond 120°	150	Hard cast irons, Pearlitic malleable iron, Steel, Deep case hardened steel, Titanium	Over HRB230	20-70 for hardness lower than HRB100
D	Diamond 120°	100	Pearlitic malleable iron, Thin steel & Medium case-hardened steel	Over HRB400	40-77 for intermediate load between A & C scale
E	1/8" Ball	100	Cast iron, Aluminum and magnesium alloys, Bearing metal	Below HRB125	50-100 for hardness lower than HRB0
F	1/16" Ball	60	Thin soft sheet metals, Annealed copper alloys	HRB 50-120	30-100 for hardness lower than HRB0
G	1/16" Ball	150	Copper-Nickel-Zinc and Cupro-Nickel alloys, Malleable irons	HRB 120-280	30-90 for hardness slightly > than HRB 100 upper limit G92
H	1/8" Ball	60	Lead, Zinc, Aluminum, Magnesium alloys	HRB 30-50	70-100
K	1/8" Ball	150	Bearing metals, very soft or thin material	HRB 100-200	40-100

Dial Shore Durometers 邵氏橡胶硬度计

- Used for testing the hardness of flexible material.
- Shore A is suitable for testing soft, natural and neoprene rubber products.

Shore A

Sharp 35° Blunt Taper
Hardness: 20-90HA
Dial Range: 0-25mm
Presser: 0.55-8.06N
(56-821g)



Order No. 639-2071

Shore D

(for hard rubber and plastic)
Sharp 30° Point
Hardness: 0-90HD
Dial Range: 0-25mm
Presser: 0-44.5N
(0-4450g)



Order No. 639-2072

Shore C

Hardness: 0-100HA



Order No. 639-2074

Shore A

Lightweight, Chrome Finish



Order No. 639-2073

12" Basic Bench Top Optical Comparator

光学投影仪

- 12", 220V/50Hz, 10X magnifier,
- two 0-1" indicators,
- T-slot stage with a travel 6" horizontally and 2-1/2" vertically,
- illumination



Order No. 105-0000

Bench Centers 偏摆仪

- Used for accurate concentricity inspection.
- Accuracy: less than 0.00015" runout.
- MT2 Centers are hardened and ground.
- Indicator holder included, Indicator not included.
- Hand scraped ways, adjustable gibs.
- Head stock can be adjusted lengthwise and locked securely in any position by special lever type handle.



Distance Between			
Center	Swing	OAL	Order No.
20"/500mm	12"	37"	640-2001
40"/1000mm	19"	55"	640-2002
12"/300mm	8-3/4"	19-5/8"	640-2004

Inch Pin Gage Sets

英制套装塞规

- Laser marking size, size is quite clear.
- Each set has a certificate, to state the accuracy of each size.
- Smooth finish 10 micro or better
- Uniform 2" length.
- A must for checking hole diameter & distance between holes and hole location.
- Sizes marked on storage case.
- All gages within 0.0002".
- 60/62 HRC.



Set without Handle



Set with Handle
(Certificate of Accuracy include)

No. of Piece	Type	Size	w/o Handle Order No.	With handle Order No.	Black With handle Order No.
50	M0 Plus	0.011 to 0.060	616-8100	616-82006	616-92006
50	M0 Minus	0.011 to 0.060	616-8101	616-82016	616-92016
50	M0 Plus	0.115 to 0.605	616-8102		
190	M1 Plus	0.061 to 0.250	616-8110	616-82106	616-92106
190	M1 Minus	0.061 to 0.250	616-8111	616-82116	616-92116
190	M1 Plus	0.0615 to 0.2505	616-8112		
250	M2 Plus	0.251 to 0.500	616-8120	616-82206	616-92206
250	M2 Minus	0.251 to 0.500	616-8121	616-82216	616-92216
250	M2 Plus	0.2515 to 0.5005	616-8122		
125	M3 Plus	0.501 to 0.625	616-8130	616-82306	616-92306
125	M3 Minus	0.501 to 0.625	616-8131	616-82316	616-92316
125	M4 Plus	0.626 to 0.750	616-8140	616-82406	616-92406
125	M4 Minus	0.626 to 0.750	616-8141	616-82416	616-92416
82	M5 Plus	0.751 to 0.832	616-8150	616-82506	616-92506
82	M5 Minus	0.751 to 0.832	616-8151	616-82516	616-92516
84	M6 Plus	0.833 to 0.916	616-8160	616-82606	616-92606
84	M6 Minus	0.833 to 0.916	616-8161	616-82616	616-92616
84	M7 Plus	0.917 to 1.000	616-8170	616-82706	616-92706
84	M7 Minus	0.917 to 1.000	616-8171	616-82716	616-92716

Metric Pin Gage Sets

公制套装塞规 Set with Handle

- Class ZZ(0.005mm tolerance).
- 0.02mm size increments on set members.
- 60/62 HRC.
- With handle.
- Certificate of Accuracy included.

Set with Handle		Plus	Minus
No. of pcs	Range(mm)	(+0.005mm) Order No.	(-0.005mm) Order No.
55	0.20-1.28	616-42016	616-43016
55	0.21-1.29	616-42026	616-43026
185	1.3-4.98	616-42036	616-43036
185	1.31-4.99	616-42046	616-43046
250	5.00-13.98	616-42056	616-43056
250	5.01-9.99	616-42066	616-43066
200	10.00-13.98	616-42076	616-43076
200	10.01-13.99	616-42086	616-43086
125	14.00-16.48	616-42096	616-43096
125	14.01-16.49	616-42106	616-43106
125	16.50-18.98	616-42116	616-43116
125	16.51-18.99	616-42126	616-43126
100	19.00-20.98	616-42136	616-43136
100	19.01-20.99	616-42146	616-43146
75	21.00-22.48	616-42156	616-43156
75	21.01-22.49	616-42166	616-43166
75	22.50-23.98	616-42176	616-43176
75	22.51-23.99	616-42186	616-43186
75	24.00-25.48	616-42196	616-43196
75	24.01-25.49	616-42206	616-43206

Set without Handle

- 60/62 HRC.
- With wooden case.
- Without handle.

Set without Handle				Plus	Minus
No. of pcs	Increment (mm)	Range (mm)	(+/-0.002mm) Order No.	(+0.005mm) Order No.	(-0.005mm) Order No.
71	0.01	0.30-1.00	616-6071	616-7071	616-9071
100	0.01	1.01-2.00	616-6102	616-7102	616-9102
100	0.01	2.01-3.00	616-6103	616-7103	616-9103
100	0.01	3.01-4.00	616-6104	616-7104	616-9104
100	0.01	4.01-5.00	616-6105	616-7105	616-9105
100	0.01	5.01-6.00	616-6106	616-7106	616-9106
100	0.01	6.01-7.00	616-6107	616-7107	616-9107
100	0.01	7.01-8.00	616-6108	616-7108	616-9108
100	0.01	8.01-9.00	616-6109	616-7109	616-9109
100	0.01	9.01-10.00	616-6111	616-7111	616-9111
98	0.1	0.30-10.00	616-6098	616-7098	616-9098
101	0.1	10.00-20.00	616-6101	616-7101	616-9101



Individual Pin Gages 塞规

615-xxxx for Plus Tolerance

616-xxxx for Minus Tolerance

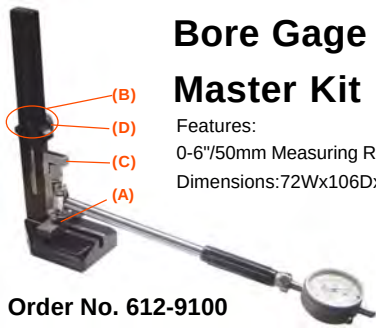
615-3xxx for Plus Black

615-8xxx for Minus Black

Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
0.011"	XXX-x011	0.094"	XXX-x094	0.177"	XXX-x177	0.260"	XXX-x260	0.343"	XXX-x343	0.426"	XXX-x426
0.012"	XXX-x012	0.095"	XXX-x095	0.178"	XXX-x178	0.261"	XXX-x261	0.344"	XXX-x344	0.427"	XXX-x427
0.013"	XXX-x013	0.096"	XXX-x096	0.179"	XXX-x179	0.262"	XXX-x262	0.345"	XXX-x345	0.428"	XXX-x428
0.014"	XXX-x014	0.097"	XXX-x097	0.180"	XXX-x180	0.263"	XXX-x263	0.346"	XXX-x346	0.429"	XXX-x429
0.015"	XXX-x015	0.098"	XXX-x098	0.181"	XXX-x181	0.264"	XXX-x264	0.347"	XXX-x347	0.430"	XXX-x430
0.016"	XXX-x016	0.099"	XXX-x099	0.182"	XXX-x182	0.265"	XXX-x265	0.348"	XXX-x348	0.431"	XXX-x431
0.017"	XXX-x017	0.100"	XXX-x100	0.183"	XXX-x183	0.266"	XXX-x266	0.349"	XXX-x349	0.432"	XXX-x432
0.018"	XXX-x018	0.101"	XXX-x101	0.184"	XXX-x184	0.267"	XXX-x267	0.350"	XXX-x350	0.433"	XXX-x433
0.019"	XXX-x019	0.102"	XXX-x102	0.185"	XXX-x185	0.268"	XXX-x268	0.351"	XXX-x351	0.434"	XXX-x434
0.020"	XXX-x020	0.103"	XXX-x103	0.186"	XXX-x186	0.269"	XXX-x269	0.352"	XXX-x352	0.435"	XXX-x435
0.021"	XXX-x021	0.104"	XXX-x104	0.187"	XXX-x187	0.270"	XXX-x270	0.353"	XXX-x353	0.436"	XXX-x436
0.022"	XXX-x022	0.105"	XXX-x105	0.188"	XXX-x188	0.271"	XXX-x271	0.354"	XXX-x354	0.437"	XXX-x437
0.023"	XXX-x023	0.106"	XXX-x106	0.189"	XXX-x189	0.272"	XXX-x272	0.355"	XXX-x355	0.438"	XXX-x438
0.024"	XXX-x024	0.107"	XXX-x107	0.190"	XXX-x190	0.273"	XXX-x273	0.356"	XXX-x356	0.439"	XXX-x439
0.025"	XXX-x025	0.108"	XXX-x108	0.191"	XXX-x191	0.274"	XXX-x274	0.357"	XXX-x357	0.440"	XXX-x440
0.026"	XXX-x026	0.109"	XXX-x109	0.192"	XXX-x192	0.275"	XXX-x275	0.358"	XXX-x358	0.441"	XXX-x441
0.027"	XXX-x027	0.110"	XXX-x110	0.193"	XXX-x193	0.276"	XXX-x276	0.359"	XXX-x359	0.442"	XXX-x442
0.028"	XXX-x028	0.111"	XXX-x111	0.194"	XXX-x194	0.277"	XXX-x277	0.360"	XXX-x360	0.443"	XXX-x443
0.029"	XXX-x029	0.112"	XXX-x112	0.195"	XXX-x195	0.278"	XXX-x278	0.361"	XXX-x361	0.444"	XXX-x444
0.030"	XXX-x030	0.113"	XXX-x113	0.196"	XXX-x196	0.279"	XXX-x279	0.362"	XXX-x362	0.445"	XXX-x445
0.031"	XXX-x031	0.114"	XXX-x114	0.197"	XXX-x197	0.280"	XXX-x280	0.363"	XXX-x363	0.446"	XXX-x446
0.032"	XXX-x032	0.115"	XXX-x115	0.198"	XXX-x198	0.281"	XXX-x281	0.364"	XXX-x364	0.447"	XXX-x447
0.033"	XXX-x033	0.116"	XXX-x116	0.199"	XXX-x199	0.282"	XXX-x282	0.365"	XXX-x365	0.448"	XXX-x448
0.034"	XXX-x034	0.117"	XXX-x117	0.200"	XXX-x200	0.283"	XXX-x283	0.366"	XXX-x366	0.449"	XXX-x449
0.035"	XXX-x035	0.118"	XXX-x118	0.201"	XXX-x201	0.284"	XXX-x284	0.367"	XXX-x367	0.450"	XXX-x450
0.036"	XXX-x036	0.119"	XXX-x119	0.202"	XXX-x202	0.285"	XXX-x285	0.368"	XXX-x368	0.451"	XXX-x451
0.037"	XXX-x037	0.120"	XXX-x120	0.203"	XXX-x203	0.286"	XXX-x286	0.369"	XXX-x369	0.452"	XXX-x452
0.038"	XXX-x038	0.121"	XXX-x121	0.204"	XXX-x204	0.287"	XXX-x287	0.370"	XXX-x370	0.453"	XXX-x453
0.039"	XXX-x039	0.122"	XXX-x122	0.205"	XXX-x205	0.288"	XXX-x288	0.371"	XXX-x371	0.454"	XXX-x454
0.040"	XXX-x040	0.123"	XXX-x123	0.206"	XXX-x206	0.289"	XXX-x289	0.372"	XXX-x372	0.455"	XXX-x455
0.041"	XXX-x041	0.124"	XXX-x124	0.207"	XXX-x207	0.290"	XXX-x290	0.373"	XXX-x373	0.456"	XXX-x456
0.042"	XXX-x042	0.125"	XXX-x125	0.208"	XXX-x208	0.291"	XXX-x291	0.374"	XXX-x374	0.457"	XXX-x457
0.043"	XXX-x043	0.126"	XXX-x126	0.209"	XXX-x209	0.292"	XXX-x292	0.375"	XXX-x375	0.458"	XXX-x458
0.044"	XXX-x044	0.127"	XXX-x127	0.210"	XXX-x210	0.293"	XXX-x293	0.376"	XXX-x376	0.459"	XXX-x459
0.045"	XXX-x045	0.128"	XXX-x128	0.211"	XXX-x211	0.294"	XXX-x294	0.377"	XXX-x377	0.460"	XXX-x460
0.046"	XXX-x046	0.129"	XXX-x129	0.212"	XXX-x212	0.295"	XXX-x295	0.378"	XXX-x378	0.461"	XXX-x461
0.047"	XXX-x047	0.130"	XXX-x130	0.213"	XXX-x213	0.296"	XXX-x296	0.379"	XXX-x379	0.462"	XXX-x462
0.048"	XXX-x048	0.131"	XXX-x131	0.214"	XXX-x214	0.297"	XXX-x297	0.380"	XXX-x380	0.463"	XXX-x463
0.049"	XXX-x049	0.132"	XXX-x132	0.215"	XXX-x215	0.298"	XXX-x298	0.381"	XXX-x381	0.464"	XXX-x464
0.050"	XXX-x050	0.133"	XXX-x133	0.216"	XXX-x216	0.299"	XXX-x299	0.382"	XXX-x382	0.465"	XXX-x465
0.051"	XXX-x051	0.134"	XXX-x134	0.217"	XXX-x217	0.300"	XXX-x300	0.383"	XXX-x383	0.466"	XXX-x466
0.052"	XXX-x052	0.135"	XXX-x135	0.218"	XXX-x218	0.301"	XXX-x301	0.384"	XXX-x384	0.467"	XXX-x467
0.053"	XXX-x053	0.136"	XXX-x136	0.219"	XXX-x219	0.302"	XXX-x302	0.385"	XXX-x385	0.468"	XXX-x468
0.054"	XXX-x054	0.137"	XXX-x137	0.220"	XXX-x220	0.303"	XXX-x303	0.386"	XXX-x386	0.469"	XXX-x469
0.055"	XXX-x055	0.138"	XXX-x138	0.221"	XXX-x221	0.304	XXX-x304	0.387"	XXX-x387	0.470"	XXX-x470
0.056"	XXX-x056	0.139"	XXX-x139	0.222"	XXX-x222	0.305"	XXX-x305	0.388"	XXX-x388	0.471"	XXX-x471
0.057"	XXX-x057	0.140"	XXX-x140	0.223"	XXX-x223	0.306"	XXX-x306	0.389"	XXX-x389	0.472"	XXX-x472
0.058"	XXX-x058	0.141"	XXX-x141	0.224"	XXX-x224	0.307"	XXX-x307	0.390"	XXX-x390	0.473"	XXX-x473
0.059"	XXX-x059	0.142"	XXX-x142	0.225"	XXX-x225	0.308"	XXX-x308	0.391"	XXX-x391	0.474"	XXX-x474
0.060"	XXX-x060	0.143"	XXX-x143	0.226"	XXX-x226	0.309"	XXX-x309	0.392"	XXX-x392	0.475"	XXX-x475
0.061"	XXX-x061	0.144"	XXX-x144	0.227"	XXX-x227	0.310"	XXX-x310	0.393"	XXX-x393	0.476"	XXX-x476
0.062"	XXX-x062	0.145"	XXX-x145	0.228"	XXX-x228	0.311"	XXX-x311	0.394"	XXX-x394	0.477"	XXX-x477
0.063"	XXX-x063	0.146"	XXX-x146	0.229"	XXX-x229	0.312"	XXX-x312	0.395"	XXX-x395	0.478"	XXX-x478
0.064"	XXX-x064	0.147"	XXX-x147	0.230"	XXX-x230	0.313"	XXX-x313	0.396"	XXX-x396	0.479"	XXX-x479
0.065"	XXX-x065	0.148"	XXX-x148	0.231"	XXX-x231	0.314"	XXX-x314	0.397"	XXX-x397	0.480"	XXX-x480
0.066"	XXX-x066	0.149"	XXX-x149	0.232"	XXX-x232	0.315"	XXX-x315	0.398"	XXX-x398	0.481"	XXX-x481
0.067"	XXX-x067	0.150"	XXX-x150	0.233"	XXX-x233	0.316"	XXX-x316	0.399"	XXX-x399	0.482"	XXX-x482
0.068"	XXX-x068	0.151"	XXX-x151	0.234"	XXX-x234	0.317"	XXX-x317	0.400"	XXX-x400	0.483"	XXX-x483
0.069"	XXX-x069	0.152"	XXX-x152	0.235"	XXX-x235	0.318"	XXX-x318	0.401"	XXX-x401	0.484"	XXX-x484
0.070"	XXX-x070	0.153"	XXX-x153	0.236"	XXX-x236	0.319"	XXX-x319	0.402"	XXX-x402	0.485"	XXX-x485
0.071"	XXX-x071	0.154"	XXX-x154	0.237"	XXX-x237	0.320"	XXX-x320	0.403"	XXX-x403	0.486"	XXX-x486
0.072"	XXX-x072	0.155"	XXX-x155	0.238"	XXX-x238	0.321"	XXX-x321	0.404"	XXX-x404	0.487"	XXX-x487
0.073"	XXX-x073	0.156"	XXX-x156	0.239"	XXX-x239	0.322"	XXX-x322	0.405"	XXX-x405	0.488"	XXX-x488
0.074"	XXX-x074	0.157"	XXX-x157	0.240"	XXX-x240	0.323"	XXX-x323	0.406"	XXX-x406	0.489"	XXX-x489
0.075"	XXX-x075	0.158"	XXX-x158	0.241"	XXX-x241	0.324"	XXX-x324	0.407"	XXX-x407	0.490"	XXX-x490
0.076"	XXX-x076	0.159"	XXX-x159	0.242"	XXX-x242	0.325"	XXX-x325	0.408"	XXX-x408	0.491"	XXX-x491
0.077"	XXX-x077	0.160"	XXX-x160	0.243"	XXX-x243	0.326"	XXX-x326	0.409"	XXX-x409	0.492"	XXX-x492
0.078"	XXX-x078	0.161"	XXX-x161	0.244"	XXX-x244	0.327"	XXX-x327	0.410"	XXX-x410	0.493"	XXX-x493
0.079"	XXX-x079	0.162"	XXX-x162	0.245"	XXX-x245	0.328"	XXX-x328	0.411"	XXX-x411	0.494"	XXX-x494
0.080"	XXX-x080	0.163"	XXX-x163	0.246"	XXX-x246	0.329"	XXX-x329	0.412"	XXX-x412	0.495"	XXX-x495
0.081"	XXX-x081	0.164"	XXX-x164	0.247"	XXX-x247	0.330"	XXX-x330	0.413"	XXX-x413	0.496"	XXX-x496
0.082"	XXX-x082	0.165"	XXX-x165	0.248"	XXX-x248	0.331"	XXX-x331	0.414"	XXX-x414	0.497"	XXX-x497
0.083"	XXX-x083	0.166"	XXX-x166	0.249"	XXX-x249	0.332"	XXX-x332	0.415"	XXX-x415	0.498"	XXX-x498
0.084"	XXX-x084	0.167"	XXX-x167	0.245"	XXX-x250	0.333"	XXX-x333	0.416"	XXX-x416	0.499"	XXX-x499
0.085"	XXX-x085	0.168"	XXX-x168	0.251"	XXX-x251	0.334"	XXX-x334	0.417"	XXX-x417	0.500"	XXX-x500
0.086"	XXX-x086	0.169"	XXX-x169	0.252"	XXX-x252	0.335"	XXX-x335	0.418"	XXX-x418	0.501"	XXX-x501
0.087"	XXX-x087	0.170"	XXX-x170	0.253"	XXX-x253	0.336"	XXX-x336	0.419"	XXX-x419	0.502"	XXX-x502
0.088"	XXX-x088	0.171"	XXX-x171	0.254"	XXX-x254	0.337"	XXX-x337	0.420"	XXX-x420	0.503"	XXX-x503
0.089"	XXX-x089	0.172"	XXX-x172	0.255"	XXX-x255	0.338"	XXX-x338	0.421"	XXX-x421	0.504"	XXX-x504
0.090"	XXX-x090	0.173"	XXX-x173	0.256"	XXX-x256	0.339"	XXX-x339	0.422"	XXX-x422	0.505"	XXX-x505
0.091"	XXX-x091	0.174"	XXX-x174	0.257"	XXX-x257	0.340"	XXX-x340	0.423"	XXX-x423	0.506"	XXX-x506
0.092"	XXX-x092	0.175"	XXX-x175	0.258"	XXX-x258	0.341"	XXX-x341	0.424"	XXX-x424	0.507"	XXX-x507
0.093"	XXX-x093	0.176"	XXX-x176	0.259"	XXX-x259	0.342"	XXX-x342	0.425"	XXX-x425	0.508"	XXX-x508

615-xxxx for Plus Tolerance 616-xxxx for Minus Tolerance
615-3xxx for Plus Black 615-8xxx for Minus Black

Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
0.509"	XXX-x509	0.592"	XXX-x592	0.675"	XXX-x675	0.758"	XXX-x758	0.841"	XXX-x841	0.924"	XXX-x924
0.510"	XXX-x510	0.593"	XXX-x593	0.676"	XXX-x676	0.759"	XXX-x759	0.842"	XXX-x842	0.925"	XXX-x925
0.511"	XXX-x511	0.594"	XXX-x594	0.677"	XXX-x677	0.760"	XXX-x760	0.843"	XXX-x843	0.926"	XXX-x926
0.512"	XXX-x512	0.595"	XXX-x595	0.678"	XXX-x678	0.761"	XXX-x761	0.844"	XXX-x844	0.927"	XXX-x927
0.513"	XXX-x513	0.596"	XXX-x596	0.679"	XXX-x679	0.762"	XXX-x762	0.845"	XXX-x845	0.928"	XXX-x928
0.514"	XXX-x514	0.597"	XXX-x597	0.680"	XXX-x680	0.763"	XXX-x763	0.846"	XXX-x846	0.929"	XXX-x929
0.515"	XXX-x515	0.598"	XXX-x598	0.681"	XXX-x681	0.764"	XXX-x764	0.847"	XXX-x847	0.930"	XXX-x930
0.516"	XXX-x516	0.599"	XXX-x599	0.682"	XXX-x682	0.765"	XXX-x765	0.848"	XXX-x848	0.931"	XXX-x931
0.517"	XXX-x517	0.600"	XXX-x600	0.683"	XXX-x683	0.766"	XXX-x766	0.849"	XXX-x849	0.932"	XXX-x932
0.518"	XXX-x518	0.601"	XXX-x601	0.684"	XXX-x684	0.767"	XXX-x767	0.850"	XXX-x850	0.933"	XXX-x933
0.519"	XXX-x519	0.602	XXX-x602	0.685"	XXX-x685	0.768"	XXX-x768	0.851"	XXX-x851	0.934"	XXX-x934
0.520"	XXX-x520	0.603"	XXX-x603	0.686"	XXX-x686	0.769"	XXX-x769	0.852"	XXX-x852	0.935"	XXX-x935
0.521"	XXX-x521	0.604"	XXX-x604	0.687"	XXX-x687	0.770"	XXX-x770	0.853"	XXX-x853	0.936"	XXX-x936
0.522"	XXX-x522	0.605"	XXX-x605	0.688"	XXX-x688	0.771"	XXX-x771	0.854"	XXX-x854	0.937"	XXX-x937
0.523"	XXX-x523	0.606"	XXX-x606	0.689"	XXX-x689	0.772"	XXX-x772	0.855"	XXX-x855	0.938"	XXX-x938
0.524"	XXX-x524	0.607"	XXX-x607	0.690"	XXX-x690	0.773"	XXX-x773	0.856"	XXX-x856	0.939"	XXX-x939
0.525"	XXX-x525	0.608"	XXX-x608	0.691"	XXX-x691	0.774"	XXX-x774	0.857"	XXX-x857	0.940"	XXX-x940
0.526"	XXX-x526	0.609"	XXX-x609	0.692"	XXX-x692	0.775"	XXX-x775	0.858"	XXX-x858	0.941"	XXX-x941
0.527"	XXX-x527	0.610"	XXX-x610	0.693"	XXX-x693	0.776"	XXX-x776	0.859"	XXX-x859	0.942"	XXX-x942
0.528"	XXX-x528	0.611"	XXX-x611	0.694"	XXX-x694	0.777"	XXX-x777	0.860"	XXX-x860	0.943"	XXX-x943
0.529"	XXX-x529	0.612"	XXX-x612	0.695"	XXX-x695	0.778"	XXX-x778	0.861"	XXX-x861	0.944"	XXX-x944
0.530"	XXX-x530	0.613"	XXX-x613	0.696"	XXX-x696	0.779"	XXX-x779	0.862"	XXX-x862	0.945"	XXX-x945
0.531"	XXX-x531	0.614"	XXX-x614	0.697"	XXX-x697	0.780"	XXX-x780	0.863"	XXX-x863	0.946"	XXX-x946
0.532"	XXX-x532	0.615"	XXX-x615	0.698"	XXX-x698	0.781"	XXX-x781	0.864"	XXX-x864	0.947"	XXX-x947
0.533"	XXX-x533	0.616"	XXX-x616	0.699"	XXX-x699	0.782"	XXX-x782	0.865"	XXX-x865	0.948"	XXX-x948
0.534"	XXX-x534	0.617"	XXX-x617	0.700"	XXX-x700	0.783"	XXX-x783	0.866"	XXX-x866	0.949"	XXX-x949
0.535"	XXX-x535	0.618"	XXX-x618	0.701"	XXX-x701	0.784"	XXX-x784	0.867"	XXX-x867	0.950"	XXX-x950
0.536"	XXX-x536	0.619"	XXX-x619	0.702"	XXX-x702	0.785"	XXX-x785	0.868"	XXX-x868	0.951"	XXX-x951
0.537"	XXX-x537	0.620"	XXX-x620	0.703"	XXX-x703	0.786"	XXX-x786	0.869"	XXX-x869	0.952"	XXX-x952
0.538"	XXX-x538	0.621"	XXX-x621	0.704"	XXX-x704	0.787"	XXX-x787	0.870"	XXX-x870	0.953"	XXX-x953
0.539"	XXX-x539	0.622"	XXX-x622	0.705"	XXX-x705	0.788"	XXX-x788	0.871"	XXX-x871	0.954"	XXX-x954
0.540"	XXX-x540	0.623"	XXX-x623	0.706"	XXX-x706	0.789"	XXX-x789	0.872"	XXX-x872	0.955"	XXX-x955
0.541"	XXX-x541	0.624"	XXX-x624	0.707"	XXX-x707	0.790"	XXX-x790	0.873"	XXX-x873	0.956"	XXX-x956
0.542"	XXX-x542	0.625"	XXX-x625	0.708"	XXX-x708	0.791"	XXX-x791	0.874"	XXX-x874	0.957"	XXX-x957
0.543"	XXX-x543	0.626"	XXX-x626	0.709"	XXX-x709	0.792"	XXX-x792	0.875"	XXX-x875	0.958"	XXX-x958
0.544"	XXX-x544	0.627"	XXX-x627	0.710"	XXX-x710	0.793"	XXX-x793	0.876"	XXX-x876	0.959"	XXX-x959
0.545"	XXX-x545	0.628"	XXX-x628	0.711"	XXX-x711	0.794"	XXX-x794	0.877"	XXX-x877	0.960"	XXX-x960
0.546"	XXX-x546	0.629"	XXX-x629	0.712"	XXX-x712	0.795"	XXX-x795	0.878"	XXX-x878	0.961"	XXX-x961
0.547"	XXX-x547	0.630"	XXX-x630	0.713"	XXX-x713	0.796"	XXX-x796	0.879"	XXX-x879	0.962"	XXX-x962
0.548"	XXX-x548	0.631"	XXX-x631	0.714"	XXX-x714	0.797"	XXX-x797	0.880"	XXX-x880	0.963"	XXX-x963
0.549"	XXX-x549	0.632"	XXX-x632	0.715"	XXX-x715	0.798"	XXX-x798	0.881"	XXX-x881	0.964"	XXX-x964
0.550"	XXX-x550	0.633"	XXX-x633	0.716"	XXX-x716	0.799"	XXX-x799	0.882"	XXX-x882	0.965"	XXX-x965
0.551"	XXX-x551	0.634"	XXX-x634	0.717"	XXX-x717	0.800"	XXX-x800	0.883"	XXX-x883	0.966"	XXX-x966
0.552"	XXX-x552	0.635"	XXX-x635	0.718"	XXX-x718	0.801"	XXX-x801	0.884"	XXX-x884	0.967"	XXX-x967
0.553"	XXX-x553	0.636"	XXX-x636	0.719"	XXX-x719	0.802"	XXX-x802	0.885"	XXX-x885	0.968"	XXX-x968
0.554"	XXX-x554	0.637"	XXX-x637	0.720"	XXX-x720	0.803"	XXX-x803	0.886"	XXX-x886	0.969"	XXX-x969
0.555"	XXX-x555	0.638"	XXX-x638	0.721"	XXX-x721	0.804"	XXX-x804	0.887"	XXX-x887	0.970"	XXX-x970
0.556"	XXX-x556	0.639"	XXX-x639	0.722"	XXX-x722	0.805"	XXX-x805	0.888"	XXX-x888	0.971"	XXX-x971
0.557"	XXX-x557	0.640"	XXX-x640	0.723"	XXX-x723	0.806"	XXX-x806	0.889"	XXX-x889	0.972"	XXX-x972
0.558"	XXX-x558	0.641"	XXX-x641	0.724"	XXX-x724	0.807"	XXX-x807	0.890"	XXX-x890	0.973"	XXX-x973
0.559"	XXX-x559	0.642"	XXX-x642	0.725"	XXX-x725	0.808"	XXX-x808	0.891"	XXX-x891	0.974"	XXX-x974
0.560"	XXX-x560	0.643"	XXX-x643	0.726"	XXX-x726	0.809"	XXX-x809	0.892"	XXX-x892	0.975"	XXX-x975
0.561"	XXX-x561	0.644"	XXX-x644	0.727"	XXX-x727	0.810"	XXX-x810	0.893"	XXX-x893	0.976"	XXX-x976
0.562"	XXX-x562	0.645"	XXX-x645	0.728"	XXX-x728	0.811"	XXX-x811	0.894"	XXX-x894	0.977"	XXX-x977
0.563"	XXX-x563	0.646"	XXX-x646	0.729"	XXX-x729	0.812"	XXX-x812	0.895"	XXX-x895	0.978"	XXX-x978
0.564"	XXX-x564	0.647"	XXX-x647	0.730"	XXX-x730	0.813"	XXX-x813	0.896"	XXX-x896	0.979"	XXX-x979
0.565"	XXX-x565	0.648"	XXX-x648	0.731"	XXX-x731	0.814"	XXX-x814	0.897"	XXX-x897	0.980"	XXX-x980
0.566"	XXX-x566	0.649"	XXX-x649	0.732"	XXX-x732	0.815"	XXX-x815	0.898"	XXX-x898	0.981"	XXX-x981
0.567"	XXX-x567	0.650"	XXX-x650	0.733"	XXX-x733	0.816"	XXX-x816	0.899"	XXX-x899	0.982"	XXX-x982
0.568"	XXX-x568	0.651"	XXX-x651	0.734"	XXX-x734	0.817"	XXX-x817	0.900"	XXX-x900	0.983"	XXX-x983
0.569"	XXX-x569	0.652"	XXX-x652	0.735"	XXX-x735	0.818"	XXX-x818	0.901"	XXX-x901	0.984"	XXX-x984
0.570"	XXX-x570	0.653"	XXX-x653	0.736"	XXX-x736	0.819"	XXX-x819	0.902"	XXX-x902	0.985"	XXX-x985
0.571"	XXX-x571	0.654"	XXX-x654	0.737"	XXX-x737	0.820"	XXX-x820	0.903"	XXX-x903	0.986"	XXX-x986
0.572"	XXX-x572	0.655"	XXX-x655	0.738"	XXX-x738	0.821"	XXX-x821	0.904"	XXX-x904	0.987"	XXX-x987
0.573"	XXX-x573	0.656"	XXX-x656	0.739"	XXX-x739	0.822"	XXX-x822	0.905"	XXX-x905	0.988"	XXX-x988
0.574"	XXX-x574	0.657"	XXX-x657	0.740"	XXX-x740	0.823"	XXX-x823	0.906"	XXX-x906	0.989"	XXX-x989
0.575"	XXX-x575	0.658"	XXX-x658	0.741"	XXX-x741	0.824"	XXX-x824	0.907"	XXX-x907	0.990"	XXX-x990
0.576"	XXX-x576	0.659"	XXX-x659	0.742"	XXX-x742	0.825"	XXX-x825	0.908"	XXX-x908	0.991"	XXX-x991
0.577"	XXX-x577	0.660"	XXX-x660	0.743"	XXX-x743	0.826"	XXX-x826	0.909"	XXX-x909	0.992"	XXX-x992
0.578"	XXX-x578	0.661"	XXX-x661	0.744"	XXX-x744	0.827"	XXX-x827	0.910"	XXX-x910	0.993"	XXX-x993
0.579"	XXX-x579	0.662"	XXX-x662	0.745"	XXX-x745	0.828"	XXX-x828	0.911"	XXX-x911	0.994"	XXX-x994
0.580"	XXX-x580	0.663"	XXX-x663	0.746"	XXX-x746	0.829"	XXX-x829	0.912"	XXX-x912	0.995"	XXX-x995
0.581"	XXX-x581	0.664"	XXX-x664	0.747"	XXX-x747	0.830"	XXX-x830	0.913"	XXX-x913	0.996"	XXX-x996
0.582"	XXX-x582	0.665"	XXX-x665	0.748"	XXX-x748	0.831"	XXX-x831	0.914"	XXX-x914	0.997"	XXX-x997
0.583"	XXX-x583	0.666"	XXX-x666	0.749"	XXX-x749	0.832"	XXX-x832	0.915"	XXX-x915	0.998"	XXX-x998
0.584"	XXX-x584	0.667"	XXX-x667	0.750"	XXX-x750	0.833"	XXX-x833	0.916"	XXX-x916	0.999"	XXX-x999
0.585"	XXX-x585	0.668"	XXX-x668	0.751"	XXX-x751	0.834"	XXX-x834	0.917"	XXX-x917	1.000"	XXX-x1010
0.586"	XXX-x586	0.669"	XXX-x669	0.752"	XXX-x752	0.835"	XXX-x835	0.918"	XXX-x918		
0.587"	XXX-x587	0.670"	XXX-x670	0.753"	XXX-x753	0.836"	XXX-x836	0.919"	XXX-x919		
0.588"	XXX-x588	0.671"	XXX-x671	0.754"	XXX-x754	0.837"	XXX-x837	0.920"	XXX-x920		
0.589"	XXX-x589	0.672"	XXX-x672	0.755"	XXX-x755	0.838"	XXX-x838	0.921"	XXX-x921		
0.590"	XXX-x590	0.673"	XXX-x673	0.756"	XXX-x756	0.839"	XXX-x839	0.922"	XXX-x922		
0.591"	XXX-x591	0.674"	XXX-x674	0.757"	XXX-x757	0.840"	XXX-x840	0.923"	XXX-x923		



Bore Gage Setting

Master Kit

内径量表标定仪

Features:
0-6"/50mm Measuring Rang,
Dimensions: 72Wx106Dx200Hmm

NEW

Order No. 612-9100

Dial Bore Gage not included

Bore Gage Setting Master Kit is used for accurately setting any bore gage up to 150mm in diameter to an accuracy of 2.5 μ m. The Bore Gage Setting Master Kit makes setting cylinder bore gages easy by eliminating the need for ring gages or micrometers.

Specifications

Setting Device:

Base Anvil: 2.750" x .80"

Adjustable anvil: 2.375" x .375" (two each)

Internal capacity: 6"

Depth capacity: 1"

Centralizer capacity width: 2.625"

Quick-adjust holder for fast adjustment.

AS-2 Grade Gage Block Set

- 33 piece
- Maximum tolerance to: $\pm 1.2 \mu$ m
- Certificate of Calibration to N.I.S.T.

Operating Instructions:

1. For best accuracy, remove all excess preservative from the gage blocks and base anvil (A) before use.
2. After determining the desired bore size to be measured with your cylinder bore gage, choose the appropriate combination of gage blocks to match the bore dimension.
3. Insert the gage blocks into the vertical column of the Bore Gage Setting Master Kit. The column features a quick adjust (B) mechanism to facilitate rapid movement of the clamping mechanism.
4. Add an adjustable anvil (C) as shown in the photo. Loosen the quick adjust knob and lower the mechanism down on to the adjustable anvil. With fingers on either side of the quick adjust (D), compress the spring with moderate pressure. Turn the knob (D) and lock in place the complete the setup.
5. Choose the appropriate spacer/post combination on your cylinder bore gage to set the bore gage to the desired range of measurement.
6. Insert the cylinder bore gage into the Bore Gage Setting Master Kit and while rocking the bore gage up and down*, determine the reversal point of the bore gage. If you are using a dial cylinder bore gage, turn the bezel of the indicator to set zero to the reversal point. If you are using an electronic cylinder bore gage, the sum of the gage blocks should be programed into the indicator and preset to size after the reversal point is determined.

* Care should be taken to ensure the bore gage is kept as vertical as possible and not tilted to either side while rocking the bore gage, which could result in a false reading. It is also recommended to sweep the bore at least one time after the initial setting to insure a good repeatable measurement.

7. It is recommended to keep a light coat of preservative on the gage blocks and base anvil while the gage is being stored to reduce the possibility of corrosion.

Accessories	Order No.
Measuring Jaw, 9x9.5x60mm	612-9102
Setting Bridge, 70Wx20Dmm	612-9104
Base, 72Wx106Dx30Hmm	612-9106
Gage Block Holder	612-9108

Pin Gage Handle 塞规手柄

- Handles all pin gages sizes from: 1/32 thru 1/2"
- Go and no go clearly marked
- Casting Aluminium



Order No. 616-8010

Pin Gage Handles 塞规手柄

- 8 Size Collets are spring adjusting and self-centering design, which are used for whole range of sizes of pin gage sets.
- Handles & Collets are made from aluminum to protect pin gages.
- Color coded Handle for GO/NO GO checking.
- Power coated handle body.
- One handle with two free collets.

One set uses one handle,
8 handles cover all sizes



Specification	Order No.
Handle for .011" to .060" M0 50pcs	616-8000
Handle for .061" to .250" M1 190pcs	616-8001
Handle for .251" to .500" M2 250pcs	616-8002
Handle for .501" to .625" M3 125pcs	616-8003
Handle for .626" to .750" M4 125pcs	616-8004
Handle for .751" to .832" M5 82pcs	616-8005
Handle for .833" to .916" M6 84pcs	616-8006
Handle for .917" to 1.000" M7 84pcs	616-8007

Steel Pin Gage Sets

套装塞规 (铁箱)

Class "ZZ", +/- .0002" Tol.

- Go/No-Go gage handle furnished with each set
- Consists of 3,4 Drawer Cabinets

NEW



Size Range	Gage Set No.	Plus Order No.	Minus Order No.
.011-.750	M0 to M4	616-8184	616-8185
.061-.750	M1to M4	616-8190	616-8191
.061-.5005	M1to M3	616-8186	616-8187
.011-.5005	M0 to M3	616-8188	616-8189
.061-1.000	M1 to M7	616-8194	616-8195
.011-1.000	M0 to M7	616-8196	616-8197
.751-1.000	M5 to M7	616-8198	616-8199

Micrometer Checking Sets

千分尺校对用块规和平晶

- A certificate shows individual deviation of each block.
- Gage blocks traceable to the NIST/DIN/ISO3650.
- Each blocks is serialized.
- with Fitted wooden case.



Piece /Set	Specifications	Order No.
10	9 Gage Blocks, Grade 0: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000". 1 Optical Flat: 1" Dia. x.5125" Thickness, .000004", Flatness, .00002" Parallel	9100-9156
10	9 Gage Blocks, Grade AS-1: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000". 1 Optical Flat: 1" Dia. x.5125" Thickness, .000004", Flatness, .00002" Parallel	9100-9157
12	10 Gage Blocks Grade 0: .105, .210, .315, .420, .500, .605, .710, .815, .920, 1.000" 2 Optical Flat: 1" Dia. x.5000" & .5125" Thickness .000004", Flatness, .00002" Parallel	9100-9159
12	10 Gage Blocks Grade AS-1: .105, .210, .315, .420, .500, .605, .710, .815, .920, 1.000" 2 Optical Flat: 1" Dia. x.5000" & .5125" Thickness .000004", Flatness, .00002" Parallel	9100-9160
11	9pcs blocks, Grade 0, Size: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000; 2 Optical Flats: 1" Dia. x.5000" & .5125" Thickness .000004", Flatness, .00002" Parallel	9100-9162
11	9pcs blocks, Grade AS-1(A&B), Size: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000; 2 Optical Flats: 1" Dia. x.5000" & .5125" Thickness .000004", Flatness, .00002" Parallel	9100-9163
17	13pcs Blocks (Grade 1: 2.5, 5, 1, 7, 7, 10, 3, 12, 9, 15, 0, 17, 6, 20, 2, 22, 8, 25, 50, 75, 100mm); 4pcs Optical Flats: 30mm Dia. Thickness: 12.0, 12.125, 12.250, 12.375mm (.0001mm Flatness, .0005mm Parallel)	9100-9164
14	13pcs Blocks (Grade 1: 2.5, 5, 1, 7, 7, 10, 3, 12, 9, 15, 0, 17, 6, 20, 2, 22, 8, 25, 50, 75, 100mm); 1pc Optical Flats: 30mm Dia. Thickness: 12.0mm (.0001mm Flatness, .0005mm Parallel)	9100-9165
11	10pcs steel Blocks ISO3650 grade 0: 2.5, 5, 1, 7, 7, 10, 3, 12, 9, 15, 0, 17, 6, 20, 2, 22, 8, 25mm); 1pcs Optical Flat: 30mm Dia. Thickness: 12.0mm Optical Flats	9100-9171
11	10pcs steel Blocks ISO3650 grade 1: 2.5, 5, 1, 7, 7, 10, 3, 12, 9, 15, 0, 17, 6, 20, 2, 22, 8, 25mm); 1pc Optical Flat: 30mm Dia. Thickness: 12.0mm Optical Flats	9100-9172
10	9pcs Ceramic Blocks ISO3650 grade 0: 1.00, 1.25, 1.50, 2.00, 3.00, 5.00, 10.00, 15.00mm); 1pcs Optical Flat: 30mm Dia. Thickness: 12.0mm	9100-9177
10	9pcs Ceramic Blocks ISO3650 grade 1: 1.00, 1.25, 1.50, 2.00, 3.00, 5.00, 10.00, 15.00mm); 1pcs Optical Flat: 30mm Dia. Thickness: 12.0mm	9100-9278

Precision Gage Block 块规

- Higher degree of accuracy when used at temperature of 68° F(20°C).
- Individual serial numbers on each block, regardless of grade.
- A complete certificate of calibration traceable to the N.I.S.T. showing the deviation of each block.
- All sets are supplied in deluxe fitted wood case.
- All sets meet or exceed Fed.Spec. ASME B89.1.9-2002
- Mirror polished surfaces provide superior wringing characteristics.

Nominal Size	Tolerances(in millionths of an inch)			
	0	AS-1	AS-2	Economy
Thru .050	+/-6	+/-12	+/-24	+/-50
Thru .400	+/-5	+/-8	+/-18	+/-50
Thru 1"	+/-6	+/-12	+/-24	+/-50
Thru 2"	+/-8	+/-16	+/-32	+/-50
Thru 3"	+/-10	+/-20	+/-40	+/-50
Thru 4"	+/-12	+/-24	+/-48	+/-50

Nominal Size	Tolerances(in millionths of an inch)		
	0	AS-1	AS-2
Thru 6"	+/-16	+/-32	+/-64
Thru 8"	+/-20	+/-40	+/-80
Thru 10"	+/-24	+/-48	+/-104
Thru 12"	+/-28	+/-56	+/-112
Thru 16"	+/-36	+/-72	+/-144
Thru 20"	+/-44	+/-88	+/-176

Rectangular Gage Block Sets 套装矩形块规

36 Piece Sets

Blocks Included in each Set

- 1 Blocks: 0.050"
- 9 Blocks: 0.1001"-0.1009" by 0.0001" steps
- 9 Blocks: 0.101"-0.109" by 0.001" steps
- 9 Blocks: 0.110"-0.190" by 0.010" steps
- 5 Blocks: 0.100"-0.500" by 0.100" steps
- 3 Blocks: 1, 2, 4"



81 Piece Sets

Blocks Included in each Set

- 9 Blocks: 0.1001"-0.1009" by 0.0001" steps
- 49 Blocks: 0.101"-0.149" by 0.001" steps
- 19 Blocks: 0.050"-0.950" by 0.050" steps
- 4 Blocks: 1.000"-4.000" by 1.000" steps



Grade	Steel Order No.	Solid Carbide Order No.	Ceramic Order No.
0	630-4100	125-0362	631-0362
AS-1	630-4103	125-0363	631-0363
AS-2	630-4104	125-0364	631-0364
Economy	630-4105	125-0365	631-0365

Grade	Steel Order No.	Solid Carbide Order No.	Ceramic Order No.
0	630-4110	125-0812	631-0812
AS-1	630-4113	125-0813	631-0813
AS-2	630-4114	125-0814	631-0814
Economy	630-4115	125-0815	631-0815

Large Size Gage Block Sets 大八块

8 Piece Sets



Inch

Size	Grade 0 Order No.	Grade AS-1 Order No.	Grade AS-2 Order No.
5", 6", 7", 8", 10", 12", 16", 20"	630-8100	630-8101	630-8102

Metric

Size	Grade 0 Order No.	Grade 1 Order No.	Grade 2 Order No.
125, 150, 175, 200, 250, 300, 400, 500mm	630-8000	630-8001	630-8002
25, 50, 75, 100, 125, 150, 175, 200mm	630-8200	630-8201	630-8202

Square Gage Block Sets 套装方块规

36 Piece Sets

Blocks Included in each Set

- 1 Blocks: 0.050"
- 9 Blocks: 0.1001"-0.1009" by 0.0001" steps
- 9 Blocks: 0.101"-0.109" by 0.001" steps
- 9 Blocks: 0.110"-0.190" by 0.010" steps
- 5 Blocks: 0.100"-0.500" by 0.100" steps
- 3 Blocks: 1, 2, 4"



81 Piece Sets

Blocks Included in each Set

- 9 Blocks: 0.1001"-0.1009" by 0.0001" steps
- 49 Blocks: 0.101"-0.149" by 0.001" steps
- 19 Blocks: 0.050"-0.950" by 0.050" steps
- 4 Blocks: 1.000"-4.000" by 1.000" steps

Grade	Carbide			
	36 PCS Order No.	81 PCS Order No.	36 PCS Order No.	81 PCS Order No.
0	630-4126	630-4120	125-0366	125-0816
AS-1	630-4127	630-4123	125-0367	125-0817
AS-2		630-4124	125-0368	125-0818
Economy	630-4128	630-4125	125-0369	125-0819

36 Piece Space Block Sets 36 件间距规

- Each block clearly marked for size
- Hardened and lapped
- 4 connecting screws included, make any length desired.
- Complete in fitted case.
- Thread HRC58-60

Set Included:

- 9 Pieces: .101-.109" by .001"
- 15 Pieces: .050-.190" by .010"
- 9 Pieces: .200-1.000" by .100"
- 1 Piece: .0625"
- 1 Piece: .125"
- 1 Piece: 1.000"



Dia.	Accuracy	I.D.	Order No.
3/4"	+/- .0001"	1/4"-28 thread	630-4050
3/4"	+/- .0001"	M6 thread	630-4051
3/4"	+/- .00005"	1/4"-28 thread	630-4055

Individual Rectangular Gage Blocks

矩形块规

630-XXXX for Steel 125-XXXX for Carbide

	Grade 0	Grade AS-1	Grade AS-2	Grade Economy		Grade 0	Grade AS-1	Grade AS-2	Grade Economy		Grade 0	Grade AS-1	Grade AS-2	Grade Economy
Size	Order No.	Order No.	Order No.	Order No.	Size	Order No.	Order No.	Order No.	Order No.	Size	Order No.	Order No.	Order No.	Order NO.
0.050"	-2305	-3305	-A305	-B305	0.123"	-2123	-3123	-A123	-B123	0.300"	-2330	-3330	-A330	-B330
0.100"	-2310	-3310	-A310	-B310	0.124"	-2124	-3124	-A124	-B124	0.350"	-2335	-3335	-A335	-B335
0.10005"	-2205	-3205	-A205	-B205	0.125"	-2125	-3125	-A125	-B125	0.400"	-2340	-3340	-A340	-B340
0.1001"	-2001	-3001	-A001	-B001	0.126"	-2126	-3126	-A126	-B126	0.420"	-2420	-3420	-A420	-B420
0.1002"	-2002	-3002	-A002	-B002	0.127"	-2127	-3127	-A127	-B127	0.450"	-2345	-3345	-A345	-B345
0.1003"	-2003	-3003	-A003	-B003	0.128"	-2128	-3128	-A128	-B128	0.500"	-2350	-3350	-A350	-B350
0.1004"	-2004	-3004	-A004	-B004	0.129"	-2129	-3129	-A129	-B129	0.550"	-2355	-3355	-A355	-B355
0.1005"	-2005	-3005	-A005	-B005	0.130"	-2130	-3130	-A130	-B130	0.600"	-2360	-3360	-A360	-B360
0.1006"	-2006	-3006	-A006	-B006	0.131"	-2131	-3131	-A131	-B131	0.605"	-2605	-3605	-A605	-B605
0.1007"	-2007	-3007	-A007	-B007	0.132"	-2132	-3132	-A132	-B132	0.625"	-2625	-3625	-A625	-B625
0.1008"	-2008	-3008	-A008	-B008	0.133"	-2133	-3133	-A133	-B133	0.650"	-2365	-3365	-A365	-B365
0.1009"	-2009	-3009	-A009	-B009	0.134"	-2134	-3134	-A134	-B134	0.700"	-2370	-3370	-A370	-B370
0.1010"	-2101	-3101	-A101	-B101	0.135"	-2135	-3135	-A135	-B135	0.710"	-2710	-3710	-A710	-B710
0.102"	-2102	-3102	-A102	-B102	0.136"	-2136	-3136	-A136	-B136	0.750"	-2375	-3375	-A375	-B375
0.103"	-2103	-3103	-A103	-B103	0.137"	-2137	-3137	-A137	-B137	0.800"	-2380	-3380	-A380	-B380
0.104"	-2104	-3104	-A104	-B104	0.138"	-2138	-3138	-A138	-B138	0.815	-2815	-3815	-A815	-B815
0.105"	-2105	-3105	-A105	-B105	0.139"	-2139	-3139	-A139	-B139	0.850"	-2385	-3385	-A385	-B385
0.106"	-2106	-3106	-A106	-B106	0.140"	-2140	-3140	-A140	-B140	0.900"	-2390	-3390	-A390	-B390
0.107"	-2107	-3107	-A107	-B107	0.141"	-2141	-3141	-A141	-B141	0.920"	-2920	-3920	-A920	-B820
0.108"	-2108	-3108	-A108	-B108	0.142"	-2142	-3142	-A142	-B142	0.950"	-2395	-3395	-A395	-B395
0.109"	-2109	-3109	-A109	-B109	0.143"	-2143	-3143	-A143	-B143	1.000"	-2100	-3100	-A100	-B100
0.110"	-2110	-3110	-A110	-B110	0.144"	-2144	-3144	-A144	-B144	2.000"	-2200	-3200	-A200	-B200
0.111"	-2111	-3111	-A111	-B111	0.145"	-2145	-3145	-A145	-B145	3.000"	-2300	-3300	-A300	-B300
0.112"	-2112	-3112	-A112	-B112	0.146"	-2146	-3146	-A146	-B146	4.000"	-2400	-3400	-A400	-B400
0.113"	-2113	-3113	-A113	-B113	0.147"	-2147	-3147	-A147	-B147	5.000"	-2500	-3500	-A500	-B500
0.114"	-2114	-3114	-A114	-B114	0.148"	-2148	-3148	-A148	-B148	6.000"	-2600	-3600	-A600	-B600
0.115"	-2115	-3115	-A115	-B115	0.149"	-2149	-3149	-A149	-B149	7.000"	-2700	-3700	-A700	-B700
0.116"	-2116	-3116	-A116	-B116	0.150"	-2315	-3315	-A315	-B315	8.000"	-2800	-3800	-A800	-B800
0.117"	-2117	-3117	-A117	-B117	0.160"	-2316	-3316	-A316	-B316	9.000"	-2901	-3901	-A901	-B901
0.118"	-2118	-3118	-A118	-B118	0.170"	-2317	-3317	-A317	-B317	10.00"	-2910	-3910	-A910	-B910
0.119"	-2119	-3119	-A119	-B119	0.180"	-2318	-3318	-A318	-B318	12.00"	-2912	-3912	-A912	-B912
0.120"	-2120	-3120	-A120	-B120	0.190"	-2319	-3319	-A319	-B319	16.00"	-2916	-3916	-A916	-B916
0.121"	-2121	-3121	-A121	-B121	0.200"	-2320	-3320	-A320	-B320	20.00"	-2921	-3921	-A921	-B921
0.122"	-2122	-3122	-A122	-B122	0.250"	-2325	-3325	-A325	-B325					

Individual Square Gage Blocks

方形块规

630-XXXX for Steel

	Grade 0	Grade AS-1	Grade AS-2	Grade Economy		Grade 0	Grade AS-1	Grade AS-2	Grade Economy		Grade 0	Grade AS-1	Grade AS-2	Grade Economy
Size	Order No.	Order No.	Order No.	Order No.	Size	Order No.	Order No.	Order No.	Order No.	Size	Order No.	Order No.	Order No.	Order No.
0.100"	-7000	-6000	-C000	-5202	0.118"	-7118	-6118	-C118	-5230	0.145"	-7145	-6145	-C145	-5257
0.1001"	-7001	-6001	-C001	-5204	0.119"	-7119	-6119	-C119	-5231	0.146"	-7146	-6146	-C146	-5258
0.1002"	-7002	-6002	-C002	-5205	0.120"	-7120	-6120	-C120	-5232	0.147"	-7147	-6147	-C147	-5259
0.1003"	-7003	-6003	-C003	-5206	0.121"	-7121	-6121	-C121	-5233	0.148"	-7148	-6148	-C148	-5260
0.1004"	-7004	-6004	-C004	-5207	0.122"	-7122	-6122	-C122	-5234	0.149"	-7149	-6149	-C149	-5261
0.1005"	-7005	-6005	-C005	-5208	0.123"	-7123	-6123	-C123	-5235	0.150"	-7315	-6315	-C315	-5262
0.1006"	-7006	-6006	-C006	-5209	0.124"	-7124	-6124	-C124	-5236	0.200"	-7320	-6320	-C320	-5267
0.1007"	-7007	-6007	-C007	-5210	0.125"	-7125	-6125	-C125	-5237	0.250"	-7325	-6325	-C325	-5268
0.1008"	-7008	-6008	-C008	-5211	0.126"	-7126	-6126	-C126	-5238	0.300"	-7330	-6330	-C330	-5269
0.1009"	-7009	-6009	-C009	-5212	0.127"	-7127	-6127	-C127	-5239	0.350"	-7335	-6335	-C335	-5270
0.1010"	-7101	-6101	-C101	-5213	0.128"	-7128	-6128	-C128	-5240	0.400"	-7340	-6340	-C340	-5271
0.102"	-7102	-6102	-C102	-5214	0.129"	-7129	-6129	-C129	-5241	0.450"	-7345	-6345	-C345	-5272
0.103"	-7103	-6103	-C103	-5215	0.130"	-7130	-6130	-C130	-5242	0.500"	-7350	-6350	-C350	-5273
0.104"	-7104	-6104	-C104	-5216	0.131"	-7131	-6131	-C131	-5243	0.550"	-7355	-6355	-C355	-5274
0.105"	-7105	-6105	-C105	-5217	0.132"	-7132	-6132	-C132	-5244	0.600"	-7360	-6360	-C360	-5275
0.106"	-7106	-6106	-C106	-5218	0.133"	-7133	-6133	-C133	-5245	0.650"	-7365	-6365	-C365	-5276
0.107"	-7107	-6107	-C107	-5219	0.134"	-7134	-6134	-C134	-5246	0.700"	-7370	-6370	-C370	-5277
0.108"	-7108	-6108	-C108	-5220	0.135"	-7135	-6135	-C135	-5247	0.750"	-7375	-6375	-C375	-5278
0.109"	-7109	-6109	-C109	-5221	0.136"	-7136	-6136	-C136	-5248	0.800"	-7380	-6380	-C380	-5279
0.110"	-7110	-6110	-C110	-5222	0.137"	-7137	-6137	-C137	-5249	0.850"	-7385	-6385	-C385	-5280
0.111"	-7111	-6111	-C111	-5223	0.138"	-7138	-6138	-C138	-5250	0.900"	-7390	-6390	-C390	-5281
0.112"	-7112	-6112	-C112	-5224	0.139"	-7139	-6139	-C139	-5251	0.950"	-7395	-6395	-C395	-5282
0.113"	-7113	-6113	-C113	-5225	0.140"	-7140	-6140	-C140	-5252	1.000"	-7100	-6100	-C100	-5283
0.114"	-7114	-6114	-C114	-5226	0.141"	-7141	-6141	-C141	-5253	2.000"	-7200	-6200	-C200	-5284
0.115"	-7115	-6115	-C115	-5227	0.142"	-7142	-6142	-C142	-5254	3.000"	-7300	-6300	-C300	-5285
0.116"	-7116	-6116	-C116	-5228	0.143"	-7143	-6143	-C143	-5255	4.000"	-7400	-6400	-C400	-5286
0.117"	-7117	-6117	-C117	-5229	0.144"	-7144	-6144	-C144	-5256					

Metric Gage Block Sets 公制套装块规

Metric Gage Blocks meet GGG-G-15, DIN, & JIS Specifications are supplied as indicated in the table.



Piece/Set	Nominal Sizes (mm)	Steps(mm)	No. Of Blocks	Grade	Steel Order No.	Solid Carbide	Ceramic Order No.
112	1.0005	---	1	0	630-1120	125-5120	631-1120
	1.001-1.009	0.001	9	1	630-1121	125-5121	631-1121
	1.01-1.49	0.01	49	2	630-1122	125-5122	631-1122
	0.5-24.5	0.5	49	3	630-1123		
	25-100	25	4				
103	1.005	---	1	0	630-1030	125-5030	631-1030
	1.01-1.49	0.01	49	1	630-1031	125-5031	631-1031
	0.5-24.5	0.5	49	2	630-1032	125-5032	631-1032
	25-100	25	4	3	630-1033		
88	1.0005	---	1	0	630-0880	125-4880	631-0880
	1.001-1.009	0.001	9	1	630-0881	125-4881	631-0881
	1.01-1.49	0.01	49	2	630-0882	125-4882	631-0882
	0.5-9.5	0.5	19	3	630-0883		
	10-100	10	10				
87	1.001-1.009	0.001	9	0	630-0870	125-4870	631-0870
	1.01-1.49	0.01	49	1	630-0871	125-4871	631-0871
	0.5-9.5	0.5	19	2	630-0872	125-4872	631-0872
	10-100	10	10	3	630-0873		
83	1.005	---	1	0	630-0830	125-4830	631-0830
	1.01-1.49	0.01	49	1	630-0831	125-4831	631-0831
	1.6-1.9	0.1	4	2	630-0832	125-4832	631-0832
	0.5-9.5	0.5	19	3	630-0833		
	10-100	10	10				
76	1.005	---	1	0	630-0760	125-4760	631-0760
	1.01-1.49	0.01	49	1	630-0761	125-4761	631-0761
	0.5-9.5	0.1	19	2	630-0762	125-4762	631-0762
	10-50	10	5	3	630-0763		
	75-100	25	2				
47	1.005	---	1	0	630-0474	125-4474	631-0470
	1.01-1.09	0.01	9	1	630-0475	125-4475	631-0471
	1.1-1.9	0.1	9	2	630-0476	125-4476	631-0472
	1-24	1	24	3	630-0477		
	25-100	25	4				
47	1.005	---	1	0	630-0470	125-4470	631-0474
	1.01-1.20	0.01	20	1	630-0471	125-4471	631-0475
	1.3-1.9	0.1	7	2	630-0472	125-4472	631-0476
	1-9	1	9	3	630-0473		
	10-100	10	10				
46	1.001-1.009	0.001	9	0	630-0460	125-4460	631-0460
	1.01-1.09	0.01	9	1	630-0461	125-4461	631-0461
	1.1-1.9	0.1	9	2	630-0462	125-4462	631-0462
	1-9	1	9	3	630-0463		
	10-100	10	10				
38	1.005	---	1	0	630-0380	125-4380	631-0380
	1.01-1.09	0.01	9	1	630-0381	125-4381	631-0381
	1.1-1.9	0.1	9	2	630-0382	125-4382	631-0382
	1-9	1	9	3	630-0383		
	10-100	10	10				
32	1.005	---	1	0	630-0320	125-4320	631-0320
	1.01-1.09	0.01	9	1	630-0321	125-4321	631-0321
	1.1-1.9	0.1	9	2	630-0322	125-4322	631-0322
	1-9	1	9	3	630-0323		
	10-30	10	3				
18	0.991-0.999	0.001	9	0	630-0180		
	1.001-1.009	0.001	9	1	630-0181		
				2	630-0182		
				3	630-0183		
13	2.5-12.9,	2.6	5	0	630-0130		631-0130
	15-22.8,	2.6	4	1	630-0131		631-0131
	25.0-100.0	25	4				
12	25, 50, 75,	25		0	630-8300		
	80, 105, 130, 155, 180, 205,	25		1	630-8301		
	300	25		2	630-8302		
11	10, 20, 41.2, 51.2, 81.2, 101.2,	---		0	630-0110		
	121.5, 121.8, 125, 175, 250	2.6		1	630-0111		
10	2.5-12.9	2.6	5	0	630-0100		
	15-22.8	---	4	1	630-0101		631-0101
	25		1	2	630-0102		631-0102
				3	630-0103		
9	1.001-1.009	0.001	9	0	630-0090		
				1	630-0091		
				2	630-0092		
				3	630-0093		
8	10, 20, 41.2, 51.2, 81.2, 101.2,	---		0	630-0080		631-0080
	121.5, 121.8			1	630-0081		631-0081

Rectangular Gage Block Accessories

矩形块规附件

Special Features:

- Base block: Mounting surface lapped flat and parallel with base. Holds blocks with extreme accuracy for scribing & measuring.
- Width of jaws: .315" on Scriber point for scribing lines 1.950" long & .750" height 6" long jaws with beveled ends.
- Accessories made with gage block accuracy.



14 pcs Set
Order No. 631-2914



27 pcs Set
Order No. 631-2927



Base Block



Scriber Point



Center Point



Point



Cylindrical Jaw



Flat Jaw



Reference Jaw



Jaw w/Beveled End



Holder

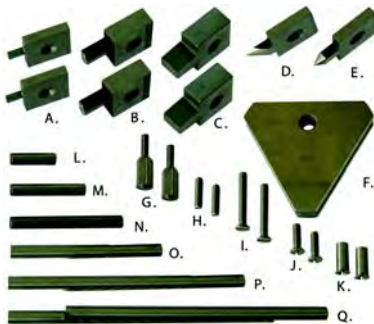
Description	Qty.	Order No.		
Base Block: Gage Block mounting surface lapped flat & parallel with base Base Size: 4x2-3/4x1-3/8", Accuracy: +/- .0002" Height.	1	631-2802		*
Scriber Point: Used for scribing lines, (1.950" Long), Accuracy: Flatness per 2" = .00002".	1	631-2500		*
Center Point: Used for locating centers, (2.0000" Overall Length), Accuracy: Concentricity = +/- .0004".	1	631-2600		*
Points: Used for Checking graduations, (2.050" Long), Accuracy: Concentricity = +/- .0002".	Pair	631-2601		*
Cylindrical Jaws: Used for inside & outside measurements & setting instruments' Accuracy .100" Radius, 1.580" Length, Accuracy: Radius +/- .00003", Pair +/- .00004"	Pair	631-2311	**	
.200" Radius, 1.965" Length, Accuracy: Radius +/- .00003", Pair +/- .00004"	Pair	631-2312	**	
.250" Radius, 2.366" Length, Accuracy: Radius +/- .00003", Pair +/- .00004"	Pair	631-2313	**	
.500" Radius, 2.945" Length, Accuracy: Radius +/- .00003", Pair +/- .00004"	Pair	631-2314	**	
.750" Radius, 4.920" Length, Accuracy: Radius +/- .00003", Pair +/- .00004"	Pair	631-2315	**	*
Flat Jaw: Two Sizes Lapped & Accurately Flat, Parallel & to Size. 0.75" Height, 6" Long, Accuracy, Parallelism = .00004"	Pair	631-2320		*
Jaw with Reference Jaw Lines: Used for spacing blocks within limits .394" Height, 1.970" Length .0625" Ref. Line (etched on block), Accuracy of Reference Line to Measuring Surface, +/- .0002"	Pair	631-2330		*
Jaw with Beveled Ends: .750" Height, 4" Long, Accuracy, Flatness per 2" = .00002"	Pair	631-2331	**	
.750" Height, 6" Long, Accuracy, Flatness per 2" = .00002"	Pair	631-2332	**	
Holders Holder, 2.250"/50mm Capacity, 4.175" Long, Accuracy, Flatness per 2" = .00002"	1	631-2050	**	
Holder, 4.000"/100mm Capacity, 6.5" Long, Accuracy, Flatness per 2" = .00002"	1	631-2100	*	
Holder, 6.000"/150mm Capacity, 8.5" Long, Accuracy, Flatness per 2" = .00002"	1	631-2150	**	
Holder, 10.000"/250mm Capacity, 12" Long, Accuracy, Flatness per 2" = .00002"	1	631-2220	*	
Holder, 16.000"/400mm Capacity, Accuracy, Flatness per 2" = .00002"	1	631-2240		
Accessories Sets 14-pc Rectangular Gage Block Accessory Set with Wooden Case	Included all "****"	631-2914		
27-pc Rectangular Gage Block Accessory Set with Wooden Case	Included all "****" + "****"	631-2927		

Square Gage Block Accessories

方形块规附件

Square Gage Block accessories are made of gage block steel, hardened and finished and meet ASME B89.1.9-2002

- Available individually or in a complete set.
- Quality & surface finish are unsurpassed.
- Countless numbers of gages can easily be assembled with ultimate accuracy.



25 pcs Set
Order No. 631-2000

Description	Qty.	Order No.
A. Half-round Jaws, .125" Radius, 1 Pair	Pair	631-2002
B. Half-round Jaws, .250" Radius, 1 Pair	Pair	631-2004
C. Straight jaws .500" thick, 1 Pair	Pair	631-2006
D. Scriber point	1	631-2008
E. Center point	1	631-2010
F. Base block	1	631-2012
G. Knurled screws, 1 Pair	Pair	631-2014
H. Studs, 1 Pair	Pair	631-2016
I. Flat head screws-long, 1 Pair	Pair	631-2018
J. Flat head screws-short, 1 Pair	Pair	631-2020
K. Slotted nuts, 1 Pair	Pair	631-2022
L. Tie rod 3/4" Solid	1	631-2024
M. Tie rod 1-1/2" Solid	1	631-2026
N. Tie rod 2-1/4" Solid	1	631-2028
O. Tie rod 3 to 4" adjustable	1	631-2030
P. Tie rod 4 to 6" adjustable	1	631-2032
Q. Tie rod 6 to 9" adjustable	1	631-2034
25-pc Square Gage Block Accessories with wooden case		631-2000

Planer & Shaper Gage

量块支架

- Max. Range 1/4 - 6 - 1/4" with extension rod.
- Makes setting of planer and shaper tools easy.
- Set gage with micrometer, surface gage or caliper and bring cutting tool in contact with it.

- Gives the operator a reliable starting point, thus eliminating trial cuts. Also use in conjunction with dial indicator to level large plates for planing, etc.
- Order No. 600-0049**



ANSI Standard Thread Plug & Ring Gages

ANSI 螺纹塞规和环规

- Used for gaging internal & external thread.
- Plug Gage(Go & No Go with handle)

Plug Gages

Order No.	
Go	623-4xxx (2B) 623-5xxx (3B)
No Go	623-6xxx (2B) 623-7xxx (3B)
Go & No Go	623-2xxx (2B) 623-3xxx (3B)

Adj. Ring Gages

Order No.	
Go	622-4xxx (2A) 622-5xxx (3A)
No Go	622-6xxx (2A) 622-7xxx (3A)
Go & No Go	622-2xxx (2A) 622-3xxx (3A)

Solid Ring Gages

Order No.	
Go	624-4xxx (2A) 624-5xxx (3A)
No Go	624-6xxx (2A) 624-7xxx (3A)
Go & No Go	624-2xxx (2A) 624-3xxx (3A)



Size	UNC UNF UNEF	Plug Gages		Adjustable Ring Gages		Solid Ring Gages	
		Class 2B Order No.	Class 3B Order No.	Class 2A Order No.	Class 3A Order No.	Class 2A Order No.	Class 3A Order No.
0-80	UNF	623-x001	623-x001	622-x001	622-x001	624-x001	624-x001
1-64	UNC	623-x002	623-x002	622-x002	622-x002	624-x002	624-x002
1-72	UNF	623-x003	623-x003	622-x003	622-x003	624-x003	624-x003
2-56	UNC	623-x004	623-x004	622-x004	622-x004	624-x004	624-x004
2-64	UNF	623-x005	623-x005	622-x005	622-x005	624-x005	624-x005
3-48	UNC	623-x006	623-x006	622-x006	622-x006	624-x006	624-x006
3-56	UNF	623-x007	623-x007	622-x007	622-x007	624-x007	624-x007
4-40	UNC	623-x008	623-x008	622-x008	622-x008	624-x008	624-x008
4-48	UNF	623-x009	623-x009	622-x009	622-x009	624-x009	624-x009
5-40	UNC	623-x010	623-x010	622-x010	622-x010	624-x010	624-x010
5-44	UNF	623-x011	623-x011	622-x011	622-x011	624-x011	624-x011
6-32	UNC	623-x012	623-x012	622-x012	622-x012	624-x012	624-x012
6-40	UNF	623-x013	623-x013	622-x013	622-x013	624-x013	624-x013
8-32	UNC	623-x014	623-x014	622-x014	622-x014	624-x014	624-x014
8-36	UNF	623-x015	623-x015	622-x015	622-x015	624-x015	624-x015
10-24	UNC	623-x016	623-x016	622-x016	622-x016	624-x016	624-x016
10-32	UNF	623-x017	623-x017	622-x017	622-x017	624-x017	624-x017
12-24	UNC	623-x018	623-x018	622-x018	622-x018	624-x018	624-x018
12-28	UNF	623-x019	623-x019	622-x019	622-x019	624-x019	624-x019
12-32	UNEF	623-x020	623-x020	622-x020	622-x020	624-x020	624-x020
1/4-20	UNC	623-x021	623-x021	622-x021	622-x021	624-x021	624-x021
1/4-28	UNF	623-x022	623-x022	622-x022	622-x022	624-x022	624-x022
1/4-32	UNEF	623-x023	623-x023	622-x023	622-x023	624-x023	624-x023
5/16-18	UNC	623-x024	623-x024	622-x024	622-x024	624-x024	624-x024
5/16-24	UNF	623-x025	623-x025	622-x025	622-x025	624-x025	624-x025
5/16-32	UNEF	623-x026	623-x026	622-x026	622-x026	624-x026	624-x026
3/8-16	UNC	623-x027	623-x027	622-x027	622-x027	624-x027	624-x027
3/8-24	UNF	623-x028	623-x028	622-x028	622-x028	624-x028	624-x028
3/8-32	UNEF	623-x029	623-x029	622-x029	622-x029	624-x029	624-x029
7/16-14	UNC	623-x030	623-x030	622-x030	622-x030	624-x030	624-x030
7/16-20	UNF	623-x031	623-x031	622-x031	622-x031	624-x031	624-x031
7/16-28	UNEF	623-x032	623-x032	622-x032	622-x032	624-x032	624-x032
1/2-13	UNC	623-x033	623-x033	622-x033	622-x033	624-x033	624-x033
1/2-20	UNF	623-x034	623-x034	622-x034	622-x034	624-x034	624-x034
1/2-28	UNEF	623-x035	623-x035	622-x035	622-x035	624-x035	624-x035
9/16-12	UNC	623-x036	623-x036	622-x036	622-x036	624-x036	624-x036
9/16-18	UNF	623-x037	623-x037	622-x037	622-x037	624-x037	624-x037
9/16-24	UNEF	623-x038	623-x038	622-x038	622-x038	624-x038	624-x038
5/8-11	UNC	623-x039	623-x039	622-x039	622-x039	624-x039	624-x039
5/8-18	UNF	623-x040	623-x040	622-x040	622-x040	624-x040	624-x040
5/8-24	UNEF	623-x041	623-x041	622-x041	622-x041	624-x041	624-x041
11/16-24	UNEF	623-x042	623-x042	622-x042	622-x042	624-x042	624-x042
3/4-10	UNC	623-x043	623-x043	622-x043	622-x043	624-x043	624-x043
3/4-16	UNF	623-x044	623-x044	622-x044	622-x044	624-x044	624-x044
3/4-20	UNEF	623-x045	623-x045	622-x045	622-x045	624-x045	624-x045
13/16-20	UNEF	623-x046	623-x046	622-x046	622-x046	624-x046	624-x046
7/8-9	UNC	623-x047	623-x047	622-x047	622-x047	624-x047	624-x047
7/8-14	UNF	623-x048	623-x048	622-x048	622-x048	624-x048	624-x048
7/8-20	UNEF	623-x049	623-x049	622-x049	622-x049	624-x049	624-x049
15/16-20	UNEF	623-x050	623-x050	622-x050	622-x050	624-x050	624-x050
1-8	UNC	623-x051	623-x051	622-x051	622-x051	624-x051	624-x051
1-12	UNF	623-x052	623-x052	622-x052	622-x052	624-x052	624-x052
1-14	UNF	623-x053	623-x053	622-x053	622-x053	624-x053	624-x053
1-20	UNEF	623-x054	623-x054	622-x054	622-x054	624-x054	624-x054
1-1/16-18	UNEF	623-x055	623-x055	622-x055	622-x055	624-x055	624-x055
1-1/8-7	UNC	623-x056	623-x056	622-x056	622-x056	624-x056	624-x056
1-1/8-12	UNF	623-x057	623-x057	622-x057	622-x057	624-x057	624-x057
1-1/8-18	UNEF	623-x058	623-x058	622-x058	622-x058	624-x058	624-x058
1-3/16-18	UNEF	623-x059	623-x059	622-x059	622-x059	624-x059	624-x059
1-1/4-7	UNC	623-x060	623-x060	622-x060	622-x060	624-x060	624-x060
1-1/4-12	UNF	623-x061	623-x061	622-x061	622-x061	624-x061	624-x061
1-1/4-18	UNEF	623-x062	623-x062	622-x062	622-x062	624-x062	624-x062
1-5/16-18	UNEF	623-x063	623-x063	622-x063	622-x063	624-x063	624-x063
1-3/8-6	UNC	623-x064	623-x064	622-x064	622-x064	624-x064	624-x064
1-3/8-12	UNF	623-x065	623-x065	622-x065	622-x065	624-x065	624-x065
1-3/8-18	UNEF	623-x066	623-x066	622-x066	622-x066	624-x066	624-x066
1-7/16-18	UNEF	623-x067	623-x067	622-x067	622-x067	624-x067	624-x067
1-1/2-6	UNC	623-x068	623-x068	622-x068	622-x068	624-x068	624-x068
1-1/2-12	UNF	623-x069	623-x069	622-x069	622-x069	624-x069	624-x069
1-1/2-18	UNEF	623-x070	623-x070	622-x070	622-x070	624-x070	624-x070

Metric ISO & Unified Thread Plug & Ring Gages

公制螺纹塞规和环规

- Used for gaging internal & external thread.
- Plug Gage(Go & No Go with handle)

	Plug Gages Order No.	Adj. Ring Gages Order No.	Solid Ring Gages Order No.
Go	617-2xxx (6H)	618-4xxx (6G)	618-0xxx (6G)
No Go	617-3xxx (6H)	618-6xxx (6G)	619-0xxx (6G)
Go & No Go	617-0xxx (6H)		



Plug Gages
(Go & No Go with Handle)



Ring Gages

Size (mm)	Plug Gages Order No.	Adjustable Ring Gages Order No.	Solid Ring Gages Order No.
M1.4X0.3	617-x001	618-x001	61x-x001
M1.6X0.35	617-x004	618-x004	61x-x004
M1.8X0.35	617-x008	618-x008	61x-x008
M2.0x.40	617-x011	618-x011	61x-x011
M2.0x.25	617-x012	618-x012	61x-x012
M2.2x.45	617-x021	618-x021	61x-x021
M2.2x.25	617-x022	618-x022	61x-x022
M2.5x.45	617-x031	618-x031	61x-x031
M2.5x.35	617-x032	618-x032	61x-x032
M3.0x.50	617-x041	618-x041	61x-x041
M3.0x.35	617-x042	618-x042	61x-x042
M3.5x.60	617-x051	618-x051	61x-x051
M3.5x.35	617-x052	618-x052	61x-x052
M4.0x.70	617-x061	618-x061	61x-x061
M4.0x.50	617-x062	618-x062	61x-x062
M4.5x.75	617-x063	618-x063	61x-x063
M5.0x.80	617-x071	618-x071	61x-x071
M5.0x.50	617-x072	618-x072	61x-x072
M6.0x1.00	617-x081	618-x081	61x-x081
M6.0x.75	617-x082	618-x082	61x-x082
M6.0x.50	617-x083	618-x083	61x-x083
M7.0x1.00	617-x084	618-x084	61x-x084
M8.0x1.25	617-x091	618-x091	61x-x091
M8.0x1.00	617-x092	618-x092	61x-x092
M8.0x.75	617-x093	618-x093	61x-x093
M8.0x.50	617-x094	618-x094	61x-x094
M10.0x1.50	617-x101	618-x101	61x-x101
M10.0x1.25	617-x102	618-x102	61x-x102
M10.0x1.00	617-x103	618-x103	61x-x103
M10.0x.75	617-x104	618-x104	61x-x104
M10.0x.50	617-x105	618-x105	61x-x105
M12.0x1.75	617-x111	618-x111	61x-x111
M12.0x1.50	617-x112	618-x112	61x-x112
M12.0x1.25	617-x113	618-x113	61x-x113
M12.0x1.00	617-x114	618-x114	61x-x114
M12.0x.75	617-x115	618-x115	61x-x115
M12.0x.50	617-x116	618-x116	61x-x116
M14.0x2.00	617-x121	618-x121	61x-x121
M14.0x1.50	617-x122	618-x122	61x-x122
M14.0x1.25	617-x123	618-x123	61x-x123
M14.0x1.00	617-x124	618-x124	61x-x124
M14.0x.75	617-x125	618-x125	61x-x125
M14.0x.50	617-x126	618-x126	61x-x126
M16.0x2.00	617-x131	618-x131	61x-x131
M16.0x1.50	617-x132	618-x132	61x-x132
M16.0x1.00	617-x133	618-x133	61x-x133
M16.0x.75	617-x134	618-x134	61x-x134
M16.0x.50	617-x135	618-x135	61x-x135
M18.0x2.50	617-x141	618-x141	61x-x141
M18.0x2.00	617-x142	618-x142	61x-x142

Size (mm)	Plug Gages Order No.	Adjustable Ring Gages Order No.	Solid Ring Gages Order No.
M18.0x1.50	617-x143	618-x143	61x-x143
M18.0x1.00	617-x144	618-x144	61x-x144
M18.0x.75	617-x145	618-x145	61x-x145
M18.0x.50	617-x146	618-x146	61x-x146
M20.0x2.50	617-x151	618-x151	61x-x151
M20.0x2.00	617-x152	618-x152	61x-x152
M20.0x1.50	617-x153	618-x153	61x-x153
M20.0x1.00	617-x154	618-x154	61x-x154
M20.0x.75	617-x155	618-x155	61x-x155
M20.0x.50	617-x156	618-x156	61x-x156
M22.0x2.50	617-x161	618-x161	61x-x161
M22.0x2.00	617-x162	618-x162	61x-x162
M22.0x1.50	617-x163	618-x163	61x-x163
M22.0x1.00	617-x164	618-x164	61x-x164
M22.0x.75	617-x165	618-x165	61x-x165
M22.0x.50	617-x166	618-x166	61x-x166
M24.0x3.00	617-x171	618-x171	61x-x171
M24.0x2.00	617-x172	618-x172	61x-x172
M24.0x1.50	617-x173	618-x173	61x-x173
M24.0x1.00	617-x174	618-x174	61x-x174
M24.0x.75	617-x175	618-x175	61x-x175
M24.0x.50	617-x176	618-x176	61x-x176
M27.0x3.00	617-x181	618-x181	61x-x181
M27.0x2.00	617-x182	618-x182	61x-x182
M27.0x1.50	617-x183	618-x183	61x-x183
M27.0x1.00	617-x184	618-x184	61x-x184
M27.0x.75	617-x185	618-x185	61x-x185
M27.0x.50	617-x186	618-x186	61x-x186
M30.0x3.50	617-x191	618-x191	61x-x191
M30.0x3.00	617-x192	618-x192	61x-x192
M30.0x2.00	617-x193	618-x193	61x-x193
M30.0x1.50	617-x194	618-x194	61x-x194
M30.0x1.00	617-x195	618-x195	61x-x195
M30.0x.75	617-x196	618-x196	61x-x196
M33.0x3.50	617-x201	618-x201	61x-x201
M33.0x3.00	617-x202	618-x202	61x-x202
M33.0x2.00	617-x203	618-x203	61x-x203
M33.0x1.50	617-x204	618-x204	61x-x204
M33.0x1.00	617-x205	618-x205	61x-x205
M33.0x.75	617-x206	618-x206	61x-x206
M36.0x4.00	617-x211	618-x211	61x-x211
M36.0x3.00	617-x212	618-x212	61x-x212
M36.0x2.00	617-x213	618-x213	61x-x213
M36.0x1.50	617-x214	618-x214	61x-x214
M36.0x1.00	617-x215	618-x215	61x-x215
M39.0x4.00	617-x221	618-x221	61x-x221
M39.0x3.00	617-x222	618-x222	61x-x222
M39.0x2.00	617-x223	618-x223	61x-x223
M39.0x1.50	617-x224	618-x224	61x-x224
M39.0x1.00	617-x225	618-x225	61x-x225

Precision Feeler Gages 塞尺

- Used for fitting and setting narrow slots.
- lock nut securely holds one or more blades.
- Each blade clearly marked with thickness.



Inch Size(Straight)

No. of Blades	Blade Thickness Included(inch)	Blade Length	Order No.
9	.0015-.002-.003-.004-.006-.008-.010-.012-.015	3"	615-6203
15	.002-.003-.004-.005-.006-.008-.011-.012-.013-.014-.016-.018-.020-.022-.025	3-1/2"	615-6206
8	.015-.018-.020-.025-.028-.030-.035-.040	3-1/2"	615-6207
26	.0015-.002-.0025-.003-.004-.005-.006-.007-.008-.009-.010-.011-.012-.013-.014-.015-.016-.017-.018-.019-.020-.021-.022-.023-.024-.025	3-1/2"	615-6208

Inch Size(Taper)

No. of Blades	Blade Thickness Included(inch)	Blade Length	Order No.
12	.008-.010-.012-.013-.014-.015-.016-.018-.019-.020-.025-.026	4"	615-6205
26	.0015-.025"	4"	615-6211

Metric Size

No. of Blades	Blade Thickness Included(mm)	Blades Length					
		75mm Order No.	100mm Order No.	150mm Order No.	200mm Order No.	300mm Order No.	500mm Order No.
6	0.10-0.15-0.20-0.25-0.30-0.40	615-6006					
9	0.04-0.05-0.06-0.07-0.08-0.10-0.15-0.20-0.30	615-6009					
11	0.03-0.04-0.05-0.06-0.07-0.10-0.15-0.25-0.30-0.40-0.50		615-6401	615-6402	615-6403	615-6404	
12	0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.35-0.40		615-6411	615-6412	615-6413	615-6414	
13	0.02-0.02-0.03-0.03-0.04-0.04-0.05-0.05-0.06-0.07-0.08-0.09-0.10		615-6421	615-6422	615-6423	615-6424	
13	0.05-0.10-0.15-0.20-0.25-0.30-0.40-0.50-0.60-0.70-0.80-0.90-1.00		615-6431	615-6432	615-6433	615-6434	615-6513
14	1 0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.40-0.50-0.75-1.00		615-6441	615-6442	615-6443	615-6444	
14	0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.35-0.40-0.45-0.50		615-6451	615-6452	615-6453	615-6454	
17	0.02-0.03-0.04-0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.35-0.40-0.45-0.50		615-6461	615-6462	615-6463	615-6464	
17	0.02-0.03-0.04-0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.40-0.50-0.75-1.00		615-6471	615-6472	615-6473	615-6474	
20	0.05-0.10-0.15-0.20-0.25-0.30-0.35-0.40-0.45-0.50-0.55-0.60-0.65-0.70-0.75-0.80-0.85-0.90-0.95-1.00		615-6481	615-6482	615-6483	615-6484	615-6516
21	0.02-0.02-0.03-0.03-0.04-0.04-0.05-0.05-0.06-0.07-0.08-0.09-0.10-0.15-0.20-0.25-0.30-0.35-0.40-0.45-0.50		615-6491	615-6492	615-6493	615-6494	

Acme Screw Thread Gages 梯形螺纹规

29° Acme Screw Thread Gauge

- For grinding & setting tools when cutting Acme threads whose sides have an inclination of 14-1/2°
- Angle & edges are precision ground.



Specifications	Order No.
Threads: 1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10	615-6123

30° Acme Screw Thread Gauge

- For grinding & setting tools when cutting Acme threads whose sides have an inclination of 15°.
- Made from stainless steel with satin chrome finish
- Angle & edges are precision ground.



Specifications	Order No.
Threads: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12	615-6125

Screw Thread Gages 螺纹规样板

Order No. 615-6128

- For grinding & setting tools when cutting Acme threads whose sides have inclination.
- Made from stainless steel with satin chrome finish
- Angle & edges are precision ground.



Order No. 615-6128



Order No. 615-6126



Order No. 615-6127

Specifications	Order No.
Threads: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12; 2.2, 2.5, 3, 3.5, 4, 5, 6, 7, 8 Angle: 55° & 60°	615-6126
Threads: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 Angle: 40°, 45°, 50°, 55°, 60°, 65°, 70°, 75°, 80°	615-6127
Threads: 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 7, 8 Angle: 45°, 53.8°, 55°, 60°, 70°, 55°, 60°	615-6128

Screw Cutting Gage

螺纹规车刀样板

- Gages 47-1/2° British, 14-1/2° Acme, 55° Whitworth & BSF & 60° USA & Metric
- Made from stainless steel with satin chrome finish
- Deep etched graduations
- All gage surfaces are ground



Order No. 615-6124



Order No. 615-6340



Order No. 615-6348

No. of Blades	Range	Order No.
22	4-48TPI, Inch 55°	615-6322
10	13-40 TPI, Metric 60°	615-6323
30	4-42TPI, Inch 55°	615-6324
30	4-42TPI, Metric 60°	615-6342
51	4-84 TPI, Inch 60°	615-6351
30	6-60 TPI, Inch 60°	615-6334
52	4-62TPI, Inch 55° & .25-6mm, metric 60°	615-6348
14	0.35-3mm, 60°	615-6317
20	0.4-6mm, 60°	615-6318
16	0.25-2.5mm, 60°	615-6320
18	0.5-7.0mm, 60°	615-6330
28	0.25-2.5mm, 60°	615-6332
18	0.4-7.0mm, 60°	615-6321
24	0.25-6.0mm, 60°	615-6340
28	0.25-2.5mm, 60°	615-6339
30	0.25-3.0mm, 60°	615-6341
28	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62	615-6343

T Screw Pitch gages

T 形螺纹规



Inch

No. of Leaves	Specifications	Degree	Order No.
16	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12"	29° 30°	615-6326 615-6151
12	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	29° 30°	615-6159 615-6327
11	2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12		615-6153
7	2, 2-1/2, 3, 3-1/2, 4, 4-1/2, 5		615-6155
7	6, 7, 8, 9, 10, 11, 12		615-6157

Screw Pitch Gages

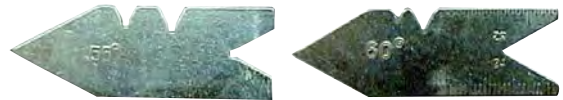
螺纹规

- For use when quick identification of screw pitch is needed.
- American National-60° Threads
Whitworth standard-55° Threads.



Center Gages

中心规



Type	Order No.
Metric std. 60°	615-6260
Whitworth std. 55°	615-6255
U.S. std. 60°	615-6300

Angle Gages

角度规



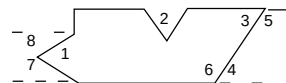
No. of Blades	Angle Range	Order No.
18	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 14-1/2°, 15°, 25°, 30°, 35°, 45°	615-9182
20	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	615-9184

18 Pc. Angle Gage Set

18 件套角度规

Stainless Steel

- Manufactured from stainless steel, satin-finished.
- Inspecting angles on ground from tools and cutters.
- Eight gaging surfaces Per gage.
- Each gage checks primary, 1/2 primary and complimentary angle.



Angles 1, 2, 3 & 4...Primary
Angles 5 & 6...Complimentary
Angles 8 & 8.....1/2-Primary

Order No. 615-9180

Primary Angle	1/2Primary Angle	Comp. Angle	Primary Angle	1/2Primary Angle	Comp. Angle
5°	2° 30"	175°	50°	25°	130°
10°	5°	170°	55°	27° 30"	125°
15°	7° 30"	165°	60°	30°	120°
20°	10°	160°	65°	32° 30"	115°
25°	12° 30"	155°	70°	35°	110°
30°	15°	150°	75°	37° 30"	105°
35°	17° 30"	145°	80°	40°	100°
40°	20°	140°	85°	42° 30"	95°
45°	22° 30"	135°	90°	45°	90°

Radius Gages 半径规

- Made of the finest quality steel.
- Satin chrome finish.
- Each gage is marked with size.



Order No.615-6555

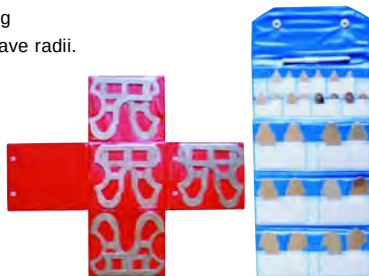


Order No.615-6530

No. of Blades	Concave Blades	Convex Blades	Radius range	Order No.
30	15	15	1/32" - 1/4", step by 1/64"	615-6565
32	16	16	17/64" - 1/2", step by 1/32"	615-6570
32	16	16	17/32" - 1", step by 1/32"	615-6575
32	16	16	1.0-6.5mm, 1-3mm step by 0.25, 3.5-6.5mm step by 0.5	615-6550
32	16	16	7.5-15mm, step by 0.5mm	615-6555
30	16	16	15.5-25mm, 15.5-20mm step by 0.5, 21-25mm step by 1.0	615-6560
34	17	17	1-7mm, 1-3mm step by 0.25, 3.5-7mm step by 0.5	615-6530

Radius Gage Sets 半径规

- Designed for checking radius, easier and faster, it can be used for inspection, layout, pattern making and all other machining job.
- Satin chrome finish and each gage is marked with its size.
- Each gage has five measuring surface for convex and concave radii.



Gages Per Set	Range	Holder	Order No.
8	9/32" to 1/2" by 32nds	Included	615-4008
8	9/16" to 1" by 16ths	Included	615-4108
8	1-1/16" to 1-1/2" by 16ths	Not Included	615-4208
8	9/16" to 1" by 16ths	Not Included	615-4308
10	0.550 to 1" by 0.05"	Not Included	615-4010
17	1/64" to 17/64" by 64ths	Included	615-4017
19	0.02" to 0.500"	Not Included	615-4019
19	0.020" to 0.500"	Included	615-4119
22	0.5-7mm by 0.5mm, 8-15mm by 1mm	Included	615-4022
25	1/64" to 17/64" by 64ths & 9/32 to 1/2 by 32ths	Included	615-4025
26	0.010" to 0.500"	Included	615-4126
26	0.5-13.0mm by 0.5mm	Included	615-4226

Wire Gage 线径规

For measuring wire diameter and non-ferrous sheets

- Made of hardened steel.
- Satin Chrome finish.
- Marks of gage size on front, decimal equivalents on back.

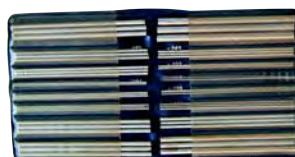


Order No.615-7100

Thread Measuring Wire Sets

三针量规

- 48 Pieces, 16 different sizes for all 60° threads
- Measures all threads from 3 to 48 threads per inch and all metric from 0.5mm to 6mm pitch.
- 3 wire method is the best method of measuring external threads.
- Wires are fitted in a plastic case stamped with sizes.
- Laminated chart compiled from the U.S. Standard.
- Gives proper sizes & measurement over wires.



No. of Wires	Specifications	Order No.
48	Threads from 3 to 48 threads per inch and metric from 0.5mm to 6mm pitch.	600-0500

Stainless Steel Sheet Metal Gages

直径规

- Handy gage for measuring cylindrical bores, bearing work and for gaging slots.
- Made from polished stainless steel
- Clearly etched graduations for inch on one side and metric on other.

Inside Gage

Range:3-30mm(1/8" to 1-1/4")

Order No. 615-6253



Outside gage

Range:1-13mm(.035" to .5")

Order No. 615-6254



Surface Roughness Standard

表面光洁度比较块

For checking, identifying and specifying the degree of roughness of machine parts

- 30 specimens: 7/8"L x 3/8"W .
- Set completed with marking in μ AA (Micro Inches Arithmetical Average) and metric in μ m RA (Micrometers).



Order No.630-9900

The set includes 30 specimens of six machining methods:

Specifications	Measuring Range
3 Specimens:Flat Lapping	2, 4and 8 μ " A A
3 Specimens:Reaming	16, 32 and 63 μ " A A
6 Specimens:Grinding	2, 4, 8,16,32 and 63 μ " A A
6 Specimens:Horizontal Milling	16, 32, 63, 125, 250 and 500 μ " A A
6 Specimens:Vertical Milling	16, 32, 63, 125, 250 and 500 μ " A A
6 Specimens:Turning	16, 32, 63, 125, 250 and 500 μ " A A

Telescoping Gages

方头可测量规

Square head

- Made of hardened tool steel.
- Satin chrome finish.
- Rigid handle with self-centering feature.



615-6650

NEW

Range	Length	Order No.
5/16 - 1/2"(8-12.7mm)	4"(102mm)	615-6611
1/2 - 3/4"(12.7-19mm)	4"(102mm)	615-6612
3/4 - 1-1/4"(19-32mm)	4"(102mm)	615-6613
1-1/4 - 2-1/8"(32-54mm)	5"(127mm)	615-6614
2-1/8" - 3-1/2"(54-90mm)	5"(127mm)	615-6615
3-1/2 - 6"(90-150mm)	5"(127mm)	615-6616
4-3/4-8"(120-200mm)		615-6650
6Pcs/set, 5/16"-6"(8-150mm)		615-6610

Square head, TiN Coated

- Made of hardened tool steel.
- Satin chrome finish.
- Rigid handle with self-centering feature.



Range	Length	Order No.
5/16 - 1/2"(8-12.7mm)	4"(102mm)	615-6622
1/2 - 3/4"(12.7-19mm)	4"(102mm)	615-6623
3/4 - 1-1/4"(19-32mm)	4"(102mm)	615-6624
1-1/4 - 2-1/8"(32-54mm)	5"(127mm)	615-6625
2-1/8" - 3-1/2"(54-90mm)	5"(127mm)	615-6626
3-1/2 - 6"(90-150mm)		615-6627
6Pcs/set, 5/16"-6"(8-150mm)		615-6621

Long Handle Telescoping Gages

加长柄可测量规

Ball head



Range	Handle Length	Order No.
5/16 - 1/2"(8-12.7mm)	8"(200mm)	615-6661
1/2 - 3/4"(12.7-19mm)	8"(200mm)	615-6662
3/4 - 1-1/4"(19-32mm)	8"(200mm)	615-6663
1-1/4 - 2-1/8"(32-54mm)	8"(200mm)	615-6664
2-1/8" - 3-1/2"(54-90mm)	8"(200mm)	615-6665
3-1/2 - 6"(90-150mm)	8"(200mm)	615-6666
4-3/4" - 8"(150-200mm)	8"(200mm)	615-6668

Range	Handle Length	Order No.
5/16 - 1/2"(8-12.7mm)	12"(300mm)	615-6671
1/2 - 3/4"(12.7-19mm)	12"(300mm)	615-6672
3/4 - 1-1/4"(19-32mm)	12"(300mm)	615-6673
1-1/4 - 2-1/8"(32-54mm)	12"(300mm)	615-6674
2-1/8" - 3-1/2"(54-90mm)	12"(300mm)	615-6675
3-1/2 - 6"(90-150mm)	12"(300mm)	615-6676
4-3/4" - 8"(150-200mm)	12"(300mm)	615-6678

Precision Telescoping Gages

圆头可测量规 (B&S)

Ball head

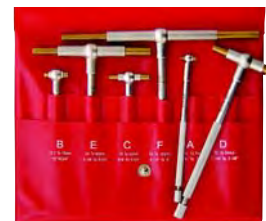
- Made of hardened tool steel.
- Satin chrome finish.
- Rigid handle with self-centering feature.



Range	Length	Order No.
5/16 - 1/2"(8-12.7mm)	4"(102mm)	615-6631
1/2 - 3/4"(12.7-19mm)	4"(102mm)	615-6632
3/4 - 1-1/4"(19-32mm)	4"(102mm)	615-6633
1-1/4 - 2-1/8"(32-54mm)	5"(127mm)	615-6634
2-1/8" - 3-1/2"(54-90mm)	5"(127mm)	615-6635
3-1/2 - 6"(90-150mm)	5"(127mm)	615-6636
6Pcs/set, 5/16"-6"		615-6630
4Pcs/set, 5/16"-2-1/2"		615-6638
5Pcs/set, 1/2"-6"		615-6639

Ball head, TiN Coated

- Made of hardened tool steel.
- Satin chrome finish.
- Rigid handle with self-centering feature.



Range	Length	Order No.
5/16 - 1/2"(8-12.7mm)	4"(102mm)	615-6641
1/2 - 3/4"(12.7-19mm)	4"(102mm)	615-6642
3/4 - 1-1/4"(19-32mm)	4"(102mm)	615-6643
1-1/4 - 2-1/8"(32-54mm)	5"(127mm)	615-6644
2-1/8" - 3-1/2"(54-90mm)	5"(127mm)	615-6645
3-1/2 - 6"(90-150mm)	5"(127mm)	615-6646
6Pcs/set, 5/16"-6"(8-150mm)		615-6640

Small Hole Gage Sets 小孔量规

- Available in half and full ball styles.
- Sets supplied in fitted case.
- Range is 1/8" thru 1/2".
- Heat treated and precision ground.
- Hole size is obtained by measuring over the contact points with a micrometer.
- Knurled knob at end of handle is used for size adjustment.



Half Ball Type

Inch Range	Metric Range	Order No.
.125-.200"	3-5mm	615-6241
.200-.300"	5-7	615-6242
.300-.400"	7.5-10	615-6243
.400-.500"	10-12.54	615-6244
4pcs set		615-6250

Full Ball Type

Inch Range	Metric Range	Order No.
.125-.200"	3-5mm	615-6245
.200-.300"	5-7	615-6246
.300-.400"	7.5-10	615-6247
.400-.500"	10-12.54	615-6248
4pcs set		615-6251

Dial Bore Gage Sets

内径量表



Plastic Cases only for Sizes lower than 6"



Wooden Cases

Probe Type



Inch Size

Range	Depth	Package	.001" Order No.	.0005" Order No.	.0001" Order No.
0.24-0.4"	1.57"	Plastic Case	612-5906	612-5900	612-5902
0.4-0.7"	4"	Plastic Case	612-5907	612-5905	612-5904
0.7-1.5"	5"	Plastic Case	612-5908	612-5910	612-5909
1.4-2.4"	6"	Plastic Case	612-5912	612-5915	612-5914
2-4"	6"	Plastic Case	612-5918	612-5916	612-5917
2-6"	6"	Plastic Case	612-5919	612-5920	612-5921
6-10"	16"	Wooden Case	612-5930	612-5925	612-5927
10-16"	16"	Wooden Case	612-5940	612-5935	612-5937
1.4-2.4"	19.7"	Wooden Case	612-6906	612-6900	612-6903
1.4-2.4"	39.4"	Wooden Case	612-6915	612-6910	612-6917
1.4-2.4"	59.1"	Wooden Case	612-6925	612-6920	612-6923
2-4 (6)	19.7"	Wooden Case	612-6935	612-6930	612-6933
2-4 (6)	39.4"	Wooden Case	612-6945	612-6940	612-6943
2-4 (6)	59.1"	Wooden Case	612-6955	612-6950	612-6953
6-10"	19.7"	Wooden Case	612-6965	612-6960	612-6963
6-10"	39.4"	Wooden Case	612-6975	612-6970	612-6973
6-10"	59.1"	Wooden Case	612-6985	612-6980	612-6983
10-16"	19.7"	Wooden Case	612-6995	612-6990	612-6991
10-16"	59.1"	Wooden Case	612-6999	612-6998	612-6993

Metric Size, Grad. 0.01mm

Range	Depth	Order No.	Range	Depth	Order No.
6-10mm	40mm	612-7900	35-50mm	1500mm	612-7950
10-18mm	100mm	612-7905	50-100mm(160)	500mm	612-7955
18-35mm	125mm	612-7910	50-100mm(160)	1000mm	612-7960
35-50mm	150mm	612-7915	50-100mm(160)	1500mm	612-7965
50-100mm	150mm	612-7920	160-250mm	500mm	612-7970
50-160mm	150mm	612-7925	160-250mm	1000mm	612-7975
160-250mm	400mm	612-7930	160-250mm	1500mm	612-7980
250-450mm	400mm	612-7935	250-450mm	500mm	612-7985
35-50mm	500mm	612-7940	250-450mm	1000mm	612-7990
35-50mm	1000mm	612-7945	250-450mm	1500mm	612-7995

Anvils

Range of		No. of Anvils												Order		No. of Washers					Order
Bore Gage	Grad.	Qty	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.	Qty	No.1	No.2	No.3	No.4	No.5	No.
0.24-0.4"	.001/.0005"	9	0.24"	0.26"	0.28"	0.3"	0.32"	0.34"	0.36"	0.38"	0.4"			612-9001							
0.4-0.7	.001/.0005"	9	0.4	0.44	0.48	0.52	0.58	0.62	0.64	0.68	0.7			612-9002	1	0.02					612-9013
0.7-1.5	.001/.0005"	8	.7-.8	.8-.9	.9-1.0	1.0-1.1	1.1-1.2	1.2-1.3	1.3-1.4	1.4-1.5				612-9003							
1.4-2.4	.001/.0005"	6	1.4	1.6	1.8	2	2.2	2.4				3.8		612-9004	3	0.02	0.05	0.1			612-9014
2-4	.001/.0005"	11	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	3.8	4	612-9005	3	0.02	0.05	0.1			612-9015
2-6	.001/.0005"	11	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6		4	612-9006	3	0.02	0.05	0.1			612-9016
6-10	.001/.0005"	6	6	6.4	6.8	7.2	7.6	8						612-9007	5	0.02	0.05	0.1	0.2	0.3	612-9017
10-16	.001/.0005"	6	10	10.4	10.8	11.2	11.6	12						612-9008	5	0.02	0.05	0.1	0.2	0.3	612-9017
1.4-2.4	.0001"	6	1.4	1.6	1.8	2	2.2	2.4				3.8		612-9004	4	0.01	0.02	0.05	0.1		
2-4	.0001"	11	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	3.8	4	612-9005	4	0.01	0.02	0.05	0.1		
2-6	.0001"	11	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6		4	612-9006	4	0.01	0.02	0.05	0.1		
6-10	.0001"	6	6	6.4	6.8	7.2	7.6	8						612-9007	5	0.02	0.05	0.1	0.2	0.3	

Washers

Digital Bore Gages

数显内径表

- Extra large LCD, 360 degree rotation
- Double display: digital and electronic scale
- Inch/Metric conversion
- Easily calibrated by one button
- Directly measure the actual value of workpiece
- Easily realize the blind measuring by freezing minimum value
- Relative measurement/Absolute measurement
- Data output RS 232
- Various measuring head for different size of bore measuring
- Power: 3V CR2032 Lithium battery
- Work temperature: +5°C+4°C,
- Storage temperature: -10°C+60°C



Range	Graduation	Accuracy	Order No.
.24 to .4"/6-10mm	.00005"/.002mm	.012mm	612-5700
.40 to .7"/10-18mm	.00005"/.002mm	.012mm	612-5702
.70 to 1.5"/18-35mm	.00005"/.002mm	.015mm	612-5704
1.4 to 2.4"/35-50mm	.00005"/.002mm	.015mm	612-5706
2 to 4"/50-100mm	.00005"/.002mm	.018mm	612-5708
2 to 6"/50-160mm	.00005"/.002mm	.018mm	612-5710
6 to 10"/160-250mm	.00005"/.002mm	.018mm	612-5712
10 to 16"/250-450mm	.00005"/.002mm	.018mm	612-5714

Accessories For Inch Dial Bore Gages

内径表附件

- Anvils for 0.7-1.5" Dial Bore Gages are screw style with 0.1" step.
- 1.4-2.4", 2-4", 2-6", 6-10", 10-16", Dial Bore Gage anvils are plug style.
- Washers are used as a smaller steps adjustment.
- Sub-Anvils extend measuring range by 2" or 4".
- Included with above sets.

Sub-Anvils

Range of Bore Gage	Qty of Grad.	Sub-Anvils	No.1	No.2
2-4"	0.001"	1	2"	
2-6"	0.001	1	2	
6-10"	0.001	1	2	
10-16"	0.001	2	2	4
2-6"	0.0005	1	2	
6-10"	0.0005	1	2	
10-16"	0.0005	2	2	4
2-6"	0.0001	1	2	
6-10"	0.0001	1	2	



Dial Indicators 百分表

Inch Size



Range	Grad.	Dial Reading	Dial Size	Back Lug	Order No.
0.05"	.0001"	0-100	2.28"	With	605-4000
0.125	.0005	0-25-0	1-37/64	With	605-4002
0.125	.00025	0-100	1-37/64	With	605-4003
1/4	0.0005	0-100	1-37/64	Without	605-4007
1/4	0.0005	0-100	2.28	Without	605-4008
0.25	0.001	0-100	2.28	With	605-4030
0.25	0.001	0-50-0	2.28	With	605-4035
0.25	0.001	0-100	1-37/64	Without	605-4041
0.25	0.001	0-100	1-37/64	With	605-4040
0.25	0.0005	0-100	2.28	With	605-4005**
0.25	0.0005	0-100	1-37/64	With	605-4004
0.25	0.0005	0-50	2.28	With	605-4058
0.25	0.0001	0-100	2.28	With	605-4006
0.40	0.001	0-100	2.28	With	605-4045
0.5	0.001	0-100	2.28	With	605-4050
0.5	0.001	0-100	2.28	With	605-4051*
0.5	0.001	0-100	2.28	Without	605-4605
0.5	0.001	0-50-0	2.28	With	605-4055
0.5	0.0005	0-100	2.28	With	605-4052
0.5	0.0005	0-50	2.28	With	605-4060
0.5	0.0005	0-25-0	2.28	With	605-4065
0.5	0.0001	0-100	2.28	With	605-4012
1	0.001	0-100	2.28	With	605-4070
1	0.001	0-100	2.28	With	605-4080***
1	0.001	0-50-0	2.28	With	605-4075
1	0.0005	0-100	2.28	With	605-4071
1	0.0005	0-50	2.28	With	605-4063
1	0.0001	0-100	2.28	With	605-4025
2	0.001	0-100	2.28	With	605-4205
2	0.001	0-100	2.28	With	605-4206***

* Economy Dial Indicators.

** without Rev.Counter.

*** Black Face

Metric Size



Range (mm)	Grad. (mm)	Dia. (mm)	Back Lug	Style	Order No.
0.5	0.001	40	With		605-4305
1	0.001	40	Without	6 Jeweled	605-4100
1	0.001	40	With	6 Jeweled	605-4301
1	0.001	58	Without	6 Jeweled	605-4101
3	0.01	40	with		605-4110
3	0.01	40	With	6 Jeweled	605-4311
3	0.01	40	Without		605-4120
3	0.01	40	Without	6 Jeweled	605-4310
3	0.01	58	With		605-4236
3	0.01	58	With	Shock Proof	605-4235
3	0.01	58	Without		605-4232
3	0.01	58	Without	Shock Proof	605-4230
3	0.001	50	Without		605-4103
5	0.01	58	With		605-4130
5	0.01	58	Without		605-4115
5	0.01	58	Without	6 Jeweled	605-4330
5	0.01	58	With	6 Jeweled	605-4331
5	0.01	40	Without		605-4140
5	0.001	58	Without	6 Jeweled	605-4345
10	0.01	58	With		605-4151
10	0.01	58	Without		605-4125
10	0.01	58	Without	6 Jeweled	605-4136
10	0.01	58	With		605-4360
10	0.01	60	With	6 Jeweled	605-4350
10	0.01	60	Without	6 Jeweled	605-4351
25	0.01	58	Without	6 Jeweled	605-4160
30	0.01	58	With		605-4165
30	0.01	58	Without		605-4166
50	0.01	76	With		605-4170
50	0.01	76	Without		605-4180

Dual System Dial Indicators

公英制双显百分表

Inch/Metric:

Inch Outside, Metric Inside



Inch/Metric Dial Indicators

Range	Dial Dia.	Graduation	Order No.
0-1/2"/0-12.7mm	2-3/8"	0.001"/0.1mm	605-4815
0-1"/0-25mm	2-3/8"	0.001"/0.1mm	605-4816



Inch/Metric Dial Indicators

Range	Dial Dia.	Graduation	Order No.
0-1"/0-25mm	3"	0.001"/0.1mm	605-4819
0-1.5"/0-40mm	3"	0.001"/0.1mm	605-4820
0-2"/0-50mm	3"	0.001"/0.1mm	605-4821



Metric/Inch:

Metric Outside, Inch Inside

Metric/Inch Dial Indicators

Range	Dial Dia.	Graduation	Order No.
0-12.7mm/0-.5"	2-3/8"	0.1mm/0.001"	605-4817
0-25mm/0-1"	2-3/8"	0.1mm/0.001"	605-4818



Metric/Inch Dial Indicators

Range	Dial Dia.	Graduation	Order No.
0-25mm/0-1"	3"	0.1mm/0.001"	605-4822
0-40mm/0-1.5"	3"	0.1mm/0.001"	605-4823
0-50mm/0-2"	3"	0.1mm/0.001"	605-4824

Back Plunger Dial Indicators

端面百分表



Inch Back Plunger Dial Test Indicators

Range	Grad.	Dial Diameter	Holding Rod Dia.	Order No.
0-0.1"/0-0.2"	0.001"	1-3/5"	1/4"	605-3821



Metric Back Plunger Dial Indicators

Range	Grad.	Dial Diameter	Order No.
0-1mm	0.01mm	40mm	605-3801
0-3mm	0.01mm	40mm	605-3803
0-5mm	0.01mm	40mm	605-3805

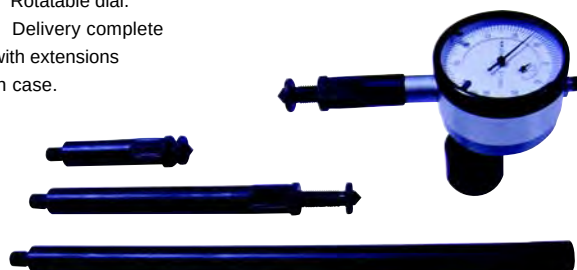


Inch Back Plunger Dial Indicators

Range	Grad.	Dial Diameter	Order No.
0-0.04"	0.001"	1-3/5"	605-3814
0-0.1	0.001	1-3/5"	605-3811
0-0.2	0.001	1-3/5"	605-3812
0-0.25	0.001	1-3/5"	605-3813

Crankshaft Meter 曲轴百分表

- Measuring rang: 45-500mm
- Rotatable dial.
- Delivery complete with extensions in case.



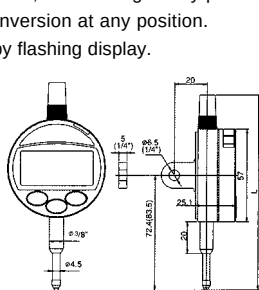
Range	Graduation	Order No.
45-500mm	0.01mm	605-3830

Electronic Digital Indicators 电子数显百分表

电子数显百分表(大屏)

3 Keys, Large Screen

- Super large LCD for easy reading .digit height 12.5mm.
 - Novel design, large silvering display window.
Customer's Logo can be printed on it.
 - With data output.
 - One 1.55V SR44 battery can last about 12 months. Functions:manual ON/OFF or auto power off; zero setting at any position;
Metric/Inch system conversion at any position.
 - Low voltage warning by flashing display.
- 



Range	Graduation	Order No.
0-.5"/12.7mm	0.01/0.0005"	605-2255
0-1"/25.4mm	0.01/0.0005"	605-2256
0-.5"/12.7mm	0.001/0.00005"	605-2257
0-1"/25.4mm	0.001/0.00005"	605-2258

3 Keys, Large Screen

Range	Graduation	Order No.
0-10mm/3/8"	0.01mm/.0005"	605-2023
0-25mm/1.0"	0.01mm/.0005"	605-2026



7 Keys, Large LCD Screen

- SPC out put
- Preset, Zero Set, Inch/mm, and Tolerance Set.
- Large LCD Screen.



0-25mm/1"

Range	Graduation	Shell Size	Stem Dia.	Order No.
0-25mm/1"	0.01mm/0.0005"	2-1/2"	9.5mm	605-2002
0-25mm/1"	0.01mm/0.0005"	60mm	8mm	605-2003
0-25mm/1"	0.005mm/0.0001"	2-1/2"x4"	9.5mm	605-2033
0-25mm/1"	0.005mm/0.0001"	64x100mm	8mm	605-2034

with Analog Display

- Absolutely and comparative measurement.
- Preset tolerance and value.
- Extra large LCD.
- Auto power On/Off.
- 360° Screen rotation.

Range	Grad.	Order No.
6.35mm/1/4"	0.01mm/0.0005"	605-2511
12.5mm/0.5"	0.01mm/0.0005"	605-2512
25.4mm/1"	0.002mm/0.0001"	605-2514
6.35mm/1/4"	0.001mm/0.00005"	605-2510
12.5mm/0.5"	0.001mm/0.00005"	605-2513
25.4mm/1"	0.001mm/0.00005"	605-2515



3 Keys, Large LCD Screen

- Super large LCD display for easy reading
- Big easy to press buttons
- With data output



		3/8" Shank	8mm shank
Range	Graduation	Order No.	Order No.
0-12.7mm/0.5"	0.01mm/0.0005"	605-2051	605-2061
0-25.4mm/1.0	0.01mm/0.0005	605-2052	605-2062
0-12.7mm/0.5	0.001mm/0.00005	605-2053	605-2063
0-25.4mm/1.0	0.001mm/0.00005	605-2054	605-2064

3 Keys, Large LCD Screen, Metal -Housing, Ip54

- Measuring speed is faster.no minus sign when “0.00” display
- Super large LCD display for easy reading.
- With durable and premium metal display housing,
IP54 Water-resistant
- Big easy to operate electronic buttons
- With data output
- One 1.55V SR44 battery can last about 12 months
- Functions:manual ON/OFF(auto power off available);
zero setting at any position;Metric/Inch system conversion
at any position
- Low voltage warning by flashing display



Range	Graduation	Order No.
0-12.7mm/0.5"	0.01mm/0.0005"	605-2251
0-25.4mm/1.0	0.01mm/0.0005	605-2252
0-12.7mm/0.5	0.001mm/0.00005	605-2253
0-25.4mm/1.0	0.001mm/0.00005	605-2254

7 Keys Multi-Function Large LCD Screen

- Large LCD Screen.
- Featured extra function of Measuring Range and Measuring Direction setting.



		Shell	Stem	
Range	Graduation	Dia.	Dia.	Order No.
0-6.5mm/1/4"	0.001mm/0.00005"	2-1/2"	8mm	605-2021
0-13mm/1/2"	0.001mm/0.00005"	64mm	8mm	605-2047

7 Keys, Large LCD Screen

0-13mm/1/2"

		Shell	Stem	
Range	Graduation	Size	Dia.	Order No.
0-13mm/1/2"	0.01mm/0.0005"	2-1/2"	9.5mm	605-2000
0-13mm/1/2"	0.01mm/0.0005"	60mm	8mm	605-2001
0-13mm/1/2"	0.005mm/0.0001"	2-1/2"	9.5mm	605-2031
0-13mm/1/2"	0.005mm/0.0001"	60mm	8mm	605-2032
0-13mm/1/2"	0.001mm/0.00005"	2-1/2"	9.5mm	605-2035
0-13mm/1/2"	0.001mm/0.00005"	60mm	8mm	605-2036



Dial Test Indicators 杠杆表

- Accessory Included: Two stems, 5/32 & 3/8" (inch) or 6 & 8mm (metric).
- Items with "*" supplied in black face.

Vertical

Range	Grad.	Vertical Order No.
0.008"	0.0001"	605-4805
0.03"	0.001"	605-4801
0.03"	0.0005"	605-4810
0.12mm	0.001mm	605-4812
0.2mm	0.002mm	605-4811
0.8mm	0.01mm	605-4813



Horizontal & Vertical with Carbide Contact Point

Range	Grad.	Horizontal Order No.	Vertical Order No.
0.008"	0.0001"	605-4505	605-4405
0.03"	0.001"	605-4501	605-4401
0.03"	0.0005"	605-4510	605-4410
0.03"	0.0005"	605-4509*	
0.12mm	0.001mm	605-4512	605-4412
0.8mm	0.01mm	605-4513	605-4413
0.2mm	0.002mm	605-4511	605-4411



Horizontal

- Dial Face is 1.26" (32mm), Large Dial Face is 1.57" (39mm)

Range	Grad.	Horizontal Order No.	Horizontal Large Dial Order No.
0.008"	0.0001"	605-4705	605-4905
0.03"	0.001"	605-4701	605-4901
0.03"	0.0005"	605-4709*	
0.03"	0.0005"	605-4710	605-4910
0.12mm	0.001mm	605-4712	605-4912
0.2mm	0.002mm	605-4711	605-4911
0.8mm	0.01mm	605-4713	605-4913



Horizontal with Ruby Contact Point

- Higher resistance to wear.
- Higher chemical and thermal stability.

Range	Graduation	Horizontal Order No.
0.008"	0.0001"	605-5705
0.03"	0.001"	605-5701
0.03"	0.0005"	605-5710
0.03mm	0.0005mm	605-5709*
0.2mm	0.002mm	605-5711
0.12mm	0.001mm	605-5712
0.8mm	0.01mm	605-5713



Digital Test Indicators

电子数显杠杆表

- Function Keys Include: Power on/off key, Zero setting key, Metric/Inch key, Tolerance key.
- Measuring probe: 2.5mm.

Range	Graduation	Point	Order No.
+/- 0.5mm/0.02"	0.01mm/0.0005"	Rubby	605-0001
+/- 0.5mm/0.02"	0.01mm/0.0005"	Steel	605-0002
+/- 0.5mm/0.02"	0.001mm/0.0001"	Rubby	605-0005
+/- 0.5mm/0.02"	0.001mm/0.0001"	Steel	605-0006



Dial Test Indicators 杠杆表

Horizontal

- Dial reading: 0-15-0
- Jeweled movement
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide .080" point

Range	Grad.	Dial Dia.	Order No.
.060"	.0005"	1.5"	605-5866
1.6mm	0.01mm	38mm	605-5868



NEW



Horizontal

Range x Grad.	Dial	Dial Dia.	Order No.	Dial Dia.	Order No.
0.02"x0.0005"	0-10-0	32mm	605-5821	37mm	605-5831
0.03"x0.0005"	0-15-0	32	605-5822	37	605-5832
0.04"x0.0005"	0-20-0	32	605-5823	37	605-5833
0.008"x0.0001"	0-40-0	32	605-5824	37	605-5834
0.5x0.01mm	0-25-0	32	605-5825	37	605-5835
0.8x0.01mm	0-40-0	32	605-5826	37	605-5836
1.0x0.01mm	0-50-0	32	605-5827	37	605-5837
0.2x0.002mm	0-100-0	32	605-5828	37	605-5838
0.12x0.001mm	0-60-120	32	605-5829	37	605-5839

Vertical

Range x Grad.	Dial	Dial Dia.	Order No.	Dial Dia.	Order No.
0.02"x0.0005"	0-10-0	32mm	605-5841	37mm	605-5851
0.03"x0.0005"	0-15-0	32	605-5842	37	605-5852
0.04"x0.0005"	0-20-0	32	605-5843	37	605-5853
0.008"x0.0001"	0-40-0	32	605-5844	37	605-5854
0.5x0.01mm	0-25-0	32	605-5845	37	605-5855
0.8x0.01mm	0-40-0	32	605-5846	37	605-5856
1.0x0.01mm	0-50-0	32	605-5847	37	605-5857
0.2x0.002mm	0-100-0	32	605-5848	37	605-5858
0.12x0.001mm	0-60-120	32	605-5849	37	605-5859

Horizontal Dial Test Indicators

杠杆千分表

- The test indicators can be applicable to measure the geometrical structure, straightness, planeness, parallelism and coaxiality.
- With the help of machine tool, distance of two bors can be measured and dimension can be coordinated.

Micron

Range	Graduation	Accuracy	Order No.
0-.005"	.00005"	.0001"	605-4502
0-0.12mm	.001mm	.0025mm	605-4512

Large Range

Range	Graduation	Accuracy	Order No.
0-.06"	.0005"	.0004"	605-4606
0-1.6mm	.01mm	.008mm	605-4616



Test Indicator and Accessory Combo Kit

杠杆表及附件

Set

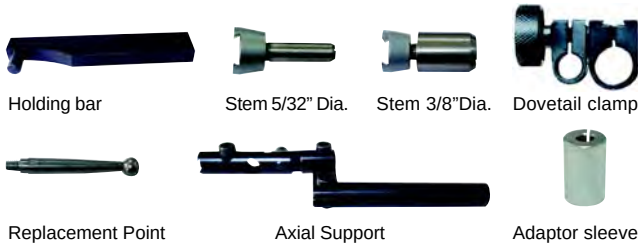
Set Includes:

- Large size dial test indicator
- Axial support
- Height gage bar with clamp
- Universal holder
- Adaptor sleeve
- Contact point case
- Contact point wrench
- Finished in fitted



Total Range	Grad.	Dial Diameter	Order No.
0.060"	0.0005"	1-1/2"	605-4870

Accessories



Specifications	Order No.
1/4"x1/2" Holding bar with 1/4" pin	605-0031
Stem 5/32" diameter with dovetail washer	605-0032
Stem 3/8" diameter with dovetail washer	605-0033
Dovetail clamp, bore diameter 1/4" and 3/8"	605-0034
Replacement Point 0.04"	605-0035
Replacement Point 0.08"	605-0036
Replacement Point 0.12"	605-0037
Axial Support	605-0038
Adaptor sleeve	605-0039

Horizontal Test Indicator & Quill-Type Holder Combo

带表架杠杆表

Test Indicator:

- .060" Range
- Graduation: .0005"
- Dial reading: 0-15-0
- Jewelled movement
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- Swivel arc: 210°
- 3 points: 0.04, 0.08 and 0.12"
- Includes 2 dovetail stems
- Furnished in fitted case

Quill Type Holder

- 1-7/8" capacity
- Reach from 0-12" dia.
- Adapts immediately for fast and positive indication

Order No. 605-4872



Dial Test Indicator Sets

水平表面杠杆百分表

Horizontal Type

Set Includes:

- Test indicator:
- Dial reasing: 0-15-0
- Two contact point
- 3/8" & 1/4" dovetail stems
- contact point wrench
- Height gage bar
- Universal Dovetail clamp
- Finished in fitted plastic case



Total Range	Grad.	Face	Order No.
0.030"	0.0005"	White	605-4707
0.030"	0.0005"	Black	605-4708

Horizontal Test Indicator with Magnetic Base

带表座杠杆表

Magnetic base: Locking screw and two universal ball sockets for setting at any angle position. Microfine adjustment screw. Removable extension arm. Dovetail form holder with lock-

ing control to hold dovetail test indicators. Accepts .250 diameter test indicator stems. The base is finished in wrinkled enamel.

Test Indicator:

- .060" Range
- Graduation: .0005"
- Dial reading: 0-15-0
- Jewelled movement
- Revolution counter
- Automatic reversal
- Swivel arc: 210°
- 3 points: 0.04, 0.08 and 0.12"
- Includes 2 dovetail stems
- Furnished in fitted case

Order No. 605-4874



Indicator, Magnetic Base & Indicator Point Set

带表座杠杆表

Indicator:

- .030" Range
- Graduation: .0005"
- Dial reading: 0-15-0
- Includes carbide tip points: (0.08" dia. by 1/2" long)

Magnetic Holder

- Two universal ball sockets
- Fine adjustment
- Dovetail clamp
- Base 1-3/16" dia., 1" high
- Extension rod 1/4" dia. by 3-1/2"

White Face

Order No. 605-4876

Black Face

Order No. 605-4877



Comparator Gages 杠杆齿轮比较仪

Metric Dial Comparator Gage

Range: +/- 0.05mm
Grad: 0.001mm
Stem Dia.: 8mmH6

Order No.605-5001



Inch Dial Comparator Gage

Range: +/- 0.002"
Grad: 0.00005"
Stem Dia.: 3/8"H6

Order No.605-5002



Large Radial Dial gage

测径表

- Easy to measure the radius of cylinders with radius from 100 to 1000mm
- $R=200/h+h/2-3$

Range	Graduation	Order No.
100-1000mm	0.001mm	615-6101



Spherical Radial Dial gages

球径表

- Easy to measure the radius of cylinders item
- Equipped with a shock-proof dial indicator
- $R=200/h+h/2-3$

Range	Graduation	Order No.
15-100mm	0.01mm	615-6111
325-1250mm	0.001	615-6112



AGD Dial Indicator Contact Points

For Indicator with #4-48 Thread

表触头

Tungsten Carbide Ball Tip

- Perfect for use in any repetitive measuring application.
- Extremely smooth and hard.
- Will last much longer than standard steel tips.

Ruby Ball Tip

- Use for all measuring applications.
- Hardness offers resistance to wear and chemical and thermal stability.
- Extremely low friction coefficient, negligible thermal expansion.



Tip Length	Ball Size	Thread	Ball Type	Order No.
1/4"	3mm	#4-48	Carbide	605-0020
1/2"	3mm	#4-48	Ruby	605-0021

Digital Bore Gages 数显内径表

- Extra large LCD, 360 degree rotation
- Double display: digital and electronic scale
- Inch/Metric conversion
- Easily calibrated by one button
- Directly measure the actual value of workpiece
- Easily realize the blind measuring by freezing minimum value
- Relative measurement/Absolute measurement
- Data output RS 232
- Various measuring head for different size of bore measuring
- Power: 3V CR2032 Lithium battery
- Work temperature: +5°C+4°C, Storage temperature: -10°C+60°C

Range	Graduation	Accuracy	Order No.
.24-.4"/6-10mm	.00005"/.002mm	.012mm	612-5700
.40-.7"/10-18mm	.00005"/.002mm	.012mm	612-5702
.70-1.5"/18-35mm	.00005"/.002mm	.015mm	612-5704
1.4-2.4"/35-50mm	.00005"/.002mm	.015mm	612-5706
2-4"/50-100mm	.00005"/.002mm	.018mm	612-5708
2-6"/50-160mm	.00005"/.002mm	.018mm	612-5710
6-10"/160-250mm	.00005"/.002mm	.018mm	612-5712
10-16"/250-450mm	.00005"/.002mm	.018mm	612-5714



Large Radial Digital gages

数显测径表

- Easy to measure the radius of cylinders with radius from 100 to 1000mm
- $R=200/h+h/2-3$

Range	Graduation	Order No.
100-1000mm	0.001mm	615-6105



Spherical Radial Digital gages

数显球径表

- Easy to measure the radius of cylinders item
- Equipped with a shock-proof dial indicator
- $R=200/h+h/2-3$

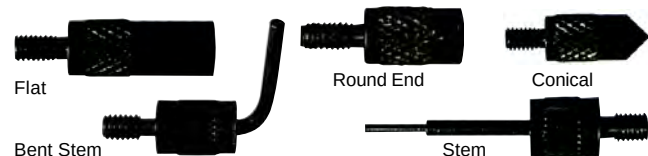
Range	Graduation	Order No.
15-100mm	0.01mm	615-6115
325-1250mm	0.001	615-6116



Individual Dial Indicator Points

仪表附件 - 表触头

- Fit standard AGD indicators, #4-48 threads.
- Made of highest quality cold rolled steel, carefully knurled for ease of placement and finished with a high quality protective finish.



Description	Length	Order No.
Flat	0.625"	605-0012
Round End	0.359	605-0013
Conical	0.500	605-0014
Stem(Bent)	0.312	605-0015
Stem*	1.025	605-0016

*Measuring tip = .250"

Indicator Accessories

仪表附件

Special function Dial Indicator Points

- Cold rolled steel, heat treated and plated. AGD #4-48 standard threads.



Description	Order No.
Radius	605-0007
Offset Chisel Point	605-0008
5/16" Diameter Cone	605-0009
1/16" Needle Stud	605-0010
Roller Anvil	605-0011

Dial Indicator Contact Points

- Standard AGD #4-48 thread fits all standard English dial indicators.
- Cold rolled steel, heat treated and plated.



Dia.	Length	Type	Order No.
1/4"		Flat	605-0027
1/2"		Bottom	605-0028
3/16"	1"	Tapered	605-0029

22 Piece Indicator Point Sets

- Turns your indicator into 22 different tools
- Fits all brand dial indicator.



Specifications	Order No.
Thread: 0.112"-48	605-0022
Thread: M3-0.5	605-0023

Individual Indicator Point

Fits all AGD Group 1,2,3,4 indicator with 4-48 threads.



Code	Type	Length	Order No.
A	Flat	0.175"	605-0101

Indicator Holder

- Universal Dovetail Indicator Holder
- 1/4"Dial.x3"OAL



Order No. 605-0040

Half Round Combination Holder

- With two point adjustment 1/4" diameter shank
- Suitable for dovetail and 5/32" stem indicator



Order No. 605-0043

Replacement Tip for Test Indicator

High Quality



Steel Tips	Order No.
.040x1/2"	605-0025

Rectangular Holder

- 1/4"x1/2" Shank for dovetail and 5/32" Stem Indicators.



Order No. 605-0041

CMM Style

M2 Threads, Stainless Steel Body, With Grade 10 Ruby Ball



Ball Size	Length	Order No.
1mm Ruby	10mm	605-0024

Arm For Indicator



Order No. 605-0109

2 Points Dial Indicator Contact

one needle point x 1" long
one 0.078" dia x 1" long,



Order No. 605-0068

Gem Indicator Accessory
Body Clamp Assembly

Order No. 605-0110

Zero Set Universal Attachment

Z 轴设定器附件

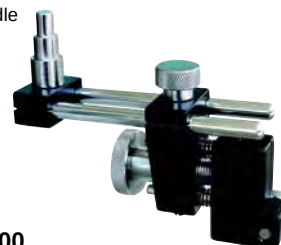
- For standard ZeroSet indicator accessory.
- Allows the placement of any test indicator with dovetails in a multitude of positions.
- Angles up to 90° on either side
- Allows for an infinite range of measurements over an extensive area



Order No. 605-0030

Zero Set 铣床对零器

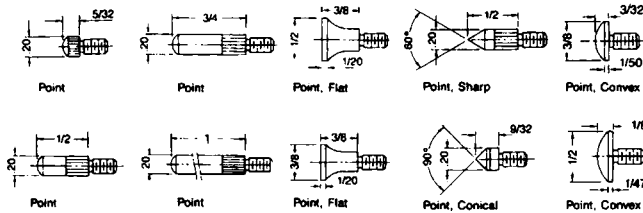
- Perfect for milling machines, magnetic bases and all measuring set ups
- Fits all dovetail equipped indicators
- Checks the alignment of the centers of round materials
- Equipped with a spindle post with 1/4", 3/8", and 1/2" diam.
- Effective measuring range of 3/8" thru 9"

**NEW**

Order No. 605-0100

Dial Indicator Contact points

百分表测头

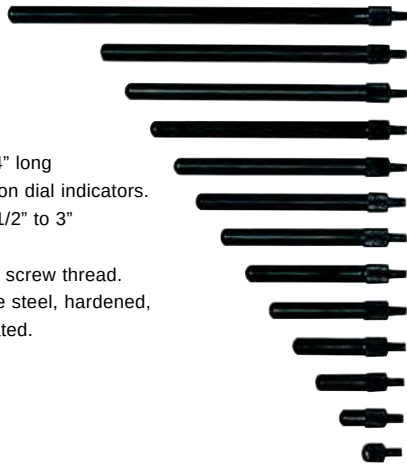


Description	Length	Dia.	Order No.
Point, Length	5/32"	.20"	605-0056
Point, Length	1/2"	.20"	605-0057
Point, Length	3/4"	.20"	605-0058
Point, Length	1"	.20"	605-0059
Point, Flat	3/8"	1/2"	605-0060
Point, Flat	3/8"	3/8"	605-0061
Point, Sharp	1/2"	.20"	605-0062
Point, Conical	9/32"	.20"	605-0063
Point, Convex	3/32"	3/8"	605-0064
Point, Convex	1/8"	1/2"	605-0065
10Pcs			605-0066

Extra Length Contact Points

百分表测头

- Used in place of the 1/4" long contact point furnished on dial indicators.
- Standard lengths from 1/2" to 3" in 1/4" increments.
- Diameter 13/64"; #4-48 screw thread.
- Made from high grade steel, hardened, ground and chrome plated.

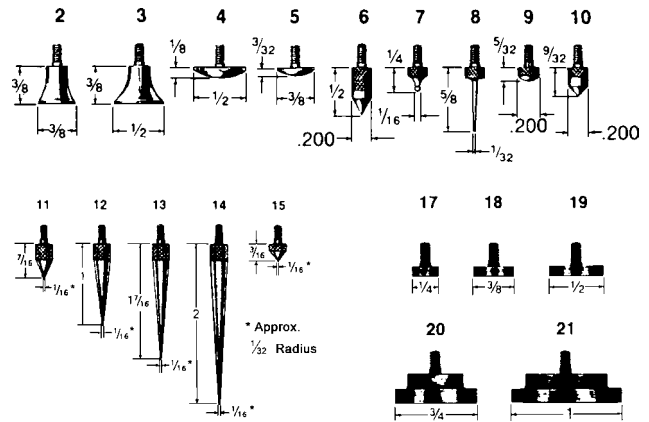


Length	Rounded End Order No.	Flat End Order No.
1/4"	605-0069	605-0169
1/2"	605-0070	605-0170
3/4"	605-0071	605-0171
1"	605-0072	605-0172
1-1/4"	605-0073	605-0173
1-1/2"	605-0074	605-0174
1-3/4"	605-0075	605-0175
2"	605-0076	605-0176
2-1/4"	605-0077	605-0177
2-1/2"	605-0078	605-0178
2-3/4"	605-0079	605-0179
3"	605-0080	605-0180

Special form Contact Points

百分表测头

Special Contact Points are furnished in fourteen shapes. Knurled diameter is approximately 13/64" (5 mm). All have #4-48 screw thread and can be used on any AGD indicator. Other special shapes are available on special order.



Special Form No.	Dia.	Length	Order No.
2	3/8"	3/8"	605-0081
3	1/2"	3/8"	605-0082
4	1/2"	1/8"	605-0083
5	3/8"	3/32"	605-0084
6	.2	1/2"	605-0085
7	1/16"	1/4"	605-0086
8	1/32"	5/8"	605-0087
9	.2	5/32"	605-0088
10	.2	9/32"	605-0089
11	1/16"	7/16"	605-0090
12	1/16"	1"	605-0091
13	1/16"	1-7/16"	605-0092
14	1/16"	2"	605-0093
15	1/16"	3/16"	605-0094
17	1/4"		605-0095
18	3/8"		605-0096
19	1/2"		605-0097
20	3/4"		605-0098
21	1"		605-0099

Swivel Joint Clamp for Test Indicators

表架附件(旋转夹)

Adapting indicators to holding bars, height gage attachments, long and short arm attachment, and jointed attachment, etc.



Hole Dia.	OAL	Order No.
5/16", 1/4"	1-3/4"	605-0042
1/4, 1/4	1-3/4"	605-0044
5/16, 5/32	1-3/4"	605-0045
3/8, 1/4	1-3/4"	605-0046
5/16, 5/16	1-3/4"	605-0047
3/8, 5/16	1-3/4"	605-0048
3/8, 3/8	1-3/4"	605-0049
1/2, 3/8	2-1/16"	605-0050

Internal & External Dial Calipers 带表卡规

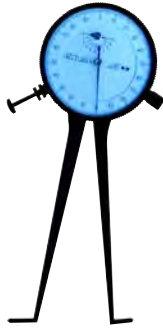
- Bezel rotates for zero setting.
- Button for opening arms.

Inch Size Graduation: 0.001"

Metric Size Graduation: 0.025mm

Internal Type

Size	Order No.	Size	Order No.
0.375-1.375"	612-0005	10-35mm	612-0305
0.750-1.750"	612-0010	20-45mm	612-0310
1.125-2.125"	612-0015	30-55mm	612-0315
1.500-2.500"	612-0020	40-65mm	612-0320
1.875-2.875"	612-0025	50-75mm	612-0325
2.250-3.250"	612-0030	60-85mm	612-0330
2.875-3.875"	612-0035	75-100mm	612-0335
3.250-4.250"	612-0040	85-110mm	612-0340
3.625-4.625"	612-0045	95-120mm	612-0345
4.000-5.000"	612-0050	100-125mm	612-0350

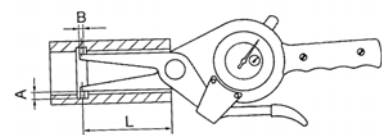
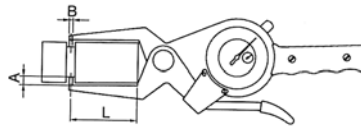


External Type

Size	Order No.	Size	Order No.
0-1"	612-0105	0-25mm	612-0205
0.375-1.375"	612-0110	10-35mm	612-0210
0.750-1.750"	612-0115	20-45mm	612-0215
1.125-2.125"	612-0120	30-55mm	612-0220
1.500-2.500"	612-0125	40-65mm	612-0225
1.875-2.875"	612-0130	50-75mm	612-0230
2.250-3.250"	612-0135	60-85mm	612-0235
2.875-3.875"	612-0140	75-100mm	612-0240
3.250-4.250"	612-0145	85-110mm	612-0245
3.625-4.625"	612-0150	95-120mm	612-0250



Dial Calipers 带表卡规

Scale Model 0-50-100
Graduation: .01mmThe dial caliper gauges are attachment
to the 6-jewel shockproof dial indicator.

INCH



METRIC



Inch Inside

Range	Grad.	A	B	L	Order No.
0.6-1.4"	.0005"	0.118"	0.118"	1.9"	612-8105
1.4-2.2"	.0005"	0.236	0.118	3.1	612-8110
2.2-3.0"	.0005"	0.315	0.118	3.1	612-8115
3.0-3.8"	.0005"	0.315	0.118	3.9	612-8120
0.6-1.4"	.001"	0.118	0.118	1.9	612-8106
1.4-2.2"	.001"	0.236	0.118	3.1	612-8111
2.2-3.0"	.001"	0.315	0.118	3.1	612-8116
3.0-3.8"	.001"	0.315	0.118	3.9	612-8121

Metric Inside

Range	A	B	L	Order No.
15-35mm	3	3	50	612-8005
35-55mm	6	3	80	612-8010
55-75mm	8	3	100	612-8015
75-95mm	8	3	100	612-8020
95-115mm	10	3.2	150	612-8025
115-135mm	10	3.2	150	612-8030

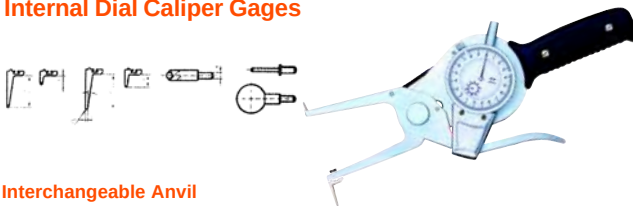
Inch Outside

Range	Grad.	A	B	L	Order No.
0-0.8"	.0005"	0.236	0.118	2.3	612-8135
0.8-1.6"	.0005"	0.236	0.118	2.3	612-8140
1.6-2.4"	.0005"	0.236	0.118	2.1	612-8145
2.4-3.2"	.0005"	0.236	0.118	2.1	612-8150
3.2-4.0"	.0005"	0.236	0.118	2.1	612-8155
0-0.8"	.001"	0.236	0.118	2.3	612-8136
0.8-1.6"	.001"	0.236	0.118	2.3	612-8141
1.6-2.4"	.001"	0.236	0.118	2.1	612-8146
2.4-3.2"	.001"	0.236	0.118	2.1	612-8151
3.2-4.0"	.001"	0.236	0.118	2.1	612-8156

Metric Outside

Range	A	B	L	Order No.
0-20mm	6	3	60	612-8035
20-40mm	6	3	60	612-8040
40-60mm	6	3	55	612-8045
60-80mm	6	3	55	612-8050
80-100mm	6	3	55	612-8055

Internal Dial Caliper Gages



Interchangeable Anvil

Range	Graduation	A	B	L	Order No.
35-55-75mm	0.01mm	10mm	3mm	80mm	612-8302
75-95-115mm	0.01mm	10mm	3mm	100mm	612-8304
115-135-155mm	0.01mm	10mm	3mm	150mm	612-8306

External Dial Caliper Gages



Interchangeable Anvil

Range	Graduation	A	B	L	Order No.
0-20-40mm	0.01mm	10mm	3mm	70mm	612-8312
40-60-80mm	0.01mm	10mm	3mm	70mm	612-8314
80-100-120mm	0.01mm	10mm	3mm	98mm	612-8316

Dial Thickness Gages

带表侧厚规

- Integrative main body machined from aluminum
- Somatological lifting handle
- Upward shockproof



Steel Contact Point and Anvil

Range	Grad.	Throat Length	Throat Depth	Anvil Dia.	Order No.
0-0.5"	0.001"	1.02"	.84"	.394"	615-6235
0-0.5"	0.0005"	1.02"	.84"	.394"	615-6237
0-10mm	0.01mm	21.3mm	26mm	10mm	615-6239

Ceramic Contact Point and Anvil

Range	Grad.	Throat Length	Throat Depth	Anvil Dia.	Order No.
0-0.5"	0.001"	1.02"	.84"	.394"	615-6236
0-0.5"	0.0005"	1.02"	.84"	.394"	615-6238
0-10mm	0.01mm	21.3mm	26mm	10mm	615-6240

Range	Grad.	Throat Length	Throat Depth	Anvil Dia.	Order No.
0-0.05"	0.0001"	1.18"			615-6225
0-0.5"	0.001"	1.18"			615-6215
0-1.0"	0.001"	1.18"			615-6214
0-10mm	0.01mm	21.3mm	26mm	10mm	615-6216
0-10mm	0.01mm	20mm	30mm	6.0mm	615-6210
0-5mm	0.001mm	20mm	30mm	6.0mm	615-6217



Pocket

Easy zero point adjustment bezel.

Range	Grad.	Order No.
0-0.5"	0.0005"	615-5205
0-0.5"	0.001"	615-5210
0-10mm	0.01mm	615-5215



Electronic Pocket

- Manual power On/Off.
- Zero setting and Metric/Inch conversion.
- Measuring faces are lapped and polished.
- Measuring anvil and spindle are made of stainless steel.

Range: 0-10mm/4"
 Graduation: 0.01mm/0.0005
 Accuracy: >/-0.03mm/0.001"
 battery: 1.5V

Order No. 615-6358



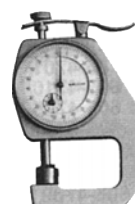
Deep Throat

Range	Grad.	Throat Depth	Order No.
0-0.5	0.001"	4.72"	615-6391
0-10mm	0.01mm	120mm	615-6390
0-10mm	0.01mm	200mm	615-6375



Range	Grad.	Type A Order No.	Type B Order No.
0-0.5"	0.001"	615-6374	615-6274
0-0.5"	0.005"	615-6372	615-6272
0-1"	0.005"	615-6373	615-6273
0-10 mm	0.1 mm	615-6370	615-6270
0-20 mm	0.1 mm	615-6371	615-6271

Range	Grad.	knob Type Order No.
0.4"	0.01"	615-6284
0.4"	0.001"	615-6282
0.4"	0.0005"	615-6283
0-10 mm	0.02 mm	615-6280
0-10 mm	0.01 mm	615-6281



Used for lens center

Range	Grad.	Max. Dia.	Distance	Order No.
0-10mm	0.01mm	58mm	25mm	615-6365
0-10mm	0.01mm	120mm	55mm	615-6360



with Base

Range	Grad.	Throat Length	Throat Depth	Order No.
0-10mm	0.01mm	32mm	40mm	615-6230



for Pipe

Range: 0-10mm
 Graduation: 0.01mm
 Inside Dia.
 of Pipe: >4.0mm

Order No. 615-6395



Roller Type

Range: 0-10mm
 Graduation: 0.01mm

Order No. 615-6380



Digital Thickness Gages

3 Key

NEW



Range	Grad.	Throat depth	Order No.
12.7mm/1/2"	.01mm/.0005"	30mm	615-6358

3 Key

0.01mm/0.0005" Repeatability



Range	Grad.	Order No.
0-10mm/0.4"	0.01mm/0.0005"	615-6345
0-15mm/0.6"	0.01mm/0.0005"	615-6350
0-25mm/1"	0.01mm/0.0005"	615-6355

7 Key

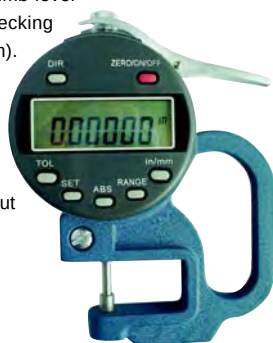
- Convenient "Snap Action" instruments with LCD readout.
- By pressing down and releasing the thumb lever these gages allow quick and efficient checking of workpiece thickness up to .5"(12.7mm).
- 7 Keys, Includes: TOL, SET, ABS, RANGE, in/mm, DIR, ZERO/ON/OFF.

Range: 0-.5"/0-12.7mm

Display: 7-Digit LCD

with [-] sign .000"/0.01mm with SPC output

Order No. 615-6405



Quick Mini Thickness Gage

Horizontal Type 迷你测厚规

- Manual power on/off.
- Zero setting at any position.
- Metric/Inch system conversion ant any position.
- With data output interface



Range	Graduation	Order No.
0-.5"/12mm	0.0005"/0.01mm	615-6212

Z-Axis Setters Z 轴设定器

- Low spring force to avoid breaking of small size end mills and drills.
- Easy to be calibrated by a parallel or gage block.
- Made of stainless steel.



Plug in Dial Style

Setting Height	Measuring Range	Grad.	Accuracy	Order No.
2"	0-0.1"	0.001"	0.0004"	805-4008
50mm	0-2mm	0.01mm	0.008mm	805-4007



Build in Dial Style

Setting Height	Measuring Range	Grad.	Accuracy	Order No.
2"	0-0.1"	0.001"	0.0004"	805-4006
50mm	0-2mm	0.01mm	0.008mm	805-4005

Zero setting for CNC Machine

- Establishing of "0" reference point with built in indicator.
- Positioning accuracy and repeatability 0.0004"/0.01mm.
- 1.45"/37mm Square, 2"/50mm Height.



Height	Grad.		Order No.
2"	0.0005"	without Magnetic Base	805-4002
4"	0.0005"	with Magnetic Base	805-4004
50mm	0.01mm	without Magnetic Base	805-4001
100mm	0.01mm	with Magnetic Base	805-4003

Electronic Z- Axial Preset Gauge

Optical Type

- With magnetic base(Dia.13.5mm). Probe face(Dia.56mm)
- The red lamp will light up when touched.
- Combined vertical and horizontal in a unit.
- Weight:0.5kgs



Height	Accuracy	Order No.
2"	0.0002"	805-4015
50mm	0.005mm	805-4010

Centering Indicators 定中心表

- All points and feelers included free precision measuring indicator.
- Designed for centering a work piece or fixture.
- Operates at any angle.
- Uses vertically or horizontally.
- Used for internal or external diameter.
- While spindle rotates, the centering indicator always faces the operator.
- Fitted plastic case/wooden case.



Sets

Description	Order No.
Inch Size Set	607-4904
Metric Size Set	607-4905

Metric Set Specification

	Specifications
Range	0-3mm
Length of Straight Feeler	45,100,154mm
Length of Curved Feeler	45,100,154mm
Length of Centre Point Feeler	52.5mm

Inch Set Accessories Included

Range	Description	Order No.
4.25"	Feeler, for inside diameter	607-4919
4.25"	Feeler, for outside diameter	607-4922
8"	Feeler, for inside diameter	607-4920
8"	Feeler, for outside diameter	607-4923
12"	Feeler, for inside diameter	607-4921
12"	Feeler, for outside diameter	607-4924
	Assembly Center Point Feeler	607-4925
	Restraining Arm	607-4926
	Hex Wrench	607-4928
	Clamping Shank	607-4911
	Main Body	607-4912
	Dial Component	607-4913
	Pin	607-4914
	Cam	607-4915
	Cam Screw & Nut	607-4916
	Feeler Holder	607-4917
	thumb screw	607-4918
	6 pcs feelers and screw set	607-4927



Inch Set Specification

	Specifications
Length	6-7/8"
Shank	3/8" dia. X 7/8" long
Weight	9-1/2" oz net 1 lbs. 14 oz
Feeler ball	1/8" diameter
Measuring range	.250" axis offset
Capacity	Internal: 5/32 to 4-1/4" diameter External: 0 to 4-1/4" diameter
Speed	It is recommended that operation speed not exceed 800 RPM approximately
Locating accuracy	To within 0.0002" or true center
Graduation	0.0005"

Edge & Center Finders 寻边器

- Helps ensure accuracy by releasing an audible click when the tip jumps.
- Available in three sizes: 1/2", 3/8" and 10mm.
- Hardened and ground on all working surface.

Angle Finders



Shank Dia.	Tip Dia.	Order No.
3/8"	.20"	805-3112
1/2"	.20"	805-3116
3/8"	10mm	805-3127
1/2"	.500"	805-3165
10mm	10mm	805-3163

Center Finders



Shank Dia.	Order No.
3/8"	805-3131
1/2"	805-3133

Double end



Shank Dia.	Tip Dia.	Order No.
1/2"	.20"/.50"	805-3118
1/2"	5mm/10mm	805-3119

Combo Edge/Center Finders



Shank Dia.	Order No.
3/8"	805-3141
1/2"	805-3143

4Pcs Set

- Two single end and two double edge finders
- Include: (805-3112, 805-3165, 805-3118, 805-3143) 130, 132, 133, 134#

Order No. 805-3400

Electronic Edge Finders 光电寻边器

- Repeatability within .0002"/0.005mm.
- Made of stainless steel.
- Feature LED light.
- Two 1.5V cell batteries included.
- With 10mm diameter probe.



Short Shank

Repeatability	Shank Dia	Overall Length	order No.
0.005mm	20mm	98.4mm	805-3010
.0002"	3/4"/20mm	3-7/8"/97mm	805-3011
.0002"/0.005mm	1-1/4"/32mm	3-7/8"/97mm	805-3012

Long Shank

Repeatability	Shank Dia	Overall Length	Order No.
.0002"/0.005mm	3/4"/20mm	6-7/10"/170mm	805-3015
.0002"/0.005mm	1-1/4"/32mm	6-7/10"/170mm	805-3016

Beep Alert



Repeatability	Shank Dia	Overall Length	Order No.
.0002"/0.005mm	3/4"	7-1/2"	805-3017
.0002"/0.005mm	1-1/4"/32mm	7-1/2"/190mm	805-3018
0.005mm	19.05mm	190.5mm	805-3019

3D Alignment Indicators 3D 表

Efficiently finds edge, center or depth with jig bore, milling machines, lathes, CNC and EDM

- Convenient, rapid, accurate measurement on three axis-X, Y and Z.
- Physical characters of ruby sensing tip features: resistance against wear and negligible thermal expansion.
- Clamping shank diameter: 3/4"/20mm.
- Accuracy: .0004"/0.01mm.
- The stylus mechanism has a full 360°.

Radial Range	Radial Grad.	Axial Range	Axial Grad.	Sensing Tip Types	Order No.
0.4"	0.0005"	0.25"	0.00016"	Ruby	605-3000
0.4"	0.0005"	0.25"	0.00016"	Steel	605-3001
10mm	0.01mm	6mm	0.0032	Ruby	605-3005
10mm	0.01mm	6mm	0.0032	Steel	605-3006



Workshop Transfer Stand stainless steel

带微调可倾表架

- Overall Height 12"
- Base 3"x3.54"
- Revolutionary Design
- Large Capacity Positioning range
- Can Be Locked In Any Position
- Stainless Steel Construction

Order No. 625-8620

NEW



Granite Comparator Stands

花岗岩表座

- Micro screw fingertip control.
- 0.0005" flatness.
- Extreme stability.
- 6 x 6 x 2" base.
- 10" height.
- Accepts all A.G.D. indicators

Descriptions	Order No.
6x6x2" granite base only	625-8504
frame only	625-8508
6x6x2" base and frame	625-8510
6x6x2" base, frame & 1" indicator	625-8511



Steel Dial Comparator

Stand 铸铁表架

Indicator
not
Included

- 5-1/2x4-1/4" working surface.

Order No. 625-8520



Dial Gage Comparator Stand

铸铁表架

- Fine adjustment 180° slide travel with lock.
- Quick position adjustment.
- Used for holding 3/8"/8mm stem indicators and lug back.
- Cast iron base size: 3-7/8"x6", height: 8".
- The Indicator travel distance (from anvil to toper position): 6-3/4"
- Base and anvil height: 2-1/8", anvil dia.: 1".

Order No. 625-8530



Universal Measuring Stand

无磁表座

- Most useful on granite plates or other non-magnetic smooth surface
- The base with fine adjustment
- Dovetail groove for test indicators
- Clamp hole 8 mm (optional: hole 3/8")
- Main stem: $\phi 20 \times 245$ mm
- Branch stem: $\phi 12 \times 235$ mm
- Base (LxWxH): 115x70x60 mm
- Weight: 3.5 kg

Order No. 625-8630

NEW



"UNI-MAG"

Direct Mount Magnetic Base

园磁表座

- Permanent magnet.
- Fits all A.G.D. indicators

Size	Order No.
$\phi 2-1/4 \times 9/16$ "	625-0451
$\phi 1-3/4 \times 5/16$ "	625-0452



Height Transfer & Square Gage

钢底座垂直检测架

- 7.5" Post
- Indicator Rod And Clamp,
- Steel Base with F/Adj.

Order No. 625-8610

NEW



Center Finder Set

中心定位器

For accurately locating working points on drill presses, milling and other machines



Description	Individual Order No.	Set Order No.
.236" Indicator Holder	805-3311	805-3305
.250" Ball Contact	805-3312	
Chuck Body	805-3313	
.100" Disc Contact	805-3314	
Needle Point	805-3315	

Surface Gages

划线座

- Base and scribe are hardened.
- Bottom grooved for cylindrical work.
- Front recessed for depressing spindle below base level.
- Features fine adjustment.
- Base has 2 retractable gage pins to set against edge of a surface plate.
- Test indicator order No. 605-4710.

Description	Order No.
4 & 7" Spindles	625-8550
9 & 12" Spindles	625-8560
12 & 18" Spindles	625-8570

Surface gage and Test Indicator Sets

Description	Order No.
4&7" Spindles & Test indicator 0.03x.0005"	625-8555
9&12" Spindles & Test indicator 0.03x.0005"	625-8565
12&18" Spindles & Test indicator 0.03x.0005"	625-8575



Universal Measuring Stands

通用测量表架

Main Column Length: 150mm
Branch Column Length: 225mm
Base Size: 225x58x35mm
Weight: 3.2kg

Description	Order No.
with Fine Adjustment	625-0012
Without Fine Adjustment	625-0010



Magnetic Base for Uneven Surface

NEW

- Attache on shape or contour
- On/off knob
- Magnetic force: 60 kg
- Base (LxWxH): 75x46x54mm
- Tapped hole: M8x1.25mm
- Weight: 0.6 kg

Order No. 625-0430



Magnetic Stands 磁性表座

- Accepts all A.G.D dial indicators with lug backs.
- Accepts dial test indicator stems .375"/9.52mm dia. and .156"/3.96mm dia.
- On and off lever releases magnet, base doesn't have to be pulled off, no risk of marring polished surfaces.
- Quick adjustment clamp.
- Universal adjustment in horizontal and vertical planes.

Base Only with Switch On/Off

Magnetic Power	Dimensions	Order No.
40kgs	63x50x55mm M8	625-0940
60kgs	63x50x55mm M8	625-0960
70kgs	70x45x65mm M10	625-0961
80kgs	70x50x55mm M8	625-0980
80kgs	70x50x55mm M10	625-0981
100kgs	88x50x55mm M10	625-0982



Standard Fine Adjustment

Magnetic Power	Working Stem	Base Size	Standard Order No.	With Fine Adjustment Order No.
40kgs	176mm/12mm	63x50x55mm	625-0300	625-0340
60kgs	176mm/12mm	63x50x55mm	625-0301	625-0341
80kgs	176mm/12mm	70x50x55mm	625-0302	625-0342
60kgs	225mm/16mm	63x50x55mm	625-3301	625-3341
80kgs	225mm/16mm	70x50x55mm	625-3302	625-3342
100kgs	360mm/20mm	88x50x55mm		625-0360

Magnetic Stands

带微调磁性表座

- Features finadjustment
- Extra stem, one main stem, tow branch stems
- with ON/OFF magnetic base



Magnetic Power	Base Dimension	Tapped Hole	Main Stem	Branch Stem	Order No.
60kgs/130lbs	60x50x55mm	M10x1.25	20x400	16x360, 12x150	625-0350

Vacuum Base Holder 真空座

With Suction Base

- Standard holder mounted on a powerful Vacuum Base
- Most useful on granite plates or other non-magnetic smooth surface
- features an 80mm diameter powerful suction pad
- ON/OFF lever for easy attaching of removing
- 3-1/2" Dia, M8x1.25 Mounting



Order No. 625-0041 Order No. 625-0042 Order No. 625-0040

Mechanical Universal Magnetic Stands

机械万向磁表座

Aluminum Alloy Arm

- Multi-nimble joint for instant fixation in any position.
- Fine adjustment knob.
- On/Off switch on base
- Working stem at 280mm

Magnetic Power	Base Dimension	Order No.
60kgs	63x50x55mm	625-1162
80kgs	70x50x55mm	625-1182



Hydraulic Universal Magnetic Stands

液压万向磁力表座

Aluminum Alloy Arm

Magnetic Power	Working Stem	Base Dimension	Order No.
60kgs	330mm	63x50x55mm	625-1361
60kgs	380mm	63x50x55mm	625-1362
80kgs	330mm	70x50x55mm	625-1381
80kgs	380mm	70x50x55mm	625-1382



Steel Arm

- Unique hydraulic clamping system.
- Can hold all style dial indicators and dial test indicators.
- On-off switch base.

Magnetic Power	Working Stem	Base Dimension	Order No.
60kgs	380mm	63x50x55mm	625-1360
80kgs	380mm	70x50x55mm	625-1380



Universal Magnetic Base Holders

机械万向磁表座

- Multi-nimble joint for instant fixation in any position.
- Fits dovetail & 3/8" or 8 mm stem indicator.
- Fine adjustment knob.
- On-off switch on base.

Magnetic Power	Base Size	Steel Arm Order No.	Alloy Arm Order No.
40kgs	2x2x2-1/8"	625-1140	625-1141
60kgs	2-1/4x2x2-1/8"	625-1160	625-1161
80kgs	2-3/4x2x2-1/8"	625-1180	625-1181



Mini Magnetic Bases

迷你磁性表座

- Articulated arm style magnetic base positions and lock easily.
- Size of Magnetic Base: 30x30x30mm(1-1/5x1-1/5x1-1/5").
- One knob mechanically tightens both arms.
- Overall Stem Length:12".

Switch On/Off

Order No. 625-2627



Push Button On/Off

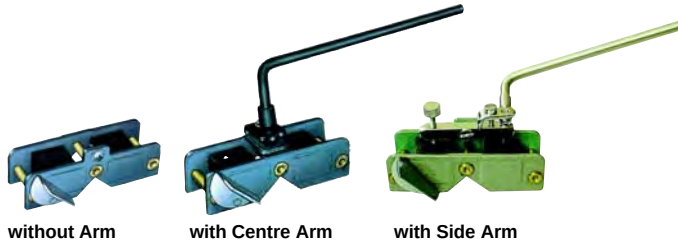
Order No. 625-2617



Magnetic Base Indicator Holders

小磁表座

Full magnetic base. Non-magnetic stainless steel holding rod, set in hardened universal ball socket. Fine precision adjustment controlled by thumb screw allowing minute adjustments. Hammered blue base finish...other parts are chrome plated or stainless steel. Magnetic release.



Descriptions	High Rod	Order No.
3-1/2x1-1/8x1" without Arm		625-0470
3-1/2x1-1/8x1" with Centre Arm		625-0472
3-1/2x1-1/8x1" with Side Arm	6"x1/4"	625-0480

Magnetic Base Indicator Holder

小磁表座

Accommodates almost any type test and dial indicator. Large 1/4" lug back type indicators mount in special links for more flexible in position. Precision lateral adjustment enables better zero settings. Magnetic pull-over 50lbs.



Base	Order No.
3-1/2x1-1/8x1-1/2" with Side Arm	625-0473

Adjustable Magnetic Connector

磁性连接器

Two permanent magnets for joining of parts in drilling, scraping, welding, etc. Adjustable to any angle & secured by wing nuts.



2 bars 2x1x1"
Order No. 625-0115

Magnetic Base Indicator Holder & Sets

小磁表座

- Powerful magnetic pull.
- Six mounting locations for indicators and accessories.
- Three 1/4"-20 tapped holes.
- One 10-32 tapped hole.
- One 3/8" mounting hole.
- One V-shaped Mounting Hole.
- 4"x1"x1".



Versatile, Powerful, Compact & Rugged

Descriptions	Order No.
Tiny-Titan Base	625-0450
Base & 1" dial indicator (605-4070)	625-0455
Base & 2" dial indicator (605-4205)	625-0460

Mini Magnetic Stands

圆小磁表座

Standard Model

- Height of base: 1"
- Diameter of base: 1"

Description	Order No.
with Fine Adjustment	625-0562
Without Fine Adjustment	625-0560



With Rod

- Height of base: 1"
- Diameter of base: 1"
- Height of rod: 3-1/2"
- Diameter of rod: 1/4"

Description	Order No.
with Fine Adjustment	625-0572
Without Fine Adjustment	625-0570



Universal Magnetic Indicator Holders

微型万向磁力表座

- Excellent workmanship on many applications.
- Fine adjustment clamp.
- Dovetail clamp for test indicator.
- 1/4" holes for 1/4" stem indicator.
- All knurled knobs and lock screws.



Circular Pot Base
625-0515



Circular Pot Base
625-0520



Square Base
625-0510

Push Button Magnetic Bases

按键式磁表座

- Provided with ON/OFF push button.
- Especially designed for use with dial gages, to work on surface plate and machine table.
- Complete with powerful magnet.

Order No. 625-0900



- Provided with ON/OFF push button.
- Especially designed for use with dial gages, to work on surface plate and machine table.
- Complete with powerful magnet.

Fine Adjustment

Description	Order No.
with Fine Adjustment	625-0910
Without Fine Adjustment	625-0905



DIN Magnetic Stands

带微调磁性表座

- 70 kg pull, switch On/Off base 70x45x65mm. M10
- Working stem $\phi 16 \times 230 \text{mm} / \phi 12 \times 200 \text{mm}$. M10
- With fine adjustment.

Description	Order No.
Base & Holder Set	625-0343
Dial Gage Holder Only	625-0201
Base Only	625-0961



Flexible Indicator Holders

蛇型万向磁力表座

Round Base

- Ideal for very tight work areas.
- Mounted pot magnetic base-1-3/8" diameter x 1-1/8" high



25 lbs. pull with 5" post and fine adjustment.

Order No. 625-0575

13/64x3-1/8" stem, 15kg pull, 9-3/4" height

Order No. 625-0925

Square Base

- Ideal for very tight work areas
- Mounted pot magnetic base-square, 25 lbs. pull with 5" post and fine adjustment.



Indicator not included

Order No. 625-1025

Flexible Arm Magnetic Base Holder

蛇型万向磁力表座

This product is made under the advanced technology. It is an ideal tool used for trusting random angle and internal hole.

Magnetic Power: 60kgs
Stem Length: 360mm
Stem Diameter: 16mm
Base Size: 60x50x55mm

Order No. 625-0950



Flexible Stem Magnetic Base Holders

蛇型万向磁力表座

- Stem flexes almost 360 degree.
- Locks into exact position with a cam lever-operated cable and tension adjustment.
- Accept all AGD type indicator

Magnetic Power	Base Size	Order No.
40kgs	2-19/64x2x2-1/8"	625-1040
60kgs	2-1/2x2x2-1/8"	625-1060
80kgs	2-3/4x2x2-1/8"	625-1080



Fine Quality Magnetic Base Holder

磁性圆表座

A permanent alnico magnetic base that easily attaches to any steel or iron surface in any desirable or convenient position, eliminating the use of clamps. The adjustable post assembly swivels into a 40° desired position and has a fine adjusting screw for final setting. Although intended primarily for test indicators, it is just as handy for inspection magnifiers, mirrors, safety shields, oil sprays, air lines, etc. Base diameter 1-1/4", with approximate 5-1/4" fine pivot adjustment post.

Description	Order No.
magnetic Base	625-0400



Plastic Casing Magnetic Stand

塑料磁性表座

Magnetic Power: 60lbs/30kgs
Overall Height: 6"
Branch Column Length: 4-1/2"
Base Size: 1-1/2x1-1/2x1-3/4"
Weight: 2.1lbs

Order No. 625-0015



Universal Indicator Holder

万向表架

- Clamping dia. 1-7/8".
- Length from clamping bracket to indicator 4-1/2".
- Suitable for all popular indicators with 5/32" shank or dovetail.
- Mounts with single pressure screw directly on machine quill, by passing the working tool.
- Guaranteed accurate readings.
- For milling machines & jig bores.
- A quicker way of indicating.
- Does not disturb the working tool.

Order No. 625-8522



Economy Magnetic Bases

长条形磁性表座

- Single Universal Rod, has 3 diameters to permit mounting popular indicators without changing rods.
- Non magnetic ball seat is riveted directly to the pole piece for permanent anchorage and lifetime rigidity.
- Non-breakable plastic base.
- Strong Magnetic Pull.
- Full 360° swivel.

Description	Order No.
Style A	625-0920
Style B	625-0922

with fine adjustment

Description	Order No.
Style A	625-0921
Style B	625-0924



SL Series Magnetic Stand with fine guide screw adjustment

SL 系列微调磁性表座

- Feature fine guide screw adjustment
- With different magnetic base
- Accept dial test indicator
- Stems: $\phi 8.0$ or $\phi 3/8$ "
- Main stem: $\phi 12 \times 190$ mm
- Height gage bar
- Branch stem: $\phi 10 \times 190$ mm

Order No. 625-0017



Measuring Tool kit

蛇型万向表座带大力钳

Set Includes:

- Indicator: 0-1"
- Flexible stem holder almost 360 degrees, Length: 350mm
- 7" Locking plier for holding and clamping objects regardless of shape or size.
- Fixing block
- Finished in fitted plastic case

Flexible stem holder with Locking plier

Order No. 625-1090



Flexible stem holder with
Locking plier & indicator

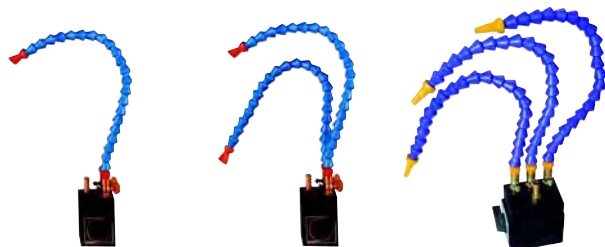
Order No. 625-0090



Magnetic Base Quick Lock Coolant Hose Systems

磁性喷液器

- Powerful magnet base with On/Off switch.
- Featured 1, 2 or 3 1/4" dia. flexible coolant hoses.



Magnetic Power	Hose No. & Length	Base Size	Order No.
50kgs	1 x 14"	2-1/2 x 2 x 2-7/8"	625-0402
80kgs	1 x 14"	2-3/4 x 2 x 2-7/8"	625-0404
50kgs	2 x 14"	2-1/2 x 2 x 2-7/8"	625-0406
80kgs	2 x 14"	2-3/4 x 2 x 2-7/8"	625-0408
50kgs	3 x 15"	2-1/2 x 2 x 2-7/8"	625-0410
80kgs	3 x 15"	2-3/4 x 2 x 2-7/8"	625-0412

Pot Magnets

圆形磁性表座体

- For use as magnetic fasteners.
- Comes with plated keeper.



Diameter	Height	Hole	Order No.
2 1/32"	5/8"	5/16"-18	625-0382
7/8"	3/4"	5/16"-18	625-0384
1-1/16"	1"	5/16"-18	625-0386
1-3/8"	1-3/16"	5/16"-18	625-0388

Magnetic Base LED Lighting Units

LED 磁性灯座

NEW

- Magnetic base without switch
- Magnetic force: 12 kg
- The lamp needn't alternating current
- It's a flashlight, it only need three 3xAAA batteries
- Illuminant source selects LED bulb
- The metal tube length: 120mm
- Weight: 0.4kg

Order No. 625-1220



Magnetic Snap-Lock Flexible Lamps

磁性灯座

- Power magnetic base, magnetic force: 40kg
- Flexible arm is plastic
- Illuminant source selects incandescent lamp, 60W screw socket bulb.
- Arm length: 280mm, base size: $\phi 40 \times 25$

Power Supply	Order No.
220V/50HZ	625-1241
110V/60HZ	625-1242

- Powerful magnet base with On/Off switch.
- Guaranteed magnetic power.
- Flexible arm for any position adjustment.
- Bulb not included.
- Body size: 2 x 2 x 2 - 1/2".

Magnetic Power	AC	Order No.
40kgs	110V	625-1240
60kgs	110V	625-1260
60kgs	220V	625-1265
80kgs	110V	625-1280



Magnetic Base-Goose Neck Magnifier

磁性座放大镜

- Powerful magnetic base with ON/OFF Switch
- Flexible arm for any position adjust
- Flexible arm length: 300mm
- Power 2X

Order No. 625-1290



Magnetizer & Demagnetizer

充退磁器

- Used for Screw Driver/Small Parts

Size	Order No.
2x2x1"	625-0000



Economy Sine Bars 正弦规

- Hardened and ground.
- Center to center distance between center of rolls within .0003".
- Top parallel to bottom of rolls within .0002".
- Supplied with back plate.



Distance between Center of Rolls	Width	Order No.
2-1/2"	1"	647-9510
5"	1"	647-9512

3 Piece Inspection Set

三件套 1-2-3 垫块和正弦规套件

1-2-3 Blocks

- Precision Ground/Case Hardened
- Five 3/8-16 Tapped holes are provided for clamping operations.
- Squareness of all side is within .0001".
- Parallel accuracy .0003".



2-1/2" or 5" Precision Sine Bar

- Accurate to .004" on parallelism.
- Hardened and ground.
- Wide: 1"



Specification	No. of piece	Individual Order No.	Set Order No.
2-1/2" Sine bar	3Pcs/set	647-9510	630-4060
1-2-3 Blocks		630-4006	
5" Sine bar	3Pcs/set	647-9512	630-4062
1-2-3 Blocks		630-4006	

1-2-3, 2-3-4 or 2-4-6 Blocks

1-2-3, 2-3-4 和 2-4-6 垫块

- Precision ground and hardened on all sides.
- Ideal for mounting work for precision grinding and lay out.
- Feature 23 holes: 5 are tapped 3/8-16, the other 18 are untapped.
- Dimension accuracy: 0.0001"~0.0007"
- Hardness HRC 56-60.
- Supplied in matched pair.



Specification	Parallelism	Desc.	Order No.
1-2-3"	±.0001"	1 hole	630-4005
1-2-3"	±.0001"	23 holes	630-4006
1-2-3" TIN	±.0001"	23 holes	630-4029
1-2-3"	±.0001"	No hole	630-4007
1-2-3"	±.0002"	No hole	630-4008
1-2-3"	±.0002"	1 hole	630-4009
1-2-3"	±.0002"	23 holes	630-4010
1-2-3"	±.0001"	11 holes	630-4011
1-2-3" TIN	±.0001"	11 holes	630-4018

Specification	Parallelism	Desc.	Order No.
25-50-75mm	±.0050mm	23 holes	630-4012
25-50-100mm	±.0050mm	23 holes	630-4013
50-100-150mm	±.010mm		630-4014

Specification	Parallelism	Desc.	Order No.
2-3-4"	±.0002"	23 holes	630-4016
2-4-6"	±.0005"	23 holes	630-4020

Sine Bars 正弦规

Order No. 637-7556

Wide	Long	Center	Parallelism	Order No.
Thin	3	3	0.0001	637-7556



Order No. 647-9109

Wide	Long	H	Center accurate	Parallelism	Order No.
15/16"	5"	1-1/4"	0.0002"		647-9059
1-1/4"	10	1-1/4"	0.0002	0.0004"	647-9108
1	10	2	0.0002		647-9109
1	5	1-1/4"	0.0002		647-9157
2	5	1-1/4"	0.0002		647-9158

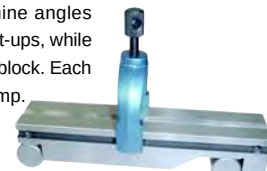


Vee Sine Bar

带卡 V 型架正弦规

5" Vee Sine Bar is an easy way to determine angles accurately for grinder and milling machine set-ups, while incorporating the ease of working with a Vee block. Each Vee sine Bar is furnished complete with clamp.

- Parallelism .0004".
- Center to center distance between rolls within .0002".

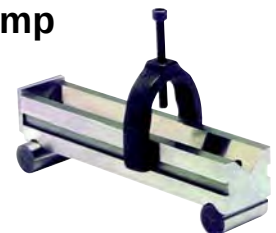


Order No. 647-9520

V-Sine Bar with Clamp

带卡 V 型正弦规

- 5" Sine Bar
- Accurate to .0003"
- 1-1/4" wide
- Hardened and ground
- Include clamp
- 1" round capacity
- Parallelism .0004"



Order No. 647-9612

1-2-3 Block Set

套装 23 孔 1-2-3 垫块

- Squareness: 0.0001" .
- Parallelism: 0.0001".
- Height accuracy in Pair: ±0.0001".
- Hardness HRC 56-60.
- 5 piece 3/8"-16 socket head cap screws.
- 1 piece hex key.
- Supplied in plastic case.



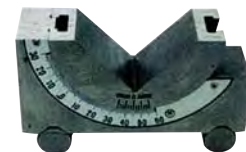
Order No. 630-4000

Tin Coated: 630-4028

Precision Sine Angle Blocks

正玄可调角度块

- 0-60° adjustable.
- 90° V Angle.
- Block Size: 4"x1-3/16"Wx2-1/4"H.
- Diameter of Roll: 5/8"
- Total Height of block (including rolls): 2-1/4"



Order No. 418-4941

Precision 0-60° Angle Blocks

可调角度块

- 0-60° adjustable angle by locking the hex screw on the bottom.
- Squareness: 0.0004"/0.01mm.
- Angle of Vee 90°.



Dimension	Order No.
1-3/16 x 1-7/8 x 4" (30 x 48 x 102mm)	418-4940
1-13/16 x 1-7/8 x 4" (46 x 48 x 102mm)	418-4950
7/8 x 1-1/4 x 3" (25 x 32 x 75mm)	418-4960

Economy Thin Parallel Set

套装平行铁

Useful for fast setting of work pieces to needed height in vise jaws. Made of hardened and precision ground steel.



Pairs	Specification	Length	Hole	Order No.
4Pairs/set	1/2", 5/8", 3/4", 7/8"	3-1/2"	1/4"	630-4257
5Pairs/set	1/2", 5/8", 3/4", 7/8", 1"	3-1/2"	1/4"	630-4255

Thin Angle Block Sets

角度块

A economical and direct method for angle set-ups. Hardened and precision ground on working surfaces. Two 1/4 holes for mounting. 3-1/2" long, 5/32" thick.

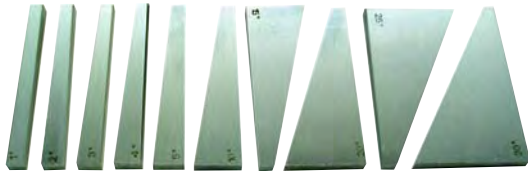


Piece	Specification	Order No.
6Pcs/set	1/2", 1- 5° by 1°	630-4258
5Pcs/set	6 -10° by 1°	630-4259
11Pcs/set	1/2 -10° by 1°	630-4251

Precision Angle Blocks & Sets

角度块

- Accuracy 0.0001" per inch.
- Furnished in 1° increments to 5° and 5° increments to 30°.
- Hardened and precision ground.
- Light magnetized for better holding.
- Size 3" long x 1/4" thick.



Size	Order No.	Size	Order No.	Size	Order No.
1/4°	630-0025	4°	630-4304	25°	630-4325
1/2°	630-0050	5°	630-4305	30°	630-4330
1°	630-4301	10°	630-4310	35°	630-4335
2°	630-4302	15°	630-4315	40°	630-4340
3°	630-4303	20°	630-4320	45°	630-4345
10Pcs/set, from 1° to 30°				630-4260	
12Pcs/set, from 1/4°, 1/2°, 1° to 30°				630-4261	

7Pcs Precision Angle Blocks Set

- Degree accuracy: $\leq 20''$
- Side: 70 long x 5mm thick.
- Rectangular size: 70x50mm



NEW

7Pcs/set, 15°, 30°, 45°, 50°, 60°, 75°, 90°

Order No. 630-4267

17 Pcs Angle Block Set

组合角度块

- Provides quick set-up for angles from 1/4° to 45°.
- Eliminates time dressing angles.
- Made from hardened steel.
- Supplied in a fitted case.
- Accuracy: 0.0003"



Piece	Specification	Order No.
17Pcs/set	Set Includes: 1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°, 35°, 40°, 45° & 2 riser blocks.	630-4275

8 Pcs Universal Angle Block Sets

组合角度块

- An accurate and direct method for angle set up in production and inspections.
- Tolerance ± 10 Sec. hardness HRC 45° to 50°.

Set includes:

3Pc. V-blocks: 10°, 15°, 30°.

5Pc. Angle blocks: 1°, 2°, 3°, 4°, 5°.



Piece	Specification	Order No.
8 Pcs/set	V- blocks : 4"L x 1-1/2" W x 1-1/2"H Angle blocks : 4"L x 1-1/2" W x 3/16"H	630-4270
8 Pcs/set	V-blocks: 3" L x 1-3/16" W x 1-3/16" H Angle blocks: 2-3/4" L x 1-3/16" W x 5/64" H	630-4265

Solid Angle Plates

角度块

- Hardened Steel
- Precision Ground Angles
- Each Block is 1/4" Thick



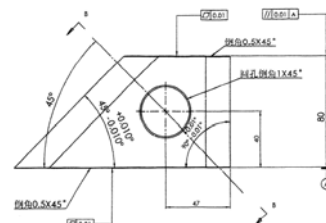
Specification	Angle	Order No.
3 x 3x 5/16"	45°/45°v/90°	418-4800
2 x 3-3/8 x 5/16"	30°v/60°/90°	418-4810
157x80x25mm	45°	630-4400
2Pcs/set, each one of above size		418-4820

Angle Plates

45° 角度块规

- 157x80x25mm HRC52-56

NEW



Order No. 630-4400

Bench Block 圆形工作台

- Very handy for holding work when driving pins, drilling, etc.
- V-groove across the face accommodates round and odd shaped stock.
- Hardened and ground.
- Smooth finish on the face preserves the work being held.
- Block is approximately 3" dia and 1-1/2" high.
- Holes vary in sizes from 1/8" to 5/8".



Order No. 420-5300

Micrometric Tangent Bar

螺钉微调正弦规

- Hardened steel and precision ground.
- Dial your desired angle with your fingers directly in degrees and minutes. No need to look up sine or tangent functions.
- Interlocking slots prevent slipping even at angles close to 90°.
- Featured with 30 minute dial at the end of MT-Bar, total length: 3.7".

Range of 0-5° Adjustment

Order No. 630-4299

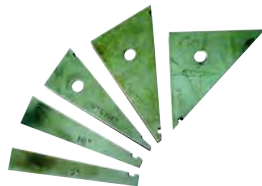


Angle Gage Blocks

角度块 - 带防滑槽

Featuring No-Slip Slots

- Used with micrometric tangent bar above or separately.
- Enable fast, accurate set-ups.
- Size .35"x 3" wide, hardened & precision ground.



Angle	Order No.
5°	630-4290
10°	630-4291
20/70°	630-4292
30/60°	630-4293
45°	630-4294

9 Pair Wavy Parallel Sets

波纹平行铁

- Economical, simple and easy to use in precision clamping of parts in drilling, boring, milling, grinding, assembly work, etc.
- Ideal for clamping a group of flat work pieces.
- Guaranteed to size in height and parallelism +/- 0.0002".
- Made of high-quality spring steel, hardened, stress-relieved and precision-ground.
- Thin and fragile work pieces can be secured without damage.

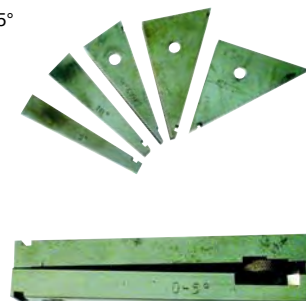


Micrometric Tangent Bar & Angle Gage Block Set

6 件套微调角度规

Set Includes:

One Micrometric Tangent Bar (630-4299)
Angle Gage Blocks with no-slip slot,
one each of 5°, 10°, 20°/70°, 30°/60°, 45°



Order No. 630-4262

Individual Pairs

Size	Order No.	Size	Order No.
1/2"	637-7401	1-1/8"	637-7406
5/8"	637-7402	1-1/4"	637-7407
3/4"	637-7403	1-3/8"	637-7408
7/8"	637-7404	1-1/2"	637-7409
1"	637-7405		

Sets

Range	Description	Wooden Case Order No.
1/2"-1-1/2"	Set of 9 Pairs	637-7400
9-23mm	Set of 8 by 2mm	637-7451
25-39mm	Set of 8 by 2mm	637-7461

Inspection Parallels

成对平行铁

- Made of high grade tool steel, stabilized and thoroughly hardened to HRC 58.
- Surface finish to 16 microinches.
- Parallels finished and sold in pairs.



Dimensions	Order No.	Dimensions	Order No.	Dimensions	Order No.
1/4 x 1/2 x 6"	637-7590	5/8x7/8x6"	637-7612	3/4x1x12"	637-7625
1/4 x 5/8 x 6"	637-7595	1/2x1-3/4x6"	637-7613	3/4x1-1/4x12"	637-7630
1/4x3/4x6"	637-7600	1/2x1-1/8x6"	637-7614	1x1-1/4x12"	637-7631
1/4x1-3/4x6"	637-7601	1/2x3/4x9"	637-7615	1x1-1/2x12"	637-7632
3/8x1/2x6"	637-7602	1/2x1-1/4x6"	637-7616	1x2x12"	637-7633
3/8x3/4x6"	637-7605	1/2x1-3/8x6"	637-7617	1-1/4x1-1/2x12"	637-7634
1/2x5/8x6"	637-7607	1/2x1-1/2x6"	637-7618	1-1/4x2x12"	637-7635
1/2x7/8x6"	637-7608	1/2x1-5/8x6"	637-7619	1-1/2x2x12"	637-7636
1/2x3/4x6"	637-7609	1/2x1x9"	637-7620	1-1/2x3x12"	637-7637
1/2x1x6"	637-7610	3/4x1x9"	637-7622	1/2x2x8"	637-7640
1/2x1x6"	637-7611	3/4x1-1/2x9"	637-7624	1/2x3x9"	637-7642

Metric Precision Parallel Sets 公制套装平行铁

7 Pair Set

- Parallel: ± 0.005mm
- Hardened and ground HRC 40-45
- Set includes one each of (Thickness x Height):
8.5 x (10,15,20, 24, 30)mm
12.6 x (38, 44)mm

Length: 150mm, Order No. 637-7777

12 Pair Set

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
10x(14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40)mm

Length: 120mm, Order No. 637-7962

8 Pair Sets

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
8x(12, 17, 22, 25, 28, 32, 36, 38)mm

Length: 120mm, Order No. 637-7972

Length: 160mm, Order No. 637-7974

14 Pair Set

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
10x(14, 16, 18, 20, 22, 24, 26, 28, 30, 32)mm
10x(35, 40, 45, 50)mm

Length: 150mm, Order No. 637-7960

8 Pair Set

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
8x(17, 22, 25, 28, 32, 36, 38, 43mm)

Length: 200mm, Order No. 637-7976

20 Pair Set

- Accuracy: ± 0.01mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
2x(5, 15, 20)mm
3x(6,11, 16, 21)mm
4x(7, 12, 17, 22)mm
5x(8, 13, 18, 23)mm
6x(9, 14, 19, 24)mm

Length:100mm, Order No. 637-7964

9 Pair Sets

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
4x(10, 14, 18, 22, 26, 30, 34, 38, 42)mm

Length: 100mm, Order No. 637-7968

Length: 160mm, Order No. 637-7970

24 Pair Set

- Accuracy: ± 0.01mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
8x(11,16,21,26,31,36)mm step by 5mm
10x(13, 18, 23, 28, 33, 38)mm step by 5mm
12x(15, 20, 25, 30, 35, 40)mm step by 5mm
14x(17, 22, 27, 32, 37, 42)mm step by 5mm

Length:150mm, Order No. 637-7966

10 Pair Set

- Parallel: ± 0.005mm.
- Hardened and ground HRC 60-61
- Set includes one each of(Thickness x Height):
10x(14, 16, 18, 20, 22, 24, 26, 28, 30, 32)mm

Length: 150mm, Order No. 637-7959



Precision Thin Parallels & Sets 超薄平行铁 (成对)



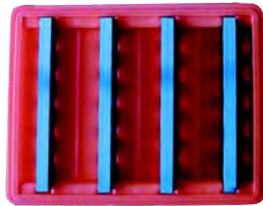
Thin style, .125 Thick, Matched pairs, Made of high grade alloy steel, hardened and ground, 2 hole in each parallel. Parallelism: ± 0.0002 , ± 0.001 to size in height.

1/8" 10 Pairs Sets

Description	Order No.
Plastic case	637-7030
Wooden case	637-7530

1/8" Individual Pairs

Dimensions	Hole Size	Order No.
1/8 x 1/2 x 6"	13/64"	637-7510
1/8 x 5/8 x 6"	1/4"	637-7511
1/8 x 3/4 x 6"	5/16"	637-7512
1/8 x 7/8 x 6"	5/16"	637-7513
1/8 x 1 x 6"	5/16"	637-7514
1/8 x 1-1/8 x 6"	3/8"	637-7515
1/8 x 1-1/4 x 6"	3/8"	637-7516
1/8 x 1-3/8 x 6"	7/16"	637-7517
1/8 x 1-1/2 x 6"	1/2"	637-7518
1/8 x 1-5/8 x 6"	1/2"	637-7519



Precision Parallel Sets 套装平行铁

Tolerance: Parallel ± 0.0003 " on 2 sides, top and bottom.

Dimensions: Within ± 0.001 " allowance.

Hardness: Hardened to HRC 55 TO 62 on 2 sides top and bottom only

The holes are designed for easier handing and set-ups.

Made from fine quality tool steel stress relieved against distortion, precision, ground and hardened.

These precision parallels are recommended for layout work, standards and set-ups.

3/16" 4 Pairs Sets

Descriptions	Order No.
Wooden case	637-7532
Plastic case	637-7032

3/16" Individual Pairs

Dimension	Order No.
3/16 x 1 x 6"	637-7504
3/16 x 1-1/4 x 6"	637-7505
3/16 x 1-1/2 x 6"	637-7506
3/16 x 1-3/4 x 6"	637-7507

1/2" 4 Pairs Sets

Descriptions	Order No.
Wooden case	637-7536
Plastic case	637-7036

NEW

1/2" Individual Pairs

Dimension	Order No.
1/2 x 1 x 6"	637-7500
1/2 x 1-1/4 x 6"	637-7501
1/2 x 1-1/2 x 6"	637-7502
1/2 x 1-3/4 x 6"	637-7503

3/16" & 1/2" 4 Pairs Sets

Descriptions	Order No.
Wooden case	637-7538
Plastic case	637-7038

3/16" & 1/2" Individual Pairs

Dimension	Order No.
1/2 x 1-1/2 x 6"	637-7502
1/2 x 1-3/4 x 6"	637-7503
3/16 x 1 x 6"	637-7504
3/16 x 1-1/4 x 6"	637-7505

6" 4 Pairs Sets

One pair each of 1/2"x3/8", 3/4"x1/4", 7/8"x3/16", 1x1/8"

Descriptions	Order No.
Wooden case	637-7000

6" 4 Pairs Sets

One pair each of 3/4"x3/8", 1"x1/4", 1-1/8"x3/16", 1-3/16"x1/8"

Descriptions	Order No.
Wooden case	637-7001

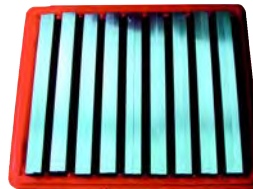


1/2" 8 Pairs Sets

Description	Order No.
Plastic Case	637-7034
Wooden Case	637-7534

1/2" Individual Pairs

Dimensions	Hole Size	Order No.
1/2 x 7/8 x 6"	5/16"	637-7800
1/2 x 1 x 6"	5/16"	637-7801
1/2 x 1-1/8 x 6"	3/8"	637-7802
1/2 x 1-1/4 x 6"	3/8"	637-7803
1/2 x 1-3/8 x 6"	7/16"	637-7804
1/2 x 1-1/2 x 6"	7/16"	637-7805
1/2 x 1-5/8 x 6"	1/2"	637-7806
1/2 x 1-3/4 x 6"	1/2"	637-7807



1/4" 9 Pairs Sets

Descriptions	Order No.
Plastic Case	637-7035
Wooden Case	637-7535

1/4" Individual Pairs

Dimensions	Hole Size	Order No.
1/4 x 3/4 x 6"	5/16"	637-7900
1/4 x 7/8 x 6"	5/16"	637-7901
1/4 x 1 x 6"	5/16"	637-7902
1/4 x 1-1/8 x 6"	3/8"	637-7903
1/4 x 1-1/4 x 6"	3/8"	637-7904
1/4 x 1-3/8 x 6"	7/16"	637-7905
1/4 x 1-1/2 x 6"	7/16"	637-7906
1/4 x 1-5/8 x 6"	1/2"	637-7907
1/4 x 1-3/4 x 6"	1/2"	637-7908

1/32" Ultra Thin Parallel Sets

套装平行铁

- Hardened to HRC50.
- Parallelism $\pm .0001$ ".
- Pair Height accuracy: ± 0.0001 ".

10 Pairs, 1/2" through 1-5/8" by 8ths

Description	Wooden case Order No.	Plastic case Order No.
Blue Finished	637-9036	637-9038
Black Finished	637-9037	637-9039



20 Pairs, 1/2" through 1-11/16" by 16ths

Description	Wooden case Order No.	Plastic case Order No.
Blue Finished	637-9032	637-9034
Black Finished	637-9033	637-9035



6 Pc. Adjustable Parallel Sets

可调平行铁

- Length range: 3/8" to 2-1/4" closed. Quickly adjustable, and locked with set screws for micrometer measurement.
- For layout inspection, stop work, set-up etc.



Individuals

Size	Order No.
3/8" to 1/2"	637-7561
1/2" to 11/16"	637-7562
11/16" to 15/16"	637-7563
15/16" to 1-5/16"	637-7564
1-5/16" to 1-3/4"	637-7565
1-3/4" to 2-1/4"	637-7566
6pcs 3/8-2-1/4"	637-7508
4pcs/set, 3/8- 1-5/16"	637-7567

Super Duty Vee Blocks and Clamps

成对 V 形铁

All V-Blocks are parallel, square and centered within 0.0002. Completely hardened and ground tool steel, Wooden case.

60° V-Block

Size LxWxH	Vee Capacity	Individuals Order No.	Pair Order No.
2-1/2 x 2-1/2 x 2"	1-3/8"	420-5415	420-5414
4x3x3	2-1/2"	420-5417	420-5416

90° V-Block

Size LxWxH	Vee Capacity	Individuals Order No.	Pair Order No.
1-3/8 x 1-3/8 x 1-3/16"	1-9/32"	420-5421	420-5420
2-3/8 x 2-3/8 x 2"	1-3/16"	420-5431	420-5430
4-1/8 x 4-1/8 x 3-1/16"	2-9/16"	420-5441	420-5440
2-1/2 x 2-1/2 x 2"	1-3/8"	420-5411	420-5410
4x3x3	2-1/2"	420-5412	420-5450
4x6x6	4-3/8"	420-5413	420-5460

V-Blocks & Clamps

多用途 V 形铁

Size LxWxH	Vee Capacity	Pair Order No.
1-3/4x2-1/2x2-3/4"	1-1/2"	420-5510
2-3/4x3-1/2x4-7/8"	2-1/8"	420-5520

Toolmakers' V-Block and Clamp

V 型块 - 底座带 V 槽

- All surfaces parallel and square are within .0002".
- Top 90° V-Groove central, parallel and square with all surface within .0003".
- Side 90° V-Groove on Base central, parallel and square with all surfaces within .00015".
- Harden steel ground.

Size(LxWxH)	Capacity	Order No.
3-1/2x1-7/8x1-7/8"	1-5/16"	420-5481

Multi-Use V-Blocks & Clamps

多用途 V 型块

- Stepped groove construction.
- 90° V groove are central, parallel and square with all surface within .0003".
- Harden steel ground.
- Two clamps only order No.: 420-5491.
- Sold in pair

Size(LxWxH)	Capacity	Order No.
2-3/4x2-3/8x2"	2"	420-5490

Magnetic V-Blocks 带开关磁性三角台

- Ideal for holding round and irregular shapes.
- Fine precision ground finish.
- Holds up to .750" on small vee.
- Holds up to 2.500" on large vee.

Standard Centered 90° V

Size LxWxH	Capacity	Magnetic Power	Order No.
2-3/4x2-3/8x2-7/8"	1-3/4"	150lbs	285-2405
4x2-5/8x3-11/16"	2"	260lbs	285-2410
2-3/4x2-3/8x2-7/8"	1-1/2"	150lbs	285-2415
5x2-3/8x2-7/8"	1-1/2"	150lbs	285-2416
4x3x3-1/16"	2"	150lbs	285-2417
4-7/8x2-3/8x2-7/8"	1-3/4"	150lbs	285-2406

Double Side Centered 90° V

Size(LxWxH)	Capacity	Order No.
4x2-3/4x3-3/4"	2"	285-2412
6x3x3-3/4"	2-1/4"	285-2414

Steel V-Blocks

铸铁成对 V 形铁

- Supplied in matched and numbered pairs.
- Vee blocks are manufactured from high quality castings. Properly seasoned against distortion.
- Blocks are accurately machined square and parallel.
- Dimensions:
A-OAL, B-Vee Width, C-Height, D-Thickness

A	B	C	D	Weight	Order No.
3"	1-3/4"	2-3/8"	1-5/16"	2-1/2 lbs	420-5700
2"	1-5/8"	1-3/8"	7/8"		420-5701
4"	2-1/4"	2-5/8"	1-5/8"	5 lbs	420-5702
5"	2-1/2"	3-1/8"	2"	8 lbs	420-5704
6"	3-1/8"	3-1/2"	2-1/2"	13 lbs	420-5706
7"	3-1/2"	4-1/2"	3"	27 lbs	420-5708
8"	4"	5-1/2"	4"	44 lbs	420-5710
10"	5"	6-5/8"	5"	73 lbs	420-5712
12"	6"	8"	7"	135 lbs	420-5714

Magnetic V-Blocks & Parallels

组合 V 形过磁铁

- Precision ground on all surfaces.
- Integrally aluminum cast into one solid piece.
- Hold in any direction on the magnetic chuck.

Combination Sets

Specifications	Order No.
One Pair of Parallels 4x2x1"	285-2100
One Pair of V Blocks 2x2-3/8x1-7/8"	
One Pair of Parallels 4x2x1"	285-2110
One Pair of V Blocks 4-3/8x2-3/8x1-7/8"	

V-Blocks & Parallels

Size LxWxH	Individual Order No.	Pair Order No.
V-Blocks 2x2-3/8x1-7/8"	285-2065	285-2060
V-Blocks 4-3/8x2-3/8x1-7/8"	285-2075	285-2070
Parallels 4x2x1"	285-2055	285-2050

V-Blocks & Clamps 铸钢弓形卡成对 V 形铁

- Designed for layout work or firmly holding circular workpiece during drilling, milling, and grinding.
- Made of hardened tool steel machined and ground to close tolerance.
- Sold in pair which includes 2 V-Blocks and 2 clamps.

Capacity	Dimensions	Sets Order No.	Clamps Only Order No.
1"	1-1/4"Hx1-1/4"Wx1-5/8"L	420-3010	420-3011
1"	1-3/8"Hx1-5/8"Wx1-3/4"L	420-3019	420-3018
1-1/2"	1-5/8"Hx1-3/4"Wx2-3/4"L	420-3027	420-3026
1-1/2"	1-3/4"Hx2-1/2"Wx2-3/4"L	420-3035	420-3034
2-1/8"	2-3/4"Hx3-1/2"Wx4-7/8"L	420-3043	420-3042

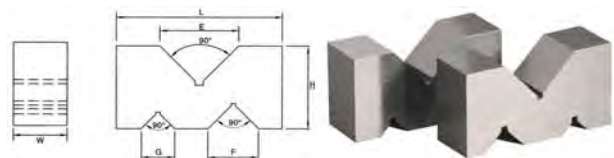
Magnetic V-Blocks 磁性 V 型块

- Holds cylindrical workpieces for grinding.
- Precision ground flat, square and parallel to 0.001"/0.02mm.
- Sold in pairs.

Size HxWxL	Capacity	Magnetic Power	Order No.
50x40x70mm	2"/50mm	15kg/33lbs	625-2515
80x50x100mm	3-1/16"/80mm	20kg/44lbs	625-2520
100x50x150mm	3-31/32"/125mm	23kg/50lbs	625-2523

Precision Non-Magnetic M Type V-Blocks

精密无磁V型块



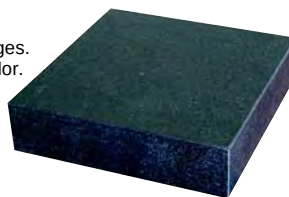
NEW

Size(LxHxW)	E	F	G	Order No.
2" 50X24X19mm	24	17	13	420-3105
3" 75X35X24mm	37	24	16	420-3110
4" 100X52X33mm	50	30	20	420-3115
5" 125X69X44mm	63	37	26	420-3120
6" 150X80X50mm	75	45	30	420-3125
7" 175X90X62mm	87	50	35	420-3130
8" 200X110X70mm	100	60	40	420-3135

Granite Surface Plates 花岗石平板

Hardest uniformity of all granite surface plate

- Lowest temperature coefficient, least responsive to temperature changes.
- Moisture and corrosion free, no rusting, no oiling, will not stain or discolor.
- Practically maintenance free, fast easy to clean.
- Smooth Ball-Bearing" surface.
- Resists dust and abrasives, Non-magnetic.



DIN876-83

Size	Grade 0 Order No.	Grade 00 Order No.
300x200x50mm	641-0001	641-0070
300x300x70mm	641-0005	641-0075
400x250x70mm	641-0010	641-0080
400x400x100mm	641-0015	641-0085
630x400x100mm	641-0020	641-0090
630x630x130mm	641-0025	641-0095
800x500x130mm	641-0030	641-0100
1000x630x150mm	641-0035	641-0105
1000x750x150mm	641-0040	641-0110
1000x1000x150mm	641-0045	641-0115
1200x800x150mm	641-0047	641-0117
1600x1000x200mm	641-0050	641-0120
2000x1000x250mm	641-0055	641-0125
2000x1600x300mm	641-0060	641-0130
2500x1600x300mm	641-0065	641-0135

GGG-P-463C-73 Inspection

Grade "A"

Size	Thick- ness	Overall Accuracy	0-Ledge Order No.	2-Ledge Order No.
9x12"	3"	.000050"	640-0400	640-0402
12x12"	3"	.000050"	640-0410	640-0412
12x18"	3"	.000050"	640-0420	640-0422
18x18"	3"	.000050"	640-0430	640-0432
18x24"	3"	.000075"	640-0440	640-0442
18x24"	4"	.000075"	640-0445	640-0446
24x24"	3"	.000075"	640-0450	640-0452
24x24"	4"	.000075"	640-0460	640-0462
24x36"	4"	.0001"	640-0470	640-0472
24x36"	5"	.0001"	640-0474	640-0476
36x48"	4"	.0002"	640-0473	640-0482
36x48"	6"	.0002"	640-0480	640-0483
36x60"	6"	.00025"	640-0490	640-0492

GGG-P-463C-73 Tool Room

Grade "B"

Size	Thick- ness	Overall Accuracy	0-Ledge Order No.	2-Ledge Order No.
5x6"	2"	.0001"	640-0070	640-0177
6x8"	2"	.0001"	640-0080	640-0188
8x12"	2"	.0001"	640-0090	640-0199
9x12"	2"	.0001"	640-0101	640-0103
9x12"	3"	.0001"	640-0100	640-0102
12x12"	3"	.0001"	640-0110	640-0112
12x18"	3"	.0001"	640-0120	640-0122
12x18"	4"	.0001"	640-0125	640-0126
18x18"	2"	.0001"	640-0127	640-0128
18x18"	3"	.0001"	640-0130	640-0132
18x24"	3"	.0001"	640-0140	640-0142
18x24"	4"	.00015"	640-0145	640-0146
18x36"	4"	.0002"	640-0147	640-0148
24x24"	3"	.00015"	640-0150	640-0152
24x36"	4"	.0002"	640-0160	640-0162
24x48"	4"	.0003"	640-0170	640-0172
36x48"	4"	.0004"	640-0180	640-0182
36x48"	6"	.0004"	640-0184	640-0186
36x60"	6"	.0005"	640-0190	640-0192
36x72"	6"	.0006"	640-0200	640-0202
48x60"	6"	.0005"	640-0210	640-0212
48x72"	6"	.0007"	640-0220	640-0222
48x84"	8"	.0007"	640-0230	640-0233
48x96"	12"	0.0008"	640-0240	640-0241

JISB7510-78

Size	Grade1 Order No.	Grade 0 Order No.
300x200x50mm	642-0001	642-0070
300x300x70mm	642-0005	642-0075
400x250x70mm	642-0010	642-0080
400x400x100mm	642-0015	642-0085
630x400x100mm	642-0020	642-0090
630x630x130mm	642-0025	642-0095
800x500x130mm	642-0030	642-0100
1000x630x150mm	642-0035	642-0105
1000x750x150mm	642-0040	642-0110
1000x1000x150mm	642-0045	642-0115
1200x800x150mm	642-0047	642-0117
1600x1000x200mm	642-0050	642-0120
2000x1000x250mm	642-0055	642-0125
2000x1600x300mm	642-0060	642-0130
2500x1600x300mm	642-0065	642-0135

GGG-P-463C-73 Laboratory

Grade "AA"

Size	Thick- ness	Overall Accuracy	0-Ledge Order No.	2-Ledge Order No.
9x12"	3"	.000025"	640-0600	640-0602
12x18"	3"	.000025"	640-0620	640-0622
18x24"	4"	.000037"	640-0640	640-0642
24x36"	6"	.000050"	640-0660	640-0662
36x48"	6"	.0001"	640-0680	640-0682

Granite Surface Plate Stands

花岗石平板支架



Bolted Construction

- Steel plates bolted construction for easy assembly and disassembly.
- Complete with 4 leveling screws for easy level adjustment.
- Long lasting painting.
- Bottom tool rack for your convenience.

Sizes	Stand Height	Order No.
18x24"	36"	64S-1110
24x24"	36"	64S-1115
24x36"	36"	64S-1120

Granite Surface Plate Stands

花岗石平板支架

- Overall working height 36".
- 4 leveling screws at the bottom of stands, 5 small jacks on the top of stands to adjust level for metric size.
- Support all grade surface plates.



Inch

Size	0-ledge Order No.	2-ledge Order No.
18x24"	64S-1010	64S-1012
24x36"	64S-1020	64S-1022
36x48"	64S-1030	64S-1032
36x60"	64S-1040	64S-1042
48x60"	64S-1050	64S-1052
48x72"	64S-1060	64S-1062
60x72"	64S-1063	64S-1064
48x96"	64S-1070	64S-1072

Metric

Size	Order No.	Size	Order No.
400x250mm	641-3005	800x800mm	641-3050
400x400mm	641-3010	1000x630mm	641-3055
500x400mm	641-3015	1000x750mm	641-3060
500x500mm	641-3020	1000x800mm	641-3065
600x500mm	641-3025	1000x1000mm	641-3070
600x600mm	641-3030	1200x800mm	641-3075
630x400mm	641-3035	1500x1000mm	641-3080
630x600mm	641-3036	1600x1000mm	641-3085
630x630mm	641-3040	2000x1600mm	641-3090
800x500mm	641-3045	2500x1600mm	641-3095

Granite V-Blocks

花岗石角板



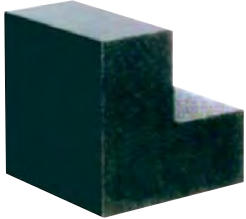
- Support or hold cylindrical pieces during inspection.
- 90° V centered and parallel to the bottom, two sides and square to the ends.
- Furnished in matched pairs.

Size	Accuracy	Order No.
3x3x3"	0.001/6"	640-0001
4x4x4"	0.001/6"	640-0002
6x6x6"	0.001/6"	640-0003

Size	Grade 0 Order No.	Grade 00 Order No.
63x63x63mm	641-6101	641-6001
100x100x100mm	641-6103	641-6003
160x160x100mm	641-6105	641-6005
250x250x160mm	641-6107	641-6007

Granite Angle Plates

花岗石角板



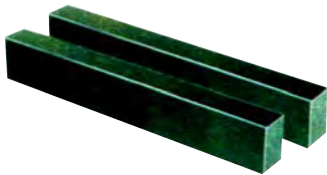
- Furnished with two finished faces or four finished faces.
- When four faces are finished, they are the 2 "L" faces, back and bottom of the angle plate.
- Two faces models have only back and bottom finished.

Size	Accuracy	2Faces	4Faces
		Order No.	Order No.
4x4x4"	0.005/6"	640-0004	640-0044
6x6x6"	0.005/6"	640-0006	640-0066
6x9x12"	0.005/6"	640-0009	640-0069

Size	2 Faces		4Faces	
	grade 0 Order No.	grade 00 Order No.	grade 0 Order No.	grade 00 Order No.
160x25x16mm	641-7211	641-7201	641-7411	641-7401
250x40x25mm	641-7213	641-7203	641-7413	641-7403
400x63x40mm	641-7215	641-7205	641-7415	641-7405
830x100x63mm	641-7217	641-7207	641-7417	641-7407

Granite Parallels

花岗石平行块

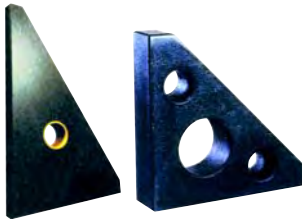


- Used to elevate parts above the surface plate, so that parts with steps and shoulders can be inspected quickly and easily. Each one only has two face finished.
- Supplied in pairs.

Size	Accuracy	Order No.
3/4x1x6"	.000060"	640-0011
1x2x12"	.000100"	640-0022
1-1/2x3x18"	.000300"	640-0033
2x4x24"	.000500"	640-0040
2x4x30"	.000500"	640-0050

Size	Grade 0 Order No.	Grade 00 Order No.
20x25x150mm	641-4020	641-5020
25x50x300mm	641-4025	641-5025
40x75x450mm	641-4040	641-5040
50x100x600mm	641-4050	641-5050
50x100x750mm	641-4055	641-5055

Granite Squares



花岗石直角尺

- For inspecting squareness of machine spindle and other work pieces.
- Round hole size 160,250mm.

Size	Grade 0 Order No.	Grade 00 Order No.
100x63x16mm	641-2011	641-2001
160x100x20mm	641-2012	641-2002
250x160x25mm	641-2013	641-2003
400x250x40mm	641-2014	641-2004
630x400x80mm	641-2015	641-2005
1000x630x80mm	641-2016	641-2006

Granite Square Rulers

花岗石方尺



On inspection of verticality and parallelism as well as absolute 90° measuring base.

Size	Grade 0 Order No.	Grade 00 Order No.
100x100x20mm	641-2111	641-2101
160x160x25mm	641-2112	641-2102

Size	Grade 0 Order No.	Grade 00 Order No.
200x200x25mm	641-2113	641-2103
250x250x30mm	641-2114	641-2104
300x300x30mm	641-2115	641-2105
400x400x40mm	641-2116	641-2106
500x500x50mm	641-2117	641-2107

Granite Straight Rules

花岗石平尺



- For inspecting the straightness and flatness

Size	Grade 0 Order No.	Grade 00 Order No.
400x60x25mm	641-1001	641-1101
630x100x35mm	641-1002	641-1102

Size	Grade 0 Order No.	Grade 00 Order No.
1000x160x50mm	641-1003	641-1103
1600x250x80mm	641-1004	641-1104
2000x300x100mm	641-1005	641-1105

Granite Machine Component

花岗石构件

CNC Components make of granite, including base, column, beam and slideway.

The maximum dimension up to:
8000mm x 2500mm x 800mm (320"x100"x32")

We can provide our customers with a great variety of granite pieces which can be used for construction of drilling & milling machines for PCB.

The maximum dimension up to:
5000mm x 2500mm x 800mm (200"x100"x32")



Stereo-Microscopes 体视显微镜-45度倾角式.

Objective: Grouped From Any Two Objectives of 1X, 2X, 3X and 4X,
Working Distance: 1X-55mm, 2X-81mm, 3X-61mm, 4X-57mm
Wide Field Plane-Scope Eyepiece: WF10X, WF15X (Optional)
Total Magnification:
10X-20X, or 10X-30X, or 10X-40X, or 20X-30X, or 20X-40X, or 30X-40X
Articulated Free Binocular Head, Interpupillary Distance: 55-75mm, 45° Inclined;

XTD-3C

Illumination: Top/Bottom Light: 12V/10W
Halogen Lamp, with Diameter 95mm Frosted
Glass Stage Plate
Rack and Pinion Coarse Focusing Mechanism
With Slip Clutch and Tension Adjustment
Net Weight/Set: 2.4kg

Order No. 855-0711

XTD-3C-RC

Illumination: Top/Bottom Light: IWLED Lamp,
with Diameter 95mm Frosted Glass Stage Plate
(XTD-3C-RC:
with a Charger and 3 Rechargeable Batteries)
Rack and Pinion Coarse Focusing Mechanism
With Slip Clutch and Tension Adjustment
Net Weight/Set: 2.4kg

Order No. 855-0721



Stereo Microscopes

直立式体视显微镜

Upright Head Style

- Fully coated excellent optics gives erect image over a wide field of view, sharp and clear.
- Provide the original true color of the viewed object.
- Accurate alignment gives fatigue free viewing.
- Power Supply: 220V 60Hz/110V 50Hz.



Order No. 855-0002



Order No. 855-0003

20X, Pillar Stand

Eyepiece	Objectives	Light	Bulb	Order No.
10X	2X	Top	Halogen	855-0002
10X	2X	Top/Bottom	Halogen	855-0003

360° Rotatable

45° Inclined Head Style



Order No. 855-0063



Order No. 855-0043

20X/40X, Pillar Stand

Eyepiece	Objectives	Light	Bulb	Order No.	Order No.
10X	2X/4X	Top/Bottom	Halogen	855-0063	855-0043

10X-40X Zoom Stereo Microscopes

10-40X 连续变倍体视显微镜照明

- Sharp stereo erect image over a wide field view.
- 45° inclined and 360° rotational binocular head.
- Adjustable Pupil Distance: 2.1"-3"/55-75mm.
- Top/Bottom adjustable light.
- Working distance: 3.4"/85mm.



Eyepiece	Objectives	Types of Stands	Order No.
10X	1-4X	Pillar Stand	855-0301
10X	1-4X	Arm Stand	855-0303

Adjustable Arm Stereo Microscopes

体视显微镜 - 可调臂型

- Top Light: 12V/10W Halogen Bulb.
- Fully coated excellent optics gives erect image over a wide field of view, sharp and clear.
- Provide the original true color of the viewed object.
- Accurate alignment gives fatigue free viewing.
- Power Supply: 220V 60Hz/110V 50Hz.



Order No. 855-0082

Slim Stereo Microscopes

显微镜

- Top/Bottom Light.
- Adjustable Brightness.
- Working Distance 3"/76mm.



Eyepiece	Objectives	Stands	Order No.
10X	Rotated 2X, 4X	Pillar Stand	855-0861
10X	Rotated 2X, 4X	Arm Stand	855-0862
10X	Rotated 1X, 3X	Pillar Stand	855-0851
10X	Rotated 1X, 3X	Arm Stand	855-0852

Stereo Microscopes

体视显微镜-20X-40X

Long Distance Adjustment

Working Distance 3.75"/95mm



Eyepiece	Objectives	Types of Stands	Light	Order No.
10X	Rotated 2X, 4X	Pillar Stand	Top/Bottom Light	855-0803
10X	Rotated 2X, 4X	Arm Stand	Top/Bottom Light	855-0804
10X	Rotated 1X, 3X	Pillar Stand	Top/Bottom Light	855-0813
10X	Rotated 1X, 3X	Arm Stand	Top/Bottom Light	855-0814

Hand Held Refractometers 光学折射仪

Application:

Measuring cutting/grinding coolants, oil/water concentrations, also used as Brix Tester (Sugar related liquids fruit juices, soft drinks, wine, honey)

- Accurately measures industrial liquids.
- Easy to read scale.
- Maintain and control optimum performance mixture.
- Two items feature automatic Temperature Compensation System.



Refractometers are precision optical instruments designed to measure the concentration or mixture ratio of aqueous solutions

Range	Grad.& Accuracy	Description	Order No.
0-10%	0.1%	without ATC	854-4010
0-10%	0.1%	with ATC	854-4011
0-18%	0.1%	without ATC	854-4018
0-32%	0.2%	without ATC	854-4032
0-32%	0.2%	with ATC	854-4033
0-55%	1%	without ATC	854-4055

Pocket Microscopes 光学折射仪

- Use 2 AA batteries (not included)



For reading fine print, industrial quality control, fine inspections, textiles, etc.

Power	Description	Order No.
30X	Illuminated with Focusing Wheel	854-3112
30X	Illuminated with Focusing Wheel	854-3113
60-100X	Illuminated with Focusing Wheel	854-3114

Triplet Optical Comparators 测量放大镜 - 带分划板

- Reticles are made of glass offered great stability.
- Each comparator comes with one reticle.

Magnifier & Reticles Sets

Individual Magnifiers



Qty of Reticles	Lens Dia.	Power	Order No.
5	25mm/1"	7X	854-7002
8	25mm/5/6"	7X	854-7000
5	25mm/1"	10X	854-7003
5	32mm/1-1/2"	10X	854-7004
8	25mm/5/6"	10X	854-7001

Power	Lens Dia.	Order No.
7X	25mm/5/6"	854-7007
7X	25mm/1"	854-7008
10X	25mm/5/6"	854-7010
10X	25mm/1"	854-7110
10X	35mm/1-1/2"	854-7111

Magni-Visors 头盔式放大镜

Used for reading fine print and precision inspection



Order No. 854-3102

- Outer Lens 1.8X, inner "flip-down" lens for total 2.3X.
- With 2X Auxiliary Lens, for total 4.8X magnification.



Order No. 854-3103

- Outer Lens 1.8X, inner "flip-down" lens for total 2.3X.
- With 2X Auxiliary Lens, for total 4.8X magnification.
- 2 Incandescent bulbs, 2 AAA batteries.

Optional Accessories For Stereo Microscopes

非连续变倍体视显微镜附件

Eye pieces

Description	Order No.
5X 18mm	855-0211
10X 20mm	855-0212
15X 13mm	855-0213
20X 10mm	855-0214



Objectives

Description	Order No.
1X	855-0231
2X	855-0232
3X	855-0233
4X	855-0234
6X	855-0236



Bulbs

Description	Order No.
Incandescent Bulb 12V/10W	855-0221
Halogen Bulb 12V/10W	855-0222

Triplet Jewel Magnifiers

三层粘和珠宝放大镜

Designed for very distinct, sharp and no color distortin magnified images

- Hasting triplet lens system-three separate lenses bonded together.
- Case colors: Bright, Black and Golden.
- Handle type swing case.
- Glass lens



Without Coating

Power	Lens Dia.	Chrome Plated Bright Order No.	Power Coated Black Order No.	TiN Coated Golden Order No.
10X	18mm	854-5010	854-5110	854-5210
15X	18mm	854-5015	854-5115	854-5215
20X	18mm	854-5020	854-5120	854-5220
30X	18mm	854-5030	854-5130	854-5230
10X	21mm	854-5310	854-5410	854-5510
15X	21mm	854-5315	854-5415	854-5515
20X	21mm	854-5320	854-5420	854-5520
30X	21mm	854-5330	854-5430	854-5530

With Coating

Power	Lens Dia.	Chrome Plated Bright Order No.	Power Coated Black Order No.	TiN Coated Golden Order No.
10X	18mm	854-8010	854-8110	854-8210
15X	18mm	854-8015	854-8115	854-8215
20X	18mm	854-8020	854-8120	854-8220
30X	18mm	854-8030	854-8130	854-8230
10X	21mm	854-8310	854-8410	854-8510
15X	21mm	854-8315	854-8415	854-8515
20X	21mm	854-8320	854-8420	854-8520
30X	21mm	854-8330	854-8430	854-8530

Folding Pocket Magnifiers

折叠袖珍放大镜

- With a swing away case, servers as a handle.
- Glass Lens



Power	Lens Dia.	Description	Order No.
10X	17mm	Jeweller's Magnifier	854-1317
10X	21mm	Jeweller's Magnifier	854-1321
5X-20X	30mm	3 pcs Lens	854-1339
3x	48.7mm	One Len,Leather Pouch	854-1348
4x	27mm	One Len	854-1361
3X-7X	27mm	2 pcs Lens	854-1362
4X-9X	30mm	3 pcs Lens	854-1363
4x	24mm	One Len With LED	854-1371
3X-7x	24mm	2 pcs Lens With LED	854-1372
4X-9X	24mm	2 pcs Lens With LED	854-1373

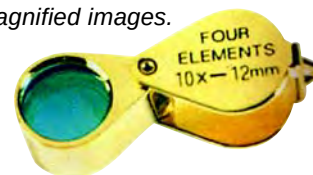
Four & Five Element Jewel Magnifiers

4和5层粘和珠宝放大镜

Increased ability of no color distortion, compare to Triplet

Lents, also have distinct magnified images.

- Glass lens



Without Coating

Power	Lens Dia.	No. of Lenses	Chrome Plated Bright Order No.	Power Coated Black Order No.	TiN Coated Golden Order No.
10X	12mm	Four	854-6010	854-6110	854-6210
15X	12mm	Five	854-6015	854-6115	854-6215
20X	12mm	Five	854-6020	854-6120	854-6220

With Coating

Power	Lens Dia.	No. of Lenses	Chrome Plated Bright Order No.	Power Coated Black Order No.	TiN Coated Golden Order No.
10X	12mm	Four	854-6310	854-6410	854-6510
15X	12mm	Five	854-6315	854-6415	854-6515
20X	12mm	Five	854-6320	854-6420	854-6520

Deluxe Shop Microscopes

简易珠宝显微镜

with Adjustment Focal Wheel

- Designed for very distinct, sharp and no color distortion magnified images.
- Glass lens
- Features illumination torch with 2 AAA batteries.

Power	Order No.
40X	855-0600
80X	855-0601



Shop Microscopes

简易珠宝显微镜

- Portable shop microscopes for precision and sharp inspection of work pieces.
- 2 in 1 metric and inch straight line scale.
- Glass lens
- 2 AAA batteries.

Power	Graduation	Order No.
20X	0.005"/0.1mm	854-0420
40X	0.0025"/0.05mm	854-0440
60X	0.001"/0.02mm	854-0460
100X	0.0005"/0.01mm	854-0500



Stainless Steel Tweezer Magnifiers

镊子放大镜

- Glass Lens

Lens Dia. 28mm, Power 5X

Order No. 854-1223



Pocket Illuminate Magnifier

袖珍照明放大镜

- Lens Size 40x40mm.
- Power 5X, 10X bifocal.
- Use 2 AA batteries(not include).
- Acrylic Lens

Order No. 854-3061



Rectangular Magnifiers

方形框放大镜



- Glass Lens
- Lens Size: 50x100mm,
- Power: 3X

Order No. 854-3011



- Acrylic Lens
- Bifocal Foldable Model
- Lens Size: 50x100mm, 3X, 6X

Order No. 854-3012

Helping Hand Magnifiers

三只手放大镜

- Cast Iron Base.
- Eliminates the use of hand held.
- Two spring clamps and magnifier work at any desired angle.
- Glass Lens

Lens Dia. 60mm, Power 2X



Order No. 854-1550

Round Magnifiers

手持放大镜

- Glass lens

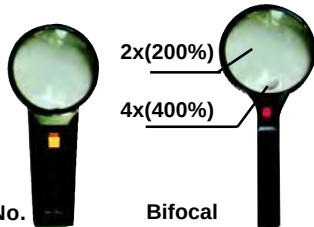


Lens Dia.	Power	Plastic Body Order No.	Plastic Handle Metal Hoop Order No.	Metal Handle Metal Hoop Order No.
100mm	3X		854-1800	854-1900
50mm	6X	854-1650	854-1850	854-1950
65mm	5X	854-1665	854-1865	854-1965
75mm	4X	854-1675	854-1875	854-1975
85mm	4X		854-1885	854-1985
90mm	3X	854-1690	854-1890	854-1990

Illuminated Magnifiers

手持灯式放大镜

- Switch on/off.
- Two AAA batteries for 854-1030, two C batteries for 854-1110, the rest models feature AA size batteries.
- Glass Lens



Order No. 854-1080

Bifocal Order No. 854-1091

Lens Dia.	Power	Order No.
80mm	2X	854-1080
90mm	2X, 4X	854-1091

Round Stand Magnifiers

桶式放大镜

- Glass Lens



Lens Dia.	Power	Order No.
30mm	10X	854-1530
75mm	3X	854-1575

Watchmakers' Loupes

钟表放大镜

- Glass Lens



Lens Dia.	Order No.
10X	854-1560
4X	854-1564
5X	854-1565
20X	854-1569

Digital Lux Meter

数字勒克斯计

Functions	Measuring Ranges
Display	LCD
Luminosity	0 ~ 50000 LUX
Accuracy	+/- (5%+1d)
Resolution	1 LUX
Overload Display	1
Battery	1x9V (6F22)
Size	105 x 70 x 20mm
Mfr's #	XL-101



Order No.856-0231

NON-CONTACT Infrared Thermometer

红外线测温枪

CE APPROVE

- Check temperature of engine,muffler , brakes and more
- Check temperature of tires and brakes
- Check for leaks around windows and doors
- Check temperature of heater vents or air conditioner
- Measures surface temperature without making contact
- Laser pointer for accurate use
- Easy to read large digital display

Specifications:

Temperature Range: -4°F-608°F(-20°C-320°C)

Accuracy: +/-2°C(+/-3°F)

Repeatability: +/-2%(+/-3°F) or 2% reading

Response Time: 500m Sec ,95%

Spectral Resonse:7-18um

Emissivity: 0.95

Ambient Operating Rang: 32-105°F

Storage Temp.: -4-150°F

Weight: 33 lb(not including battery)

Size: 6.3x3.54x1.7"

Power: 9V 6F22

Distance to spotL ratio: 6:1

Mfr's # EM520A



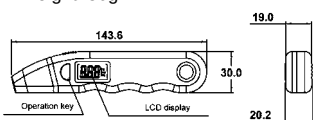
Order No.856-0520

Digital Tyre Gauge

数显电子胎压计

Features

- Large LCD display for easy reading
- Novel design whose shape harmonizes with human engineering
- Single key operation, manual ON/OFF, unit conversion, auto power off
- Four kinds of unit for measuring pressure: PSI,Bar ,Kgf/cm² ,Kpa
- One CR-2032, 3V lithium battery can last 24 months
- Working temp.range: -5°C-50°C
- Blister colour card for packing, which can be with customer's logo
- Available colours:elegant silver or sedate iron-grey
- Weight: 50g



Silver

Order No. 856-0301



Iron-gray Order No. 856-0302

Resolution	Range	Accuracy
0.1PSI	0-100PSI	+/-1%
0.01Bar	0-7.0Bar	
0.01kgf/cm ²	0-7.0Kgf/cm ²	
1Kpa	0-700Kpa	

Moisture Meter

水分分析仪

- Measure Fast & Easy To Operate
- The instrument is used for the measurement of water ratio
- Small size
- Light weight

Display:LED Display

Measuring Range:6~25%

Accuracy: +/-1

Battery:6F22(9V)x1

Size:160x62x28mm

Weight:150g(about)

Mfr's # EM-4G

Order No.856-0004



Hand & Power Tools

Batteries.....	448
Counter.....	433
Deburring Tools.....	422-430
Dividers.....	432
Inside & Outside Calipers.....	433
Jigs/Pullers/Hole Saw Arbors.....	442-443
Laser Levels.....	446-447
Manifolds.....	450
Telescoping Magnetic & Pickup Tools	445
Pliers.....	439
Pipe and Tubing Tools.....	440
Punches.....	434-438
Rulers ,& Taps.....	444
Scribers.....	430-431
Screwdriver	440
Spray Guns.....	448-449
Steel Stamps.....	434
Wrenches.....	440-442



Steel Scribers 划线针

One-End Scriber

Straight point with knurled handle. Total Length: 175mm

Order No. 830-2001



Plastic Handle Scriber

One straight and one bent point Total Length: 250mm
Black finish.

Order No. 830-0378



Replaceable Needle Point scriber

- Needle point are long lasting, simply replace with a new point
- Extra point stored under cap
- Use for scribing on stainless steel and other hard metals and for deep hole work
OAL: 5-5/16"

Order No. 830-2005



Pocket Scribers

Replaceable hardened and centerless ground point.
Point can be reversed into knurled body for safety.
Size: 1/4" x 2-3/8" x 4-3/4" (Body dia. x Point length x OAL)
Order No. 830-2003



Size: 3/8" x 2-7/8" x 5-7/8" (Body dia. x Point length x OAL)
Order No. 830-2004



Right Angle Scriber

Fully hardened point. Total Length: 8"
Order No. 830-2006



Double-End Scriber

One straight and one bend point. Total Length: 9"
Order No. 830-2002



Steel Scribers 划线针

Three Point Scriber

Aluminum knurled body with three interchangeable threaded points:
One short straight, one short bent, one long bent point.

Total Length of two short point combination: 9"

Total Length of one short and one long point Combination: 12"

Order No. 830-2007



Fixed Two Point Scriber

Total Length: 192mm

Order No. 830-0377



Double-End Scriber

One straight and one bent point with knurled handle.

Replaceable Points: Straight Point (830-0391)

Bend Point (830-0392)

Total Length: 250mm

Order No. 830-0386



Chisel type

6-1/2" overall length

Order No. 830-2012



Pothook type

Total Length: 110mm

Order No. 830-2023



Carbide Tipped Scribers 合金头划线针

Carbide Tipped Points

Pocket Type

Total length: 145mm, Chrome Plated

Order No. 830-2008



Heavy Duty Type

Heavy body, Diameter 8.0mm Total Length: 180mm

Order No. 830-2009



Metal body, chrome plated. 20mm long carbide tipped point.

Total Length: 160mm

Order No. 830-2010



Round spring Collet Pen Scriber

• Pen length: 150mm.

• Include one 40mm carbide point, one 70mm lead point.

Order No. 830-2021



Hexagon spring collet pen scriber

- Pen length: 150mm.
- One Carbide Point.

Order No. 830-2017**Replaceable Point Type**

Aluminum body.

Point can be reversed into body for safety when not in use.

Replacement point(830-0393). Total Length: 150mm

Order No. 830-0389**Type A**

Hold scriber 1.0-3.0mm, Plastic Shank

Order No. 830-2050

Hold scriber 1.0-3.0mm, Aluminum Shank

Order No. 830-2051**Type B**

with Auto Feeding

Order No. 830-2055**Type C**

Scriber & Center Punch.

Order No. 830-2060**Type F**

Scriber length is adjustable.

Order No. 830-2065**Type I, Aluminum Shank**

with double end Scriber

Order No. 830-2070**Type II, Aluminum Shank**

with Magnetic. Pick up,

Order No. 830-2076

without Magnetic. Pick up,

Order No. 830-2075**magnetic pick up**

Aluminum body.

Total Length: 5-1/2"

Order No. 830-0382**Heavy Duty**

Plastic Handle, Carbide Point.

Order No. 830-2066**8pcs Machinist Scriber Tool Sets****8pc 套装划线工具****A Type**

- Vernier Caliper 4"/100mm
- Steel Ruler 6"/150mm
- Machinist Square 4x6"(100x150mm)
- Carbide Tip Scriber (Auto Feeding)
- Double End Steel Scriber 8"/200mm
- Plastic Edge Off Deburring Tool (E100 Blade, magnetic end)
- Steel Divider 4"/100mm
- Automatic Center Punch
- Come with Plastic Case

Order No. 830-0081**B Type**

- Steel Ruler 6"/150mm
- Machinist Square 4x6"(100x150mm)
- Carbide Tip Scriber (Auto Feeding)
- One End Steel Scriber 7"/175mm
- Pocket Steel Scriber 6"/150mm
- Plastic Edge Off Deburring Tool (E100 Blade, magnetic end)
- Steel Divider 4"/100mm
- Center Punch
- Come with Plastic Case

Order No. 830-0082**C Type**

- Steel Ruler 6"/150mm
- Machinist Square 4x6"(100x150mm)
- Carbide Tip Scriber
- Double End Steel Scriber 8"/200mm
- Chisel Type Steel Scriber 7"/175mm
- Plastic Edge Off Deburring Tool (E100 Blade, magnetic end)
- Steel Divider 4"/100mm
- Center Punch
- Come with Plastic Case

Order No. 830-0083

Dividers 卡规

Rivet Joint Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0004	109-0004
125mm/5"	108-0005	109-0005
150mm/6"	108-0006	109-0006
175mm/7"	108-0007	109-0007
200mm/8"	108-0008	109-0008
250mm/10"	108-0010	109-0010
300mm/12"	108-0012	109-0012
400mm/16"	108-0016	109-0016
500mm/20"	108-0020	109-0020
600mm/24"	108-0024	109-0024
800mm/32"	108-0032	109-0032
1000mm/40"	108-0040	109-0040

Adjustable Screw Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0504	109-0504
125mm/5"	108-0505	109-0505
150mm/6"	108-0506	109-0506
175mm/7"	108-0507	109-0507
200mm/8"	108-0508	109-0508
250mm/10"	108-0510	109-0510
300mm/12"	108-0512	109-0512
400mm/16"	108-0516	109-0516
500mm/20"	108-0520	109-0520
600mm/24"	108-0524	109-0524
800mm/32"	108-0532	109-0532
900mm/36"	208-0536	109-0536
1000mm/40"	108-0540	109-0540

Rivet Joint Type
with Wing

Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0104	109-0104
125mm/5"	108-0105	109-0105
150mm/6"	108-0106	109-0106
175mm/7"	108-0107	109-0107
200mm/8"	108-0108	109-0108
250mm/10"	108-0110	109-0110
300mm/12"	108-0112	109-0112
400mm/16"	108-0116	109-0116
500mm/20"	108-0120	109-0120
600mm/24"	108-0124	109-0124
800mm/32"	108-0132	109-0132
900mm/36"	108-0136	109-0136
1000mm/40"	108-0140	109-0140

Adjustable Screw Type
with Wing

Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0604	109-0604
125mm/5"	108-0605	109-0605
150mm/6"	108-0606	109-0606
175mm/7"	108-0607	109-0607
200mm/8"	108-0608	109-0608
250mm/10"	108-0610	109-0610
300mm/12"	108-0612	109-0612
400mm/16"	108-0616	109-0616
500mm/20"	108-0620	109-0620
600mm/24"	108-0624	109-0624
800mm/32"	108-0632	109-0632
900mm/36"	108-0636	109-0636
1000mm/40"	108-0640	109-0640

Rivet Joint Type
with Wing and Pencil Holder

Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0204	109-0204
125mm/5"	108-0205	109-0205
150mm/6"	108-0206	109-0206
175mm/7"	108-0207	109-0207
200mm/8"	108-0208	109-0208
250mm/10"	108-0210	109-0210
300mm/12"	108-0212	109-0212
400mm/16"	108-0216	109-0216
500mm/20"	108-0220	109-0220
600mm/24"	108-0224	109-0224
800mm/32"	108-0232	109-0232
1000mm/40"	108-0240	109-0240

Spring Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
75mm/3"	108-0903	109-0903
100mm/4"	108-0904	109-0904
125mm/5"	108-0905	109-0905
150mm/6"	108-0906	109-0906
175mm/7"	108-0907	109-0907
200mm/8"	108-0908	109-0908
250mm/10"	108-0910	109-0910
300mm/12"	108-0912	109-0912
400mm/16"	108-0916	109-0916
500mm/20"	108-0920	109-0920
600mm/24"	108-0924	109-0924

Inside Calipers 内卡规

Rivet Join Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0304	109-0304
125mm/5"	108-0305	109-0305
150mm/6"	108-0306	109-0306
175mm/7"	108-0307	109-0307
200mm/8"	108-0308	109-0308
250mm/10"	108-0310	109-0310
300mm/12"	108-0312	109-0312
400mm/16"	108-0316	109-0316
500mm/20"	108-0320	109-0320
600mm/24"	108-0324	109-0324
800mm/32"	108-0332	109-0332
900mm/36"	108-0336	109-0336
1000mm/40"	108-0340	109-0340

Inside Calipers 内卡规

Adjustable Screw Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0704	109-0704
125mm/5"	108-0705	109-0705
150mm/6"	108-0706	109-0706
175mm/7"	108-0707	109-0707
200mm/8"	108-0708	109-0708
250mm/10"	108-0710	109-0710
300mm/12"	108-0712	109-0712
400mm/16"	108-0716	109-0716
500mm/20"	108-0720	109-0720
600mm/24"	108-0724	109-0724
800mm/32"	108-0732	109-0732
900mm/36"	108-0736	109-0736
1000mm/40"	108-0740	109-0740

Inside Calipers 内卡规

Spring Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
75mm/3"	108-1003	109-1003
100mm/4"	108-1004	109-1004
125mm/5"	108-1005	109-1005
150mm/6"	108-1006	109-1006
175mm/7"	108-1007	109-1007
200mm/8"	108-1008	109-1008
250mm/10"	108-1010	109-1010
300mm/12"	108-1012	109-1012
400mm/16"	108-1016	109-1016
500mm/20"	108-1020	109-1020
600mm/24"	108-1024	109-1024

Outside Calipers 外卡规

Spring Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
75mm/3"	108-1103	109-1103
100mm/4"	108-1104	109-1104
125mm/5"	108-1105	109-1105
150mm/6"	108-1106	109-1106
175mm/7"	108-1107	109-1107
200mm/8"	108-1108	109-1108
250mm/10"	108-1110	109-1110
300mm/12"	108-1112	109-1112
400mm/16"	108-1116	109-1116
500mm/20"	108-1120	109-1120
600mm/24"	108-1124	109-1124

Outside Calipers 外卡规

Rivet Join Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0404	109-0404
125mm/5"	108-0405	109-0405
150mm/6"	108-0406	109-0406
175mm/7"	108-0407	109-0407
200mm/8"	108-0408	109-0408
250mm/10"	108-0410	109-0410
300mm/12"	108-0412	109-0412
400mm/16"	108-0416	109-0416
500mm/20"	108-0420	109-0420
600mm/24"	108-0424	109-0424
800mm/32"	108-0432	109-0432
900mm/36"	108-0436	109-0436
1000mm/40"	108-0440	109-0440

Outside Calipers 外卡规

Adjustable Screw Type



Size	Carbon Steel Order No.	Stainless Steel Order No.
100mm/4"	108-0804	109-0804
125mm/5"	108-0805	109-0805
150mm/6"	108-0806	109-0806
175mm/7"	108-0807	109-0807
200mm/8"	108-0808	109-0808
250mm/10"	108-0810	109-0810
300mm/12"	108-0812	109-0812
400mm/16"	108-0816	109-0816
500mm/20"	108-0820	109-0820
600mm/24"	108-0824	109-0824
800mm/32"	108-0832	109-0832
900mm/36"	108-0836	109-0836
1000mm/40"	108-0840	109-0840

Inside & Outside Calipers 两用内外卡规

两用内外卡规



Size	Carbon Steel Order No.	Stainless Steel Order No.
150mm/6"	108-2006	109-2006
175mm/7"	108-2007	109-2007
200mm/8"	108-2008	109-2008
250mm/10"	108-2010	109-2010
300mm/12"	108-2012	109-2012

Hermaphrodite Calipers 单边卡钳

单边卡钳



NEW

Size	Carbon Steel Order No.
100mm/4"	108-1204
150mm/6"	108-1206

4 Digit Hand Counter

4 位计数器

- Mainly used for checking number of persons, tallying of goods and cargo.
- 2" Height x 1-3/4" Width.



Specification	Order No.
ABS Case	840-1614
Reset with push button	840-1617

4 Digit Hand Counters

4 位计数器



- Chrome plated.
- Finger ring for convenience.
- 2" Height x 1-3/4" Width.

Specification	Order No.
4 Digital	840-1615
4 Digital with steel base	840-1616

5, 6&7 Digit Ratchet Counters 5, 6, 7 位计数器

With Reset Knob

- Base: 2-1/8"x1-3/4" Counter Height: 1-1/4".



Specification	Order No.
5 Digital	840-1610
6 Digital	840-1611
7 Digital	840-1613

Steel Stamping Letter & Number Sets

套装字母冲

Alloy Steel, Heat Treatment 50-55 HRC

Size	Specification	Order No.
1/16"	A to Z 27Pcs/set	835-1000
1/8"	A to Z 27Pcs/set	835-1005
3/16"	A to Z 27Pcs/set	835-1010
1/4"	A to Z 27Pcs/set	835-1015
1/16"	0 to 9 9Pcs/set	835-1055
1/8"	0 to 9 9Pcs/set	835-1060
3/16"	0 to 9 9Pcs/set	835-1065
1/4"	0 to 9 9Pcs/set	835-1070
1/16"	A to Z & 0-9 36Pcs/set	835-2000
1/8"	A to Z & 0-9 36Pcs/set	835-2001
3/16"	A to Z & 0-9 36Pcs/set	835-2002
1/4"	A to Z & 0-9 36Pcs/set	835-2003

Size	Specification	Order No.
1mm	A-Z 27Pcs/set	835-3001
	0-9 9Pcs/set	835-3002
	A-Z & 0-9 36Pcs/set	835-3005
1.5mm	A-Z 27Pcs/set	835-3011
	0-9 9Pcs/set	835-3012
	A-Z & 0-9 36Pcs/set	835-3015
2mm	A-Z 27Pcs/set	835-3021
	0-9 9Pcs/set	835-3022
	A-Z & 0-9 36Pcs/set	835-3025
3mm	A-Z 27Pcs/set	835-3031
	0-9 9Pcs/set	835-3032
	A-Z & 0-9 36Pcs/set	835-3035
4mm	A-Z 27Pcs/set	835-3041
	0-9 9Pcs/set	835-3042
	A-Z & 0-9 36Pcs/set	835-3045
5mm	A-Z 27Pcs/set	835-3051
	0-9 9Pcs/set	835-3052
	A-Z & 0-9 36Pcs/set	835-3055

38 Pc. Automatic Steel Stamp Sets 组合自动冲

- Permanently identify your belongings.
- Imprints wood & metal.
- Steel handle: 6 x 5/8", handle only Order No.830-8300.
- Complete set includes both letters and numbers plus a 6" handle.

Description	Order No.
Handle + 1/16" Letter Punches(835-2000)	830-8350
Handle + 1/8" Letter Punches(835-2001)	830-8351
Handle + 3/16" Letter Punches(835-2002)	830-8352
Handle + 1/4" Letter Punches(835-2003)	830-8353

112 Pc. Industrial Steel Stamp Set 组合字母冲

Special Tool Steel for Hand or Machine Use

- A fast easy solution for multi-character marking. Now in a simple stamp you can indent a series of letters and numbers in a product or nameplate. These kits are made of special tool steel. Each character is hardened and tempered to HRC 58-62.
- Each kit is packed in a case and contains: type holder with a complete selection of letters, numbers, dash, slash, amok, period, comma, ampersand and spacers.
- Holder capacity: 8pcs or 12pcs.

Sets

Size	Holder Capacity	Order No.	Holder Capacity	Order No.
1/16"	8Pcs	829-1700	12Pcs	829-1800
3/32"	8Pcs	829-1701	12Pcs	829-1801
1/8"	8Pcs	829-1702	12Pcs	829-1802
3/16"	8Pcs	829-1703	12Pcs	829-1803
1/4"	8Pcs	829-1704	12Pcs	829-1804
3/8"	8Pcs	829-1705	12Pcs	829-1805

Sets Includes:

A	A	B	B	C	C	D	D	E
E	E	F	F	G	G	H	H	I
I	I	J	J	K	K	L	L	M
M	N	N	O	O	P	P	Q	Q
R	R	S	S	T	T	U	U	U
U	V	W	W	X	X	Y	Z	/
/	-	-	-	-	-	-	-	-
1	2	2	2	2	3	3	3	4
4	4	5	5	5	6	6	6	7
7	8	8	8	9	9	9	0	0



Steel Type & Holders 冲头和手柄

- Stamp a series of letters or figures in a producing nameplate or metal part, with uniform legibility, in one stroke!
- Hand mobile type holders include threaded pin, Allen wrench and screw.
- Blanks must be used for spacing – or filling unused capacity of type holder.

Steel Type Holders

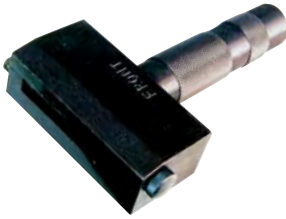
Body Size			
Size	Capability	W x H x L	Order No.
1/8"	8	1/8" x 1/4" x 1"	830-0900
1/8"	12	1/8" x 1/4" x 1"	830-0905
1/4"	8	1/8" x 1/4" x 1"	830-0910
1/4"	12	1/8" x 1/4" x 1"	830-0915

Individual Steel Type Sets

Character	Description	Order No.
Height		
1/8"	Letter A-Z	830-1027
1/8"	Number 0-9	830-1510
1/4"	Letter A-Z	830-1131
1/4"	Number 0-9	830-1610

Steel Spacers

Size	Order No.
1/8"	830-1135
1/4"	830-1145



Individual Letters & Numbers

1/8"			1/4"			1/8"			1/4"		
Character	Order No.	Order No.	Character	Order No.	Order No.	Character	Order No.	Order No.	Character	Order No.	Order No.
A	830-1001	830-1101	M	830-1013	830-1113	Y	830-1025	830-1125			
B	830-1002	830-1102	N	830-1014	830-1114	Z	830-1026	830-1126			
C	830-1003	830-1103	O	830-1015	830-1115	0	830-1500	830-1600			
D	830-1004	830-1104	P	830-1016	830-1116	1	830-1501	830-1601			
E	830-1005	830-1105	Q	830-1017	830-1117	2	830-1502	830-1602			
F	830-1006	830-1106	R	830-1018	830-1118	3	830-1503	830-1603			
G	830-1007	830-1107	S	830-1019	830-1119	4	830-1504	830-1604			
H	830-1008	830-1108	T	830-1020	830-1120	5	830-1505	830-1605			
I	830-1009	830-1109	U	830-1021	830-1121	6	830-1506	830-1606			
J	830-1010	830-1110	V	830-1022	830-1122	7	830-1507	830-1607			
K	830-1011	830-1111	W	830-1023	830-1123	8	830-1508	830-1608			
L	830-1012	830-1112	X	830-1024	830-1124	9	830-1509	830-1609			

Automatic Center Punches 自动冲

- Moveable components are made from tool steel and hardened. The point is easily removed for sharpening.
- The pressure of marking is controlled by ratching the dunned cap. Screw the cap down for heavy indentations and screw the cap upward for lighter markings.
- Automatic heavy duty center punch.
- Handle Length 6", Handle Diameter 5/8".



Description	Order No.
Steel Handle	830-3001
Copper Handle	830-3002

2 in 1 Punch Scriber 内藏式冲、划针

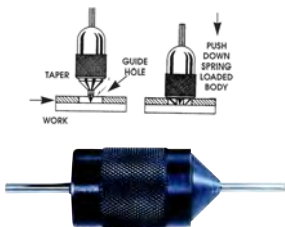
- Attachable carbide scriber head can be stored in the hollow handle for safe carrying.
- The punch scriber consisted of one male handle with punch head and key ring, and one female handle with female thread used to tighten carbide scriber and male handle.



Order No. 830-3003

Universal Transfer Punches & Aligners 大头冲

- Centers top of 3/16"-3/4" hole.
- Perfect hole center alignment assured.
- Precision ground and spring loaded.
- All parts made from steel & hardened.
- Replaces different size transfer punches.



Specification	Weight (lbs)	Order No.
3/16" Dia. Punch 3-1/8" L for 1/4"-3/4" hole	0.26	830-0150
3/16" Dia. Punch 4-1/8" L for 1/4"-1-1/16" hole	0.46	830-0180

Center Punches 中心冲头

Metric Sets

Piece	Size	Order No.
5	1.6, 2.0, 2.4, 3.6, 4.0mm	830-0220
3	1.6, 2.0, 2.4mm	830-0230

Inch Sets

Piece	Size	Order No.
5	1/16", 5/64", 3/32", 9/64", 5/32"	830-0200
3	1/16", 5/64", 3/32"	830-0210

Inch Individuals

Point Dia.	Order No.
1/16"	830-0201
5/64"	830-0202
3/32"	830-0203
9/64"	830-0204
5/32"	830-0205

Metric Individuals

Point Dia.	Order No.
1.6mm	830-0211
2.0mm	830-0212
2.4mm	830-0213
3.6mm	830-0214
4.0mm	830-0215





Extra Long Drive Pin Punches 洋冲

Inch Sets

Piece	Size	Length	Order No.
5	1/8", 3/16", 1/4", 5/16", 3/8"	8"	830-0240

Metric Sets

Piece	Size	Length	Order No.
5	3.2, 4.8, 6.4, 8.0, 9.5mm	200mm	830-0270

Inch Individuals

Point Dia.	Order No.
1/8"	830-0242
3/16"	830-0244
1/4"	830-0246
5/16"	830-0248
3/8"	830-0250

Metric Individuals

Point Dia.	Order No.
3.2mm	830-0272
4.8mm	830-0274
6.4mm	830-0276
8.0mm	830-0278
9.5mm	830-0280



Drive Pin Punch Sets 洋冲

Piece	Specification	Order No.
4Pcs	1/16, 3/32, 1/8, 5/32"	830-0260
4Pcs	3/16, 7/32, 1/4, 5/16"	830-0262
8Pcs	1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16"	830-0264

Piece	Specification	Order No.
4Pcs	1.6, 2.4, 3.2, 4 mm	830-0290
4Pcs	4.8, 5.6, 6.4, 8.0mm	830-0292
8Pcs	1.6, 2.4, 3.2, 4 mm, 4.8, 5.6, 6.4, 8.0mm	830-0294

Transfer Punches 套装冲头

- Heat treated and tempered for long life.
- Diameters 0.0025 undersize to facilitate use.
- Black oxide finish.

Sets

Description	Steel Stand Order No.	Plastic Stand Order No.
25Pcs/set 1mm to 13mm by 0.5mm	830-4025	830-4125
26Pcs/set letters A-Z	830-4026	830-4126
28Pcs/set 3/32" to 1/2" by 64ths plus 17/32"	830-4028	830-4128
33Pcs/set 1/2" to 1" by 64ths	830-4033	
60Pcs/set numbers 1 to 60	830-4060	830-4160

Individual Punches

Size	Order No.	Size	Order No.	Size	Order No.
3/32"	830-0106	1/4"	830-0116	13/32"	830-0126
7/64"	830-0107	17/64"	830-0117	27/64"	830-0127
1/8"	830-0108	9/32"	830-0118	7/16"	830-0128
9/64"	830-0109	19/64"	830-0119	29/64"	830-0129
5/32"	830-0110	5/16"	830-0120	15/32"	830-0130
11/64"	830-0111	21/64"	830-0121	31/64"	830-0131
3/16"	830-0112	11/32"	830-0122	1/2"	830-0132
13/64"	830-0113	23/64"	830-0123	33/64"	830-0133
7/32"	830-0114	3/8"	830-0124	17/32"	830-0134
15/64"	830-0115	25/64"	830-0125		

Solid Brass Grommet Kits 组合扣眼冲

- Mandrels and anvils are coded with lines for specifying their own individual size.
- Black finished Mandrel, Anvil and Hole Cutters.
- Golden bright finished Grommets.

Each size kit includes:

- 1 Hole cutter
- 1 Wooden block
- 1 Mandrel
- 1 Anvil

48 grommets for 1/4", 24 grommets for 3/8" & 1/2"

Grommet Kits

Size	Order No.
1/4"	830-0400
3/8"	830-0410
1/2"	830-0420

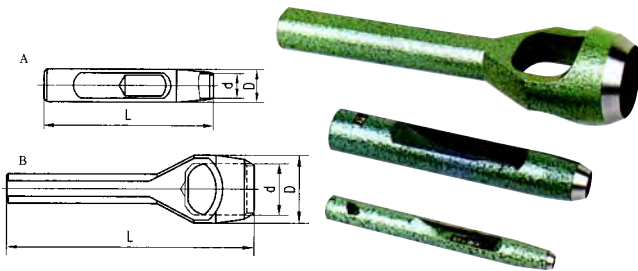
Grommet Refills

Description	Size	Grommet Piece	Order No.
for 830-0400	1/4"	24pcs	830-0500
for 830-0410	3/8"	24pcs	830-0510
for 830-0420	1/2"	24pcs	830-0520



Hollow Punches 空心冲

These tools are used to punch holes in materials such as leather, rubber, cork, plastic, balsa wood, and thin soft metals such as brass and lead. Widely used for punching holes as well as cutting gaskets and washers, production work, and other close tolerance applications.



Hole Size(in)	D mm	L mm	Type	Order No.
3/16	10	95	A	830-8001
1/4	10.5	100	A	830-8002
5/16	12.5	106	A	830-8003
3/8	15	106	A	830-8004
7/16	17	106	A	830-8005
1/2	19	116	A	830-8007
9/16	21	116	A	830-8008
5/8	23	116	A	830-8009
11/16	24	118	A	830-8010
3/4	26	118	A	830-8011
13/16	27	118	A	830-8012
7/8	29	120	A	830-8013
15/16	31	120	A	830-8014
1	33	120	A	830-8015
1-1/16	40	163	B	830-8017
1-1/8	42	165	B	830-8018
1-3/16	44	168	B	830-8019
1-1/4	46	168	B	830-8020
1-5/16	48	175	B	830-8021
1-3/8	50	185	B	830-8022
1-7/16	52	200	B	830-8023
1-1/2	54	208	B	830-8024
1-9/16	55	208	B	830-8025
1-5/8	57	215	B	830-8026
1-11/16	58	215	B	830-8027
1-3/4	61	215	B	830-8028
1-13/16	63	218	B	830-8029
1-7/8	64	220	B	830-8030
1-15/16	66	230	B	830-8031
2	68	230	B	830-8032
2-1/8	70	230	B	830-8033
2-1/4	75	230	B	830-8034
2-3/8	78	230	B	830-8035
2-1/2	81	230	B	830-8036
2-5/8	84	230	B	830-8037
2-3/4	88	232	B	830-8038
2-7/8	92	235	B	830-8039
3	96	235	B	830-8040
3-1/8	99	235	B	830-8041
3-1/4	102	235	B	830-8042
3-3/8	105	240	B	830-8043
3-1/2	108	240	B	830-8044
3-5/8	112	250	B	830-8045
3-3/4	115	250	B	830-8046
3-7/8	118	255	B	830-8047
4	122	255	B	830-8048

7 Pc. Transfer Screw Sets 7件套螺纹冲

More accurate than transfer punches. The fastest and most precise method of transferring threaded holes to mating parts. Great for tool and die work and in lay out. Set consists of 1 handle and 6 screws.



Size	NC Order No.	NF Order No.
4-40	830-3014	830-3114
5-40	830-3015	830-3115
6-32	830-3016	830-3116
8-32	830-3018	830-3118
10-24	830-3020	830-3120
3/16"-24	830-3021	830-3121
12-24	830-3022	830-3122
1/4"-20	830-3023	830-3123
5/16"-18	830-3024	830-3124
3/8"-16	830-3025	830-3125
7/16"-14	830-3026	830-3126
1/2"-13	830-3027	830-3127
9/16"-12	830-3028	830-3128
5/8"-11	830-3029	830-3129
3/4"-11	830-3030	830-3130
7/8"-9	830-3031	830-3131
1"-8	830-3032	830-3132

3 PC. Punch Set 组合洋冲

4" OAL. Black nitrate finished. Chrome alloy steel, hardened with knurled body. Includes center punch, prick punch and pin punch in pouch.



Order No. 830-0003

6 Pc. Hollow Punch Set 6pc 挖孔工具

The fast, easy way to punch accurate holes in gasket material, light gauge sheet metal, vinyl, leather, and more. High carbon construction with precision ground flutes and cutting edges. Easy to grip knurled shank.

6 Pcs/set, includes 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 punches



Order No. 830-8006

24 Pc. Pin Punch Set 组合洋冲

- This set combines all the most used pin punches, all are forge hardened, heat-treated tool steel.
- 16 Pcs/set, includes:
 - 5 pieces 8" extra long drive pin punches.
 - 8 pieces 4" long drive pin punches.
 - 5 pieces round shank center punches.
 - 3 pieces 5/32" taper pin punches.
 - 1 handle for pin punches.
 - 1 piece 6"/150mm ruler.
 - 1 piece 4" divider.



Order No. 830-0024

16 Pc. Punch & Chisel Set

16pc 凿刀

- Comes in a vinyl roll-up pouch.
- 16 Pcs/set, includes:
 - 4 starting punches: 9-3/4", 7-3/4", 5-3/4", 5-13/16".
 - 5 cold chisels: 8x5/8, 7x3/4, 6-3/4x5/8, 5-3/4x1/2, 5-3/4x3/8".
 - 1 center punch.
 - 3 pin punches.
 - 1 prick punch.
 - 1 diamond point punch.



Order No. 830-8016

15 Pc. Gasket Punch Set

皮带冲

- Punch quick, accurate washers and gaskets on the job. Use on rubber, leather, copper, soft brass, and other materials.
- 15 Pcs/set, includes:
 - 1-1/2, 1-3/8, 1-1/4, 1-1/8, 1, 7/8, 3/4, 5/8, 1/2, 7/16, 3/8, 5/16, and 1/4",
 - Handle, Plastic case.



Order No. 830-2115

13Pc. Gunsmith Punch set

13 件套冲棒

- Set include:
 - 8pc Brass punches, one of each: 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16
 - 2pc Steel pin punches: 1/16 & 3/32
 - 2pc Hard plastic punches: 15/64 & 3/8
 - 1pc Brass head hammer
- All included in a blow molded case.



Order No. 830-0013

3 Pc. Expandable Pin Punch Set 可膨胀冲头

Rang 1/4 to 11/16" (6-17mm)

- Compact set of 3 takes the pace of numerous individual solid punches.
- Each punch expands within its range to pick up the true center of holes from 1/4" to 11/16" diameter.
- By turning the knurled head, the punch body expands to the perfect fit in the bottom of the hole.
- A light hammer stroke on the top of the center pin provides the desired center mark.



No. of Piece	Size	Individual Order No.	Set Order No.
3Pcs/set	1/4-5/16"(6-8mm)	830-0025	830-0029
	5/16-7/16"(8-11mm)	830-0026	
	7/16-11/16"(11-17mm)	830-0027	

Blind Hole Spotters & Sets 圆盘冲

Fast, easy way to locate opposite centers. When holes do not extend through material (such as holes for dowel pins, perforating punches, etc.) Spellmaco blind-hole spotters get the job done simply. Correct size spotter can be used in threaded, drilled or reamed holes. Packaged six of one size in plastic tube.



Piece	Size	Order No.
108	6pcs each of 1/8-21/32" by 32nds	830-5300
66	6pcs each of 11/16-1" by 32nds	830-5305



Individuals

Size	Order No.	Size	Order No.	Size	Order No.	Size	Order No.
1/8"	830-5008	13/32"	830-5026	11/16"	830-5044	31/32"	830-5062
9/64"	830-5009	27/64"	830-5027	45/64"	830-5045	63/64"	830-5063
5/32"	830-5010	7/16"	830-5028	23/32"	830-5046	1"	830-5064
11/64"	830-5011	29/64"	830-5029	47/64"	830-5047	3#	830-5103
3/16"	830-5012	15/32"	830-5030	3/4"	830-5048	6#	830-5106
13/64"	830-5013	31/64"	830-5031	49/64"	830-5049	7#	830-5107
7/32"	830-5014	1/2"	830-5032	25/32"	830-5050	8#	830-5108
15/64"	830-5015	33/64"	830-5033	51/64"	830-5051	10#	830-5110
1/4"	830-5016	17/32"	830-5034	13/16"	830-5052	16#	830-5116
17/64"	830-5017	35/64"	830-5035	53/64"	830-5053	20#	830-5120
9/32"	830-5018	9/16"	830-5036	27/32"	830-5054	21#	830-5121
19/64"	830-5019	37/64"	830-5037	55/64"	830-5055	25#	830-5125
5/16"	830-5020	19/32"	830-5038	7/8"	830-5056	29#	830-5129
21/64"	830-5021	39/64"	830-5039	57/64"	830-5057	30#	830-5130
11/32"	830-5022	5/8"	830-5040	29/64"	830-5058	F	830-5206
23/64"	830-5023	41/64"	830-5041	59/64"	830-5059	I	830-5209
3/8"	830-5024	21/32"	830-5042	15/16"	830-5060	P	830-5216
25/64"	830-5025	43/64"	830-5043	61/64"	830-5061	Q	830-5217

4PC Pin Vise Set

针夹手柄



Includes: 1 each size of
0-1mm, .8-1.5mm, 1.3-3.1mm, 3-4.8mm

Order No. 830-3104

Screw Extractors & Sets 螺丝拔出器

- For removing broken screws, bolts, studs, and pipes



No.	Screw and Bolt Size	Size Drill	Heavy Duty Order No.	Straight Flute Order No.
1#	3/32— 5/32"	5/64"	312-8921	312-8961
2#	5/32— 7/32"	7/64"	312-8922	312-8962
3#	7/32— 9/32"	5/32"	312-8923	312-8963
4#	9/32— 3/8"	1/4"	312-8924	312-8964
5#	3/8— 5/8"	17/64"	312-8925	312-8965
6#	5/8-7/8"	13/32"	312-8926	312-8966
7#	7/8— 1-1/8"	17/32"	312-8927	312-8967
8#	1-1/8— 1-3/8"	13/16"	312-8928	312-8968
9#	1-3/8— 2"	1-1/16"	312-8929	312-8969
10#	2-1/8— 2-1/2"	1-5/16"	312-8930	312-8970
11#	2-1/2— 3"	1-17/32"	312-8931	312-8971

Sets



	Heavy Duty Order No.	Straight Flute Order No.
5pcs/set (1-5#)	312-8920	312-8960
6pcs/set (1-6#)	312-8936	
8pcs/set (1-8#)	312-8938	
12pcs/set (1-6# & Drills, 2,3,4,5,7,10)	312-8937	

Stair Set Gages 楼梯定位器

A "must" for fast, accurate layout of angles for stair stringers, roof framing and other bevel cut. Clamp to framing square for repetitive layout such as stairs and rafters.



Order No. 830-3047

Door Lock Hole Reforming Tool

门锁修正器

- For repair of damaged door lock apertures.
- Suitable for flush fitting or recessed lock holes.



Order No. 830-3045

High Speed Hand Hacksaw Blades

高速手用钢锯条



Length	Width	Teeth per Inch	Thickness	M2 HSS Order No.	Alloy Steel Order No.
10"	1/2"	18	.025"	402-7568	402-8568
10"	1/2"	24	.025"	402-7572	402-8572
10"	1/2"	32	.025"	402-7576	402-8576
12"	1/2"	14	.025"	402-7625	402-8525
12"	1/2"	18	.025"	402-7629	402-8529
12"	1/2"	24	.025"	402-7633	402-8533
12"	1/2"	32	.025"	402-7637	402-8537

High Speed Power Hacksaw Blades

M2 HSS

高速机用钢锯条



Length	Width	Teeth per Inch	Order No.
12"	1"	10	401-0123
12"	1"	14	401-0126
14"	1"	10	401-0141
14"	1"	14	401-0144
14"	1-1/4"	6	401-0147
14"	1-1/4"	10	401-0149
17"	1"	10	401-0172
17"	1"	14	401-0175
17"	1-1/4"	6	401-0177
17"	1-1/4"	10	401-0179
18"	1-1/2"	4	401-0180
18"	1-1/2"	6	401-0183
18"	1-3/4"	6	401-0185
21"	1-3/4"	4	401-0212
21"	1-3/4"	6	401-0215
24"	2"	4	401-0244
24"	2"	6	401-0247

Telescoping Magnetic Mirror & Pen

磁性伸缩笔



Specification	Order No.
Mirror Size: 2"x3.5", Stem Length: $\phi 10 \times 550$	810-0201
Mag. Force: 1 Lbs, Stem Length: $\phi 10 \times 510$	810-0202
2Pcs Set	810-0203



Specification	Order No.
Mirror Size: $\phi 2"$, Stem Length: $\phi 10 \times 750$	810-0204
Mag. Force: 5 Lbs, Stem Length: $\phi 10 \times 658$	810-0205
2Pcs Set	810-0206



Specification	Order No.
Mirror Size: $\phi 1.25"$, Stem Length: $\phi 8 \times 502$	810-0207
Mag. Force: 1 Lbs, Stem Length: $\phi 8 \times 475$	810-0208
2Pcs Set	810-0209

Magnetic Safe Catcher

磁力安全操作器

- Using it get workpiece when operating pressure machine
- Handle length 220mm



Magnetic Force	Dimension	Order No.
0.7Kg/1.5Lbs	$\phi 15 \times 25 \text{mm}$	810-0026
2.5Kg/5.5Lbs	$\phi 20 \times 25 \text{mm}$	810-0027
5Kg/11Lbs	$\phi 25 \times 25 \text{mm}$	810-0028



Size	Magnetic Force	Order No.
$\phi 7 \times 635$	1.5 Lbs	810-0210
$\phi 9 \times 535$	2 Lbs	810-0211
$\phi 10 \times 610$	5 Lbs	810-0212
$\phi 10 \times 615$	8Lbs	810-0213
$\phi 10 \times 615$	10Lbs	810-0214

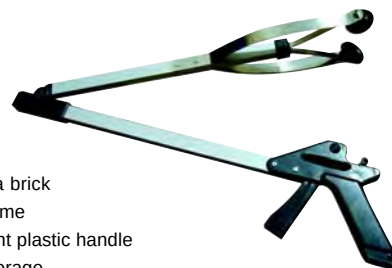


Size	Magnetic Force	Order No.
$\phi 8 \times 710$	1 Lbs	810-0215
$\phi 7 \times 650$		810-0216
$\phi 9 \times 620$		810-0217

Trash Pickup Tools

取物器

Retrieval Tools

NEW

- Strong enough to pick up a brick
- Agile enough to pick up a dime
- Comfortable impact resistant plastic handle
- 72" Model folds for easy storage
- Rod made of durable stainless steel and aluminum parts
- Features trigger latch for retrieval in hard to reach places



Desc.	Order No.
30", no Latch Lock	810-0231
60", Latch Lock	810-0232
72", Latch Lock & Fold	810-0233

Spray Guns-Bottom Cup Style

G70 型喷枪

- Sprays latex, enamel lacquer stain for general purpose painting jobs.
- 1000cc, Bottom Cup
- Adjustable Spray Control.
- Simple and easy maintenance.

Size of Spray Nozzle	Bayonet Lock Order No.	Cam Lock Order No.
1.0mm	106-0010	106-0110
1.2mm	106-0012	106-0112
1.4mm	106-0014	106-0114
1.5mm	106-0015	106-0115
1.6mm	106-0016	106-0116
1.8mm	106-0018	106-0118
2.0mm	106-0020	106-0120
2.2mm	106-0022	106-0122
2.5mm	106-0025	106-0125
3.0mm	106-0030	106-0130
4.0mm	106-0040	106-0140



Spray Guns-Liquid Supply Hose Style

G70/SSP 型喷枪

- Sprays latex, enamel lacquer stain for general purpose painting jobs.
- 8X17mm Painting Supply Rubber Hose
- Adjustable Spray Control.
- Simple and easy maintenance.

Size of Spray Nozzle	Order No.
1.0mm	106-0210
1.2mm	106-0212
1.4mm	106-0214
1.5mm	106-0215
1.6mm	106-0216
1.8mm	106-0218
2.0mm	106-0220
2.2mm	106-0222
2.5mm	106-0225
3.0mm	106-0230
4.0mm	106-0240



Spray Guns-Top Cup Style

E70 型喷枪

- Sprays latex, enamel lacquer stain for general purpose painting jobs.
- Adjustable Spray Control.
- Simple and easy maintenance.

Size of Spray Nozzles	500cc. Cup Order No.	750cc. Cup Order No.	1000cc. Cup Order No.
1.0mm	106-0310	106-0410	106-0510
1.2mm	106-0312	106-0412	106-0512
1.4mm	106-0314	106-0414	106-0514
1.5mm	106-0315	106-0415	106-0515
1.6mm	106-0316	106-0416	106-0516
1.8mm	106-0318	106-0418	106-0518
2.0mm	106-0320	106-0420	106-0520
2.2mm	106-0322	106-0422	106-0522
2.5mm	106-0325	106-0425	106-0525
3.0mm	106-0330	106-0430	106-0530
4.0mm	106-0340	106-0440	106-0540



Tire Inflating Gun 胎压枪

- Designed for the measurement of tire pressure of bikes, motorcycles, cars.
- Measurement rang 0-140 psi, 0-10Bar



View of Press Indicator



Order No. 106-1280

Cleaning Spray Gun 清洗喷枪

- Extension Tip for hard to reach place.
- Applies high pressure jet of water, detergent, or degreaser.



Order No. 106-1001

5 Piece Gun Set 5 支套喷墙套装

Include one of each

Air Gun, Model No.106-1090.

Cleaning Spray Gun, Model No. 106-1001

Tire Inflating Gun, Model No.106-1280

Spray Gun-Bottom Cup Style

Rubber Hose



Order No. 106-1305

Blow Gun 吹尘枪

Thumb Lever Action, Short type

This is mainly used for blowing off dust and metal particles

- Duster Gun
- Rated Pressure: 0.2-0.4 Mpa
- Max. Pressure: $\leq 8 \text{ kg/cm}^2$

Order No. 397-600S

Air Blow Gun

with 25Ft 1/4" Air Hose, (2x1/4"NPT Coupler)

Order No. 106-1097



Air Duster Guns 空气清洗枪

- Designed for hard to reach use.
- Nozzle Length 65mm
- Fitted Plastic Handle.

Order No. 106-1091



- Solid conical tip Prevents blockage of nozzle.
- Nozzle Length 10mm
- Fitted Plastic Handle.

Order No. 106-1090



Manifolds

多支管

Pneumatic & Hydraulic Applications

Designed for the distribution of air and fluids in pneumatic and hydraulic applications. They can be used when a convenient, effective, and attractive connection is needed.

- Manufactured from 16061 aluminum
- Black anodized finish
- All port NPT
- Pre-drilled mounting holes for easy installation
- Two inlets, one each end
- Pressure ratings: air 1000psi, non-shock hydraulic 3000 psi
- Temperature range: -10° to +200°F



No. of	Inlet	Outlet	Outlets				Mounting	Order No.
	Pipe		Size(in.)	Size(in.)	OAL	Ht. & W(in.)	Hole Size	
2	1/4	1/8	1.75	1.00	0.75	0.17		106-0911
2	1/4	1/8	3.25	1.00	1.50	0.17		106-0912
2	3/8	1/8	2.37	1.25	0.88	0.20		106-0913
2	3/8	1/8	3.25	1.25	1.50	0.20		106-0914
2	3/8	1/4	2.37	1.25	0.88	0.20		106-0915
2	3/8	1/4	3.25	1.25	1.50	0.20		106-0916
2	1/2	1/4	2.37	1.50	1.00	0.20		106-0917
2	1/2	1/4	3.25	1.50	1.50	0.20		106-0918
2	1/2	3/8	2.75	1.50	1.00	0.20		106-0919
2	1/2	3/8	3.25	1.50	1.50	0.20		106-0920
3	1/4	1/8	2.5	1.00	0.75	0.17		106-0921
3	1/4	1/8	4.75	1.00	1.50	0.17		106-0922
3	3/8	1/8	3.25	1.25	0.88	0.20		106-0923
3	3/8	1/8	4.75	1.25	1.50	0.20		106-0924
3	3/8	1/4	3.25	1.25	0.88	0.20		106-0925
3	3/8	1/4	4.75	1.25	1.50	0.20		106-0926
3	1/2	1/4	3.75	1.50	1.00	0.20		106-0927
3	1/2	1/4	4.75	1.50	1.50	0.20		106-0928
3	1/2	3/8	3.75	1.50	1.00	0.20		106-0929
3	1/2	3/8	4.75	1.50	1.50	0.20		106-0930
4	1/4	1/8	3.25	1.00	0.75	0.17		106-0931
4	1/4	1/8	6.25	1.00	1.50	0.17		106-0932
4	3/8	1/8	4.12	1.25	0.88	0.20		106-0933
4	3/8	1/8	6.25	1.25	1.50	0.20		106-0934
4	3/8	1/4	4.12	1.25	0.88	0.20		106-0935
4	3/8	1/4	6.25	1.25	1.50	0.20		106-0936
4	1/2	1/4	4.75	1.50	1.00	0.20		106-0937
4	1/2	1/4	6.25	1.50	1.50	0.20		106-0938
4	1/2	3/8	4.75	1.50	1.00	0.20		106-0939
4	1/2	3/8	6.25	1.50	1.50	0.20		106-0940
5	1/4	1/8	4	1.00	0.75	0.17		106-0941
5	1/4	1/8	7.5	1.00	1.50	0.17		106-0942
5	3/8	1/8	5	1.25	0.88	0.20		106-0943
5	3/8	1/8	7.5	1.25	1.50	0.20		106-0944
5	3/8	1/4	5	1.25	0.88	0.20		106-0945
5	3/8	1/4	7.75	1.25	1.50	0.20		106-0946
5	1/2	1/4	5.75	1.50	1.00	0.20		106-0947
5	1/2	1/4	7.75	1.50	1.50	0.20		106-0948
5	1/2	3/8	5.75	1.50	1.00	0.20		106-0949
5	1/2	3/8	7.75	1.50	1.50	0.20		106-0950
5	1/4	1/8	4.75	1.00	0.75	0.17		106-0951
6	1/4	1/8	9.25	1.00	1.50	0.17		106-0952
6	3/8	1/8	5.88	1.25	0.88	0.20		106-0953
6	3/8	1/8	9.25	1.25	1.50	0.20		106-0955
6	3/8	1/4	5.88	1.25	0.88	0.20		106-0954

No. of	Inlet	Outlet	Outlets				Mounting	Order No.
	Pipe		Size(in.)	Size(in.)	OAL	Ht. & W(in.)	Hole Size	
6	3/8	1/4	9.25	1.25	1.50	0.20		106-0956
6	1/2	1/4	6.75	1.50	1.00	0.20		106-0957
6	1/2	1/4	9.25	1.50	1.50	0.20		106-0958
6	1/2	3/8	6.75	1.50	1.00	0.20		106-0959
6	1/2	3/8	9.25	1.50	1.50	0.20		106-0960
6	1/4	1/8	5.5	1.00	0.75	0.17		106-0961
7	1/4	1/8	10.75	1.00	1.50	0.17		106-0962
7	3/8	1/8	6.75	1.25	0.88	0.20		106-0963
7	3/8	1/8	10.75	1.25	1.50	0.20		106-0964
7	3/8	1/4	6.75	1.25	0.88	0.20		106-0965
7	3/8	1/4	10.75	1.25	1.50	0.20		106-0966
7	1/2	1/4	7.75	1.50	1.00	0.20		106-0967
7	1/2	1/4	10.75	1.50	1.50	0.20		106-0968
7	1/2	3/8	7.75	1.50	1.00	0.20		106-0969
7	1/2	3/8	10.75	1.50	1.50	0.20		106-0970
7	1/4	1/8	6.25	1.00	0.75	0.17		106-0971
8	1/4	1/8	12.25	1.00	1.50	0.17		106-0972
8	3/8	1/8	7.62	1.25	0.88	0.20		106-0973
8	3/8	1/8	12.25	1.25	1.50	0.20		106-0974
8	3/8	1/4	7.62	1.25	0.88	0.20		106-0975
8	3/8	1/4	12.25	1.25	1.50	0.20		106-0976
8	1/2	1/4	8.75	1.50	1.00	0.20		106-0977
8	1/2	1/4	12.25	1.50	1.50	0.20		106-0978
8	1/2	3/8	8.75	1.50	1.00	0.20		106-0979
8	1/2	3/8	12.25	1.50	1.50	0.20		106-0980
8	1/4	1/8	7	1.00	0.75	0.17		106-0981
9	1/4	1/8	13.75	1.00	1.50	0.17		106-0982
9	3/8	3/8	8.5	1.25	0.88	0.20		106-0983
9	3/8	3/8	13.75	1.25	1.50	0.20		106-0984
9	3/8	1/4	8.5	1.25	0.88	0.20		106-0985
9	3/8	1/4	13.75	1.25	1.50	0.20		106-0986
9	1/2	1/4	9.75	1.50	1.00	0.20		106-0987
9	1/2	1/4	13.75	1.50	1.50	0.20		106-0988
9	1/2	3/8	9.75	1.50	1.00	0.20		106-0989
9	1/2	3/8	13.75	1.50	1.50	0.20		106-0990
10	1/4	1/8	7.75	1.00	0.75	0.17		106-0991
10	1/4	1/8	15.25	1.00	1.50	0.17		106-0992
10	3/8	1/8	9.38	1.25	0.88	0.17		106-0993
10	3/8	1/8	15.25	1.25	1.50	0.20		106-0994
10	3/8	1/4	9.38	1.25	0.88	0.20		106-0995
10	3/8	1/4	115.3	1.25	1.50	0.20		106-0996
10	1/2	1/4	10.75	1.50	1.00	0.20		106-0997
10	1/2	1/4	15.25	1.50	1.50	0.20		106-0998
10	1/2	3/8	10.75	1.50	1.00	0.20		106-0999
10	1/2	3/8	15.25	1.50	1.50	0.20		106-1000

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Magnifier Lamps

灯式放大镜

For electronic assembly, office and laboratories applications, quality control inspection.
Feature weighted base, pedestal Base, clamp bracket.
Arms are consisted of square steel tubes with plastic coating and steel springs.
Feature Lock Control at the arm joint.



MAGNIFICATION

■ Diopter:

Refers to lens power, higher diopter lenses have greater lens curvature and greater magnification power. Each diopter increases magnification by 25%.

■ Magnification Power:

Refers to how much larger an object appears when viewed through a magnifying lens.

For example :1.75X≈(175%), 3X≈(300%)

Rectangular Magnifier Lamps

灯式放大镜-方形透镜

- AC120/230V, 3 Diopter, Power is 1.75X.
- Large Lens of 7.5x6.2" (190x158mm) size rectangular feature:
Two 9W H Shape fluorescent bulb (Energy Saving Model)
- Small Lens of 7x5.2" (178x132mm) size rectangular feature:
Two 7W "H" Shape fluorescent bulb (Energy Saving Model)

C-Clamp Model Single on/off Button

- Single On/Off Button.
- 2-1/2" Adjustable C-Clamp
- 32"/800mm Arm length.



	Large Lens 7.5x6.2"	Small Lens 7x5.2"
Color	Order No.	Order No.
Light Grey	854-0101	854-0201
White	854-0102	854-0202
Black	854-0103	854-0203

Handled Peach Head Magnifier Lamps

灯式放大镜-圆形透镜

with 5"/127mm Round Lens

AC120/230V, 3 Diopter, Power is 1.75X
22W circular fluorescent bulb

C-Clamp Model Ballast On Arm

- 2-1/2" Adjustable C-Clamp
- 32"/800mm Arm length.



	C-Clamp Ballast On Arm
Color	Order No.
Light Grey	854-0521
White	854-0522
Black	854-0523

C-Clamp Model Double on/off Buttons

- Two On/Off Buttons.
- 2-1/2" Adjustable C-Clamp
- 32"/800mm Arm length.



	Large Lens 7.5x6.2"
Color	Order No.
Light Grey	854-0111
White	854-0112
Black	854-0113

C-Clamp Model Ballast In Base

- 2-1/2" Adjustable C-Clamp
- 36"/920mm Arm length.



	C-Clamp Ballast In Base
Color	Order No.
Light Grey	854-0501
White	854-0502
Black	854-0503

Weighted Base Model

- 9.9lbs/4.5kg Plastic Weighted Base.
- 24"/600mm Arm length.



	Large Lens 7.5x6.2"	Small Lens 7x5.2"
Color	Order No.	Order No.
Light Grey	854-0141	854-0241
White	854-0142	854-0242
Black	854-0143	854-0243

Weighted Base Model

- 9.9lbs/4.5kg Plastic Weighted Base.
- 24"/600mm arm length.



	Weighted Base
Color	Order No.
Light Grey	854-0581
White	854-0582
Black	854-0583

Peach Head Magnifier Lamps 灯式放大镜 - 圆形透镜

with 5"/127mm Round Lens

AC120/230V, 3 Diopter, Power is 1.75X
22W circular fluorescent bulb



C-Clamp Model

- 2-1/2" Adjustable C-Clamp
- 32"/800mm Arm length.

Color	C-Clamp Order No.
Light Grey	854-0301
White	854-0302
Black	854-0303



Weighted Base Model

- 9.9lbs/4.5kg Plastic Weighted Base.
- 24"/600mm Arm length.

Color	Weighted Base Order No.
Light Grey	854-0341
White	854-0342
Black	854-0343



Round Head Magnifier Lamps

灯式放大镜 - 圆形透镜

with 5"/127mm Round Lens

AC120/230V, 3 Diopter, Power is 1.75X
a 22W circular fluorescent bulb feature lock control at the arm joint.



C-Clamp Model Ballast On Arm

- 2-1/2" Adjustable C-Clamp
- 32"/800mm Arm length.

Color	without Lens Cover Order No.	with Lens Cover Order No.
Light Grey	854-0411	854-0431
White	854-0412	854-0432
Black	854-0413	854-0433



C-Clamp Model Ballast In Base

- 2-1/2" Adjustable C-Clamp
- 36"/920mm Arm length.

Color	without Lens Cover Order No.	with Lens Cover Order No.
Light Grey	854-0401	854-0421
White	854-0402	854-0422
Black	854-0403	854-0423



Weighted Base Model

- 9.9lbs/4.5kg Plastic Weighted Base.
- 24"/600mm Arm length.

Color	with Lens Cover Order No.
Light Grey	854-0481
White	854-0482
Black	854-0483



Fluorescence Working Lamps

工作灯

Desk Lighting

AC120/230V

Two 15W fluorescent bulb for Electronic assembly, office and laboratories applications., quality control inspection illumination.

Feature weighted base, pedestal Base, clamp bracket.

Arms are consisted of square steel tubes with plastic coating and steel springs



C-Clamp Model Ballast On Arm

- 32"/800mm Arms.

Color	C-Clamp Ballast on Arm Order No.
Light Grey	854-0621
White	854-0622
Black	854-0623



C-Clamp Model Ballast In Base

- Square Ballast.
- 36"/920mm Arms.

Color	C-Clamp Ballast in Base Order No.
Light Grey	854-0601
White	854-0602
Black	854-0603



Weighted Base Model

- 9.9lbs/4.5kg Weighted Base.
- 32"/800mm Arms.

Color	Weighted Base Order No.
Light Grey	854-0641
White	854-0642
Black	854-0643



Black Frame Protective Eyewear

防护眼镜

- Polycarbonate lenses.
- Lightweight, economical keeps dust and foreign particles away from eyes.



Order No. 893-7513

Goggles 护目眼镜

- Soft, clear vinyl frame in 3 models: perforated, chemical splash, and non-vented
- Clear polycarbonate lenses
- Meets or exceeds ANSI Z87.1-1989



Specifications	Order No.
Perforated Style	893-7447
Indirect Ventilation	893-7448
Ventless	893-7449

Swing-Away Safety Shields 防护罩



- Shield with Magnetic Base 58x50x55mm, 60kgs
- Shield size: 300 x 260mm

Order No. 893-7534



- Quick cam action locking.
- Shield swivels 360° and locks positively where placed.
- Shield size: 300 x 260mm

Order No. 893-7530



- Shield with square Magnetic Base 40 x 25mm, 40kgs

Order No. 893-7532

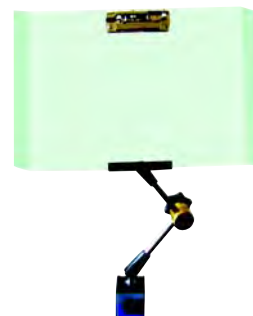
Universal Shield

万向挡屑板

Used in any part of the lathe, can change the angle wantonly, prevent iron filling, oil, emulsification oil, etc. from spattering out, can grasp the drawing or file.

Magnetic Power: 80kgs
Back Plate Size: 330x270mm

OrderNo.893-7536



Roller Stands

滚轮支架

V Roller Support Stand, 1 Ton Capacity, 23 to 37 Inches Adjustable Height



150-3025

Roller Stands

滚轮支架

H Roller Support Stand, 2000 Pounds Capacity, 23 1/4 to 38 Inches Adjustable Height



150-3020

Roller Stands

滚轮支架

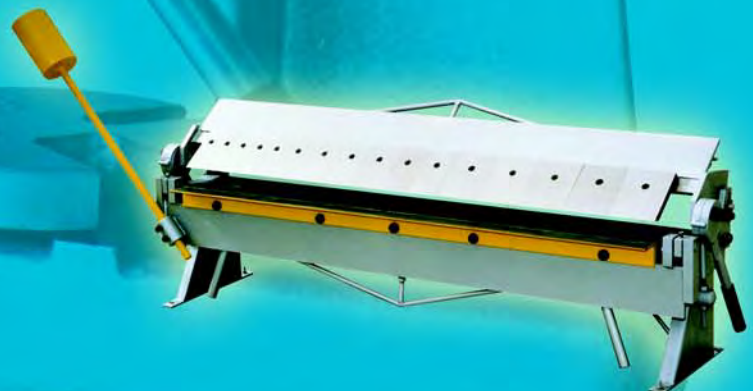
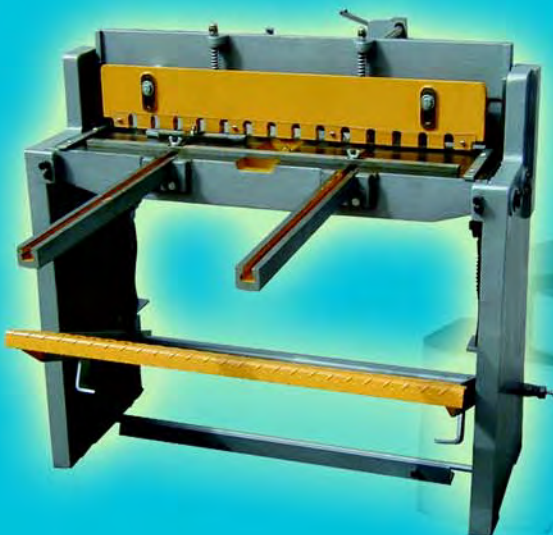


150-3080

Roller Conveyor Support Table, Width 15 In, Height 44 3/4 In, Length 65 In, Raised Height 44 3/4 In, Lowered Height 24 In, Height Range 24 To 44 3/4 In, Load Capacity 500 Lb, Platform Width 15 In, Max Stand Height 44 3/4 In, Construction Steel, Color Dayton Gray, Use With Horizontal Bandsaws, Packaging, Manufacturing And Shipping Departments, Features 9 Solid Ball Bearing Rollers, Folds And Locks For Easy Movement And Storage, Each Leg Is Independently Adjustable

Machinery

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Arbor Presses 压力机

Single Leverage

- Lever arm allows you to easily change positions comfortably for maximum leverage.
- Convenient front and side gib adjustment.
- 4 Position anvil.
- Heavy duty construction for long lasting reliability.
- Steel pinions and rams.



Capacity (Ton)	Height of Press	Max. Work Diameter	Cap Over Table	Largest Ram	Largest Arbor	Order No.
1/2	10"	6-1/2"	4-1/2"	7-1/2"	1"	805-1005
1	13"	8"	5-1/4"	9-1/2"	1-1/8"	805-1010
2	18"	12"	8-1/2"	14"	1-5/8"	805-1020
3	23"	12"	12-1/2"	18"	1-3/4"	805-1030
5	35"	17"	18"	27"	2-7/8"	805-1050

Ratchet Type

- Ratcheting presses put lever arm in most comfortable position for final application of force.
- Counterweight assures quick return with hand wheel advance.
- Hand wheel advances ram to work.



Capacity (Ton)	Height of Press	Max. Work Diameter	Cap Over Table	Largest Ram	Largest Arbor	Order No.
2	18-1/2"	11-7/8"	3-1/2"	13-1/2"	1-7/8"	805-1120
3	21-1/2"	12"	12-5/8"	18"	2-1/2"	805-1130
5	34-1/2"	17"	18-1/4"	27-1/2"	3"	805-1150

Precision Level Press

杠杆压力机

For precision assembly work and for shearing, punching of light stock, metal or plastic.

- Ideal for small-parts and production assembly
- Reted to with stand 1000Lbs. of force
- Hard chromed ram
- Opening 5x2-1/16", ram to column
- Two 1/4" holes are provided in base for anchoring
- Dimensions: 7-3/4x5-1/2x2-7/8"(HxDxW)



Order No. 130-1300

Specifications	
Base size	2.875"Wx5.5"L
Height	7.75"
Capacity	5.125"
Max. Diameter	4.125"
Pressure	0.5 ton
Weight	14LBS

Throat Level Press 杠杆压力机

Utilizes a 5/8" diameter precision ground ram, press consists of a ground cast iron base and separate column. the base consists of two mounting holes for 1/4" socket cap screw.

- Throat Clearance: 6"
- Adjustable down stop
- Up stroke limiter
- Pressure 1/4 ton
- Height 7.625"
- Capacity: 5"
- Dimensions: 5x12"(WxL)



Order No. 130-1301

Hand Puncher 手动冲孔器

- It is easy to punch a hole in steel plate.
- Punch die is interchangeable.
- Max. Punching Capacity :
Steel Plate Thickness 8mm, punch Dia. 20mm
Steel Plate Thickness 10mm, punch Dia. 16mm
- Throat Depth: 160mm.



Order No. 130-5105

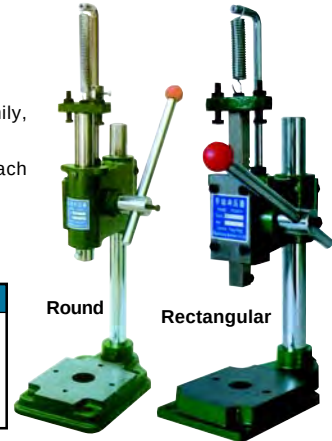
Hand Punchers

手动冲压器

The punch is designed to use in family, school, small factory.

The spring could make the arbor reach "0" position automatically.

Type	Arbors	Order No.
Standard	Rectangular	805-1205
Heavy Duty	Rectangular	805-1206
Standard	Round	805-1207
Heavy Duty	Round	805-1208



Sheet Metal Cutter

Mini Type 微型金属剪

For use on mild steel. 16gage capacity.

Adjustable rollers can be used for straight or curved cuts.2"Throat.

Can be mounted to work bench or held in a vise.
3"x2-1/2" Base with 2 mounting holes. 11"Handle.
4-3/4" overall height (less handle)



Order No. 130-5115

Geared Type 齿轮式手动剪

For use on mild steel, 16 gage capacity, can be used for straight or curved cuts



Order No.130-1305

Hand Operated Wire Cutter

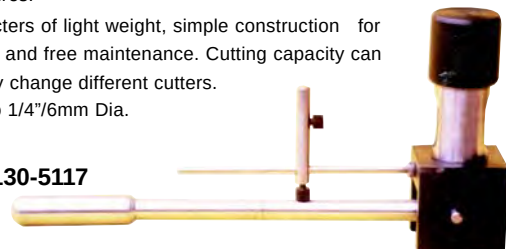
手动截丝机

Designed to achieve better surface finish and lower distortion on cutting different size wires.

Feature characters of light weight, simple construction for easy operation and free maintenance. Cutting capacity can be extended by change different cutters.

Capacity: up to 1/4"/6mm Dia.

Order No. 130-5117



12" Bench Shear

台式剪切机

- Rear drop off gage
- Front steel rule graduated in inch and metric
- Hardened and ground steel blades
- Upper blade is double angle ground for easy cut
- Protective, stationary front and rear plastic shields
- 2 brackets secure shear to work table

Capacity	Arbors
Aluminum	0.050"
Brass	0.025"
Steel	0.020"
Dimensions	26x14x11"
Weight	35Lbs



Order No.130-1303

Manual Shear

辊剪

Sheet-shearing

Max. sheershearing capacity:2mm
Cut various kind of curve required



Order No.130-7102

Throatless Shear

曲线剪

Designed to allow you to turn the workpiece at any angle for straight, curved, and irregular cuts. Will cut mild steel, aluminum, stainless steel or lighter material.

- 18" Handle for good leverage
- Blades: alloy tool steel, 4" length
- Dimension: 8-1/4x13-1/2x27-1/4"
- Base size: 5-1/8 x 3-7/8" with three mounting holds: (3/8" Diameter)
- Weight: 16.4Lbs



Order No.130-0050

Mitre Trimmer

塑料手动剪切机

- Make those "perfect mitres" for picture frames, cabinets, chair railing, doorframes etc.
- Positive stops at 45 degree and 90 degree
- Ground cast iron frame and two razor sharp knives
- Used to trim mitres after approximate saw cuts
- weight: 30lbs. Approx

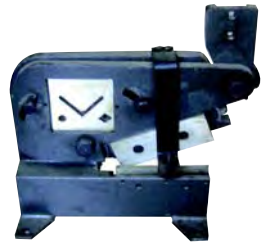


Order No.130-0030

Combination Angle, Rod and Flat Cutter

多用金属剪切机

- Angle 2x2x3/16", Rod 9/16", Flat 2x5/16"
- Robust steel plate frames
- Rack and pinion operation
- Blades made of high grade tool steel
- Blade with two cutting edges
- Overall body size: 19x19"
- Cuts plate, flats, rounds, squares and angle irons
- Blade size: 7-1/2x2-1/2x7/16"
- Weight of the body with 4ft. handle: 48kg



Order No.130-7001

Hand Shear

手动剪切机

Two excellent models to suit your needs. For cutting metal-plate and flat bar stock. Blade are made of high speed steel and accurately tempered

- Capacity: 1/8" plate

Blade	Order No.
8"	130-7201
10"	130-7202
12"	130-7203



Bench Metal Shears

台式剪切机

- Long handle provides plenty of shearing torque.
- Comes with pre-drilled holes to bolt down to workbench.
- Replacable blades made from high grade tool steel.

Blade Length	Capacity		Blade Only	
	Round	Plates	Order No.	Order No.
5"	3/8"	3/32"	130-5785	130-5795
6"	3/8"	3/32"	130-5786	130-5796
8"	7/16"	1/8"	130-5788	130-5798
10"	7/16"	1/8"	130-5790	130-5799
12"	7/16"	1/8"	130-5792	130-5793



Plate Cutter 多用台式金属剪

Versatile Metal Cutting Machine, Multi-purpose

- For straight and round cutting of sheet metal.
- No power required.

Specifications

Material

Stainless Steel.....13 Gage
Steel Plate.....12 Gage
Aluminum/Copper Plate....8 Gage



Order No. 130-5713

Tube & Pipe Notchers 钢管切割机

Notches, copes, or saddles any pipe or tube up to 2" in diameter, round or square. Easy set-up for angles to 45°. Uses all standard hole saws up to 3" with either a 1/2-20 or 5/8-18 thread mount. 1/2" diameter drive shaft for use with any 1/2" capacity drill motor.

Made of heavy plated chrome steel. The pipe clamp has a black oxide finish.

5-1/4x3 mounting plate with 3-1/4" drilled holes. Weight 9lbs. Hole saw not included.

Aluminium Structure

Order No. 130-5111



Steel Structure

Order No. 130-5110

Hand Notcher

手动切槽机（直角剪）

Heavy duty notcher cuts all shearable material with ease; steel, aluminum, plastic and rubber.

Includes 12" x 18" ground table with front gages.

The gages offer a full 6 inches of surface allowing for easy and accurate squaring. Reversible upper blades for both splay and pierce cutting.



Hand Notcher

4 Ton, capacity:16 Gauge

Order No. 130-5100



Operation Stand

Stand Size: 22"x20x30",
Weight: 90Lbs

Order No.130-5101

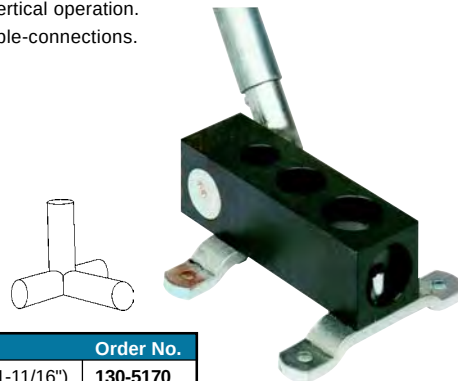
Specification

Capacity	Notch	Stroke	Table		Body Height
			Size	Weight	
16 Gage	6x6x90°	3/4"	12x18"	210lbs	18-1/2"

Tube Notchers

切管器

- Operated on tubes with up to 3 mm wall thickness which material range from steel or non-ferrous metal.
- Advantage for joining and welding of tubes at a 90 degree angel.
- One device covers several tube diameters.
- Horizontal and vertical operation.
- Suitable for double-connections.



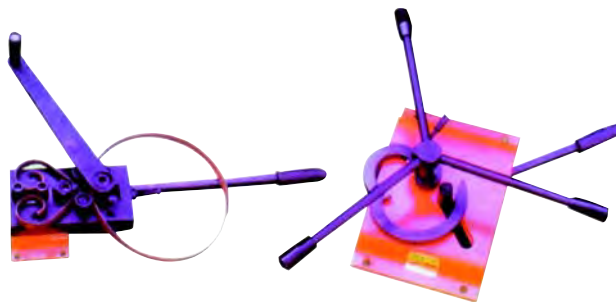
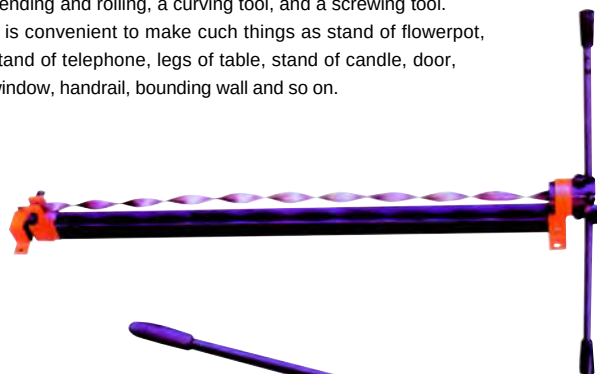
Tube Diameters	Order No.
27-43mm(1-1/16"-1-11/16")	130-5170
48-61mm(1-7/8"-2-13/32")	130-5175

Compact Benders 弯花机

Multipurpose Metal Craft Tool Set

Includes 4 kinds of tools: a punching and shearing tool, a bending and rolling, a curving tool, and a screwing tool.

It is convenient to make such things as stand of flowerpot, stand of telephone, legs of table, stand of candle, door, window, handrail, bounding wall and so on.



Up to 5x30mm, shear, bender, twist former, screw former.

Order No. 130-5075

Up to 3x16mm, shear, bender, twist former, screw former.

Order No. 130-5074

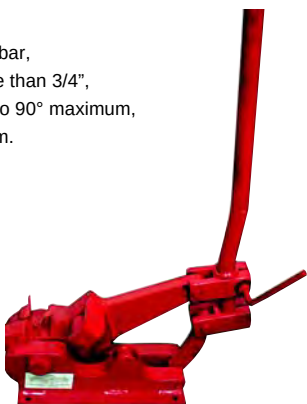
Rebar Cutter/Bender 手动断材器

- It is designed to cut steel bar, which diameter is not more than 3/4", and could bend the rebar to 90° maximum, by adjusting the clamp arm.
- Base: 12-3/64"x6"
- Weight: 80lbs.

OrderNo.130-5010

Knives Only

Order No. 130-0020



Compact Benders 弯花机

Includes these round dies:

1", 1-1/4, 1-1/2, 1-3/4, 2", 2-1/2, and 3".

Right angle attachment. Handles telescope to 44".

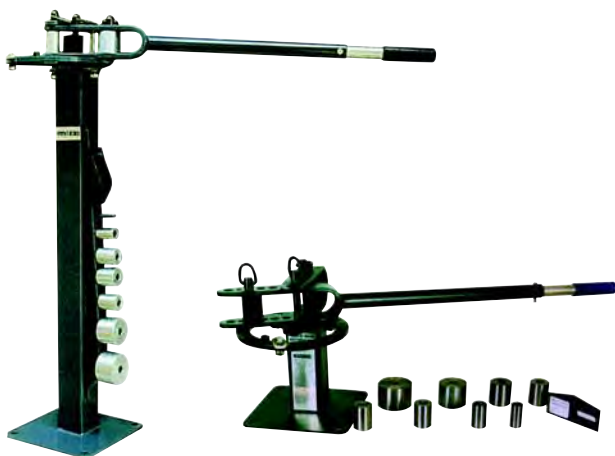
Capacities:

Mild steel..... 5/16x1-1/4 or 1/4x2"

Right angle bending.....3/16x1-1/4 or 1/4x1-1/4"

Center point.....1/4" thick (use 1" die for greater)

Solid rod1/2" (use 3" die)



Floor Model

- Height: 33", base: 10" x 10"

Order No. 130-5070



Scroll Attachment

- Capacity 3/16x1/2 to 3/16x1" mild flat steel.

Order No. 130-5073

Bench Model

- Height: 8", base: 8.6" x 8.6"

Order No. 130-5071



Twister Attachment

- Capacity 1/2" pickets 36" long in hot rolled, square mild steel. Handle 25" x 1-1/4".

Order No. 130-5072

Form Bender 折弯机

Features:

- For cold forming of steel and metals.
- Including set-up plate for table clamping.
- Punch and die tools are available for tool bending.
- The Max. Bending force is 2.5 Ton.
- Min. Adjustment 2.5mm.

- Max. Bending capacity:
Round material up to 20mm,
Square material up to 18mm
Flat material:
20mm(width)x18mm(Thick)
50mm(width)x11mm(Thick)
100mm(wdth)x8mm(Thick)



Order No. 130-5125

Universal Metal Bender 万能折弯机

- Light weight may be mounted in a vise or on a work bench
- Will shape metal up to 9/16" wide and 3/16" thick
- Will bend thin wall tubing to 3/8" dia. and solid bar to 1/4" dia.
- Come with metal case

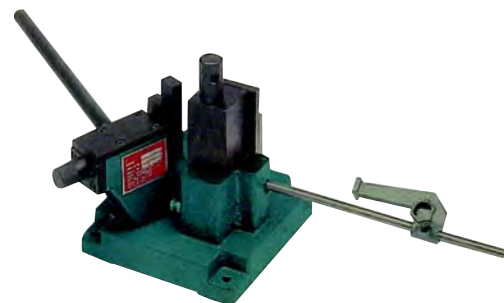


Order No. 130-0040

Right Angle Iron Bender

直角铁折弯机

- Made from steel with hardened jaws
- Special vise, eccentric clamping for ease of operation
- Will bend 7/8" rod, 3/4" square or rectangular bar 1-1/8x3/8"
- For angles of 90degree or less
- Approx. weight 83Lbs



Order No. 130-1304

Universal Bender 万能折弯机

Forms wire, flat metal and tubing into clamps, handles, brackets, hooks, coils and more!

Makes sharp angle bends in wire and rod up to 5/16" diameter and in flat metal to 1" x 1/8". Steel construction, weighs 6lbs. Fits into a tool box and mounts on a bench or vise. Includes circle pins for 3/16, 1/4, 1/2" diameter circles, 1" diameter circle die, form pin follower, sharp angle die, gage and handle. Optional edge bender kit adds edgewise bending capability for ductile materials to 0.12" thick and 3/4" wide. Optional circle dies form perfect circles in various diameters.



Order No. 130-5040

Hydraulic Bender

分离式液压弯管机

Make 90° bends in rigid steel and rigid aluminum 1/2 to 3" capacity, 10 ton output. Includes steel frame & pipe supports, cast iron shoes and a hydraulic unit. Positive lock pipe support pins and one piece frame for easy pipe insertion and removal from front. Shoes included for 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, & 3" pipe sizes.

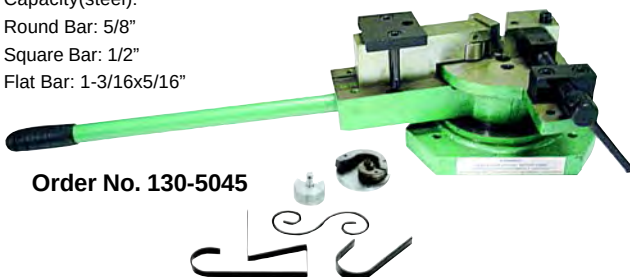


Order No. 837-6310

Universal Bender 万能折弯机

For angular, roll, hoop and coil bending to produce grids, doors, gates, balcony railings, patio furniture as well as rod iron lamps, Suitable for steel, brass, copper, and aluminum.

Bending strength:
28.5 Tons per square inch.
Capacity(steel):
Round Bar: 5/8"
Square Bar: 1/2"
Flat Bar: 1-3/16x5/16"



Order No. 130-5045

Hydraulic Bender

液压折弯机

Bends pipe and tube from 1/2" to 2" diameters, up to 180°. Bending bars are adjustable to accommodate distances of 8-1/2", 11-1/4", 12", 19-1/2", and 22-1/4". Steel frame is 4" deep, 21" high and 24" wide. Includes 12 ton jack. Weighs 120lbs.



Order No. 130-5120

Mighty Mini Benders 微型折弯机

- For shops, schools, and hobbyists.
- Clean smooth bends up to 90°.
- Use for heating and cooling ducts. Production runs or one time fabrication of boxes, covers and trays.
- 18" bender could bend and form up to 16 Gauge thick sheet metal. Certain applications require a cut of 1" deep slot in brake bar.
- 30" bender handles up to 16 Gauge aluminum & 18 Gauge steel.

18"x16gauge

Order No. 130-5018

30"x18gauge

Order No. 130-5030



Gear Driven Ring Roller 三辊机

Precision, high quality machined roller forms rings out of not rolled flat stock, Metal sizes 3/16"x1" and up to 1/4" round, Create rings from 3" diameter to as large as you need. All surface are heat-treated and hardened for long life.



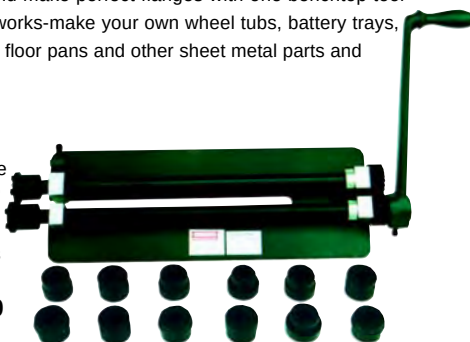
Order No.130-1111

Bead Roller Kit 起穀器

- Cut, form, roll beads and make perfect flanges with one benchtop tool
- Perfect for auto body works-make your own wheel tubs, battery trays, dash-boards, fire walls, floor pans and other sheet metal parts and accessories.

Capacities:

Mild steel.....18 gauge
Throat.....15"x7/8"
Dimensions.....8"x28"
Weight.....60Lbs



Order No. 130-5060

Bend Roller Fence Attachnebt

Helps you make accurate beads, bends and cuts.
Weight: 3 lbs.



Order No. 130-5062

Tube Rollers 弯管机

This machine is very superior and convenient for square tubes, rectangular tubes. It can bend various capacity workpieces by one by one set roller delivered with machine.

So you can save a lot of moment time and labor by using this machine



Order No. 837-6304

Tube Roller with Adjustable stand

- Hardened steel top plate

Order No. 837-6305



Electronic

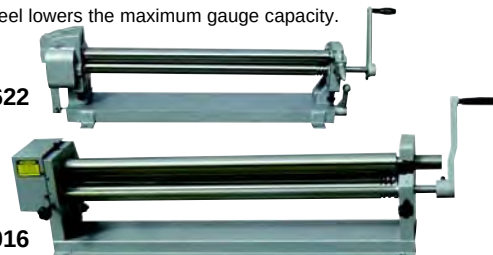
Tube Roller with Adjustable stand

Order No. 837-6306

Slip Rolls 手动卷筒机

- Maximum gauge capacities are applicable when using mild steel.
- Using galvanized steel lowers the maximum gauge capacity.

Order No. 130-3622



Order No. 130-5016

Capacity	Dia.of Rolls	Weight	Slip Rolls Order No.	Optional Stands Order No.
12"x22Ga.	1"	37lbs	130-1222	130-1229
24"x20Ga.	2"	140lbs	130-2420	130-2429
36"x22Ga.	2"	280lbs	130-3622	130-3629
50"x16Ga.	3"	570lbs	130-5016	130-5019

Combination of Shear, Brake & Rolls

三用组合卷筒机 3 in 1

- Removable male dies with female dies.
- Micro adjustable set back Gauge standard equipment.
- One piece 24" two position handle.



	Order No.	Order No.	Order No.	Order No.	Order No.
Specifications	130-1200	130-2400	130-3000	130-4000	130-5231
Width	12"	24"	30"	40"	52"
Rolling Dia.	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"
Weight	115lbs	264lbs	285lbs	570lbs	680lbs

Optional Stands

Width	Order No.
12"	13B-0312
24"	13B-0324
30"	13B-0330
40"	13B-0340
52"	13B-0352



Power Roll 电动卷筒机

Product Description

Capacity.....50" x 16 gage.
Motor.....220V/440V, 3-PH., 1HP.
Roll speed.....22 RPM.
Dia. of roll.....3".
Min. radius.....1.5".

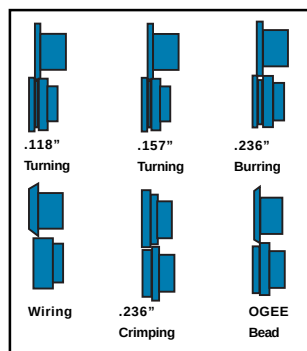


Order No.130-5116

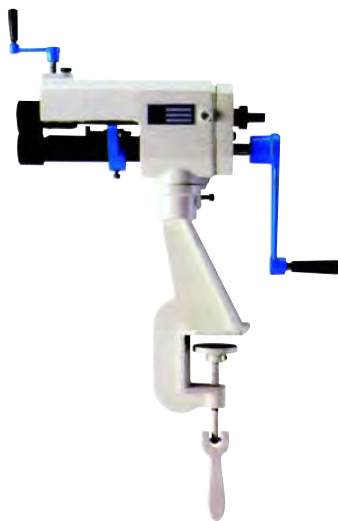
Rotary Machine 起鼓机

- Performs burring, edging, elbowing, flanging, flattening and turning.
- Long throat makes unit highly versatile.
- Includes 6 rolls: 2 turning, 1 each of burring, wiring, crimping, and ogee bead.
- Standard clamp for table mount operation.

Cutting Capacity.....22Gage
 Distance Between Shaft Centers.....2" (50.8mm)
 Depth of Throat to Frame.....7" (175mm)
 Net Weight.....64Lbs(29 kgs)
 Gross Weight.....71Lbs(32kgs)
 Overall Dimension (LXWXH).....16"x8"x16"(458x203x406mm)



Order No. 130-5400



Power Table Feeds 进给器

135 or 150lbs /inch of torque for mills with 5/8 Lead Screw

- Fits most Bridgeport and Bridgeport type milling machines.
- Speed: 4-180 RPM.
- Bevel Drive Gear Rate 4:8:1, Pilot light.
- A pivot light, on/off switch.
- Protective circuit breaker.
- Travel stop/limit, Internal Clutch, Helical Gearing.
- Strengthened Nylon "spiral gear".
- Automatic shutoff with electric limit switches.
- Central knob to control speed.
- Push button turns motor on for rapid traverse.
- Single lever controls engage, disengage, start, stop and direction of feed.
- Safety limit switches.



Axis	Volt/Frequency	Torque	Order No.
X-axis	115V/60Hz	135lbs	199-1050
X-axis	115V/60Hz	150lbs	199-1051
X-axis	240V/50Hz	135lbs	199-1049
Y-axis	115V/60Hz	135lbs	199-1052
Y-axis	115V/60Hz	150lbs	199-1053
Y-axis	240V/50Hz	135lbs	199-1054
Z-axis	115V/60Hz	150lbs	199-1055
Z-axis	240V/50Hz	135lbs	199-1056
Feed Horizontal type	115V/60Hz	150lbs	199-1057
Feed Horizontal type	240V/50Hz	135lbs	199-1058

Parts Washers

清洗桶

This parts washer is design for use in shops ranging from the home mechanic garage to heavy industry. Feature: enclosed pump, seamless construction.



Order No. 199-1035



Order No. 199-1022



Order No. 199-1031



Order No. 199-1041

Capacity	Capacity	Order No.
3.5 gallon (portable)	115V/60Hz/0.5A	199-1035
3.5 gallon (portable)	220V/50Hz/0.5A	199-1036
20 gallon	115V/60Hz/0.5A	199-1022
20 gallon	220V/50Hz/0.5A	199-1023
30 gallon	115V/60Hz/0.5A	199-1030
30 gallon	220V/50Hz/0.5A	199-1031
40 gallon	115V/60Hz/0.5A	199-1040
40 gallon	220V/50Hz/0.5A	199-1041

Protatable Benchtop 14" In-Line Brake

- With removeable fingers
- 4Pcs 1", 3", 4" and 6"
- 20 gage capacity in mild steel
- Weight: 45Lbs



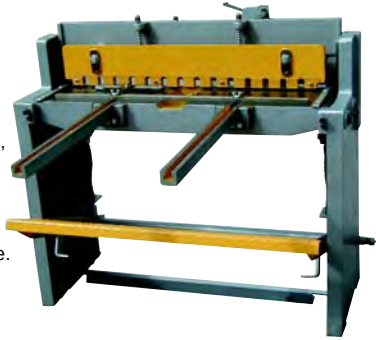
Order No. 130-1302

Precision Foot Shears

脚踏断材器

37" & 52" x 16 Gauge

- Front, Side & Back Gauge.
- Use for mild steel, aluminum, copper, brass, zinc, plastic and lead.
- Finger guards.
- High chrome high steel blade.



Specifications	37" x 16 Gauge Order No. 130-3700	52" x 16 Gauge Order No.130-5200
Capacity: 16 Gauge	37"	52"
Range Back Gauge	30-3/4"	30-3/4"
Range Front Gauge	35"	37-1/2"
Weight(N.W.)	775lbs	1,030lbs

Hand Shear

手动剪切机

Specifications

Dimension...96"x29-1/2"x 41-1/3".
Weight550lbs.
Max Shear Width.....78-5/8".
Shear Thickness.....1/20"



Order No. 130-5155

7-1/2" Mini Shear Brake

微型剪切机

- Blade length: 8".
- Max. Cutting/ Bending length: 7-7/8".
- Mounting base 9"x5".

Capacities:

Copper and brass.....20gauge
Aluminum.....18gauge

Order No. 130-5050



24" Bending Brakes 24" 折弯机

- Unlimited throat depth.
- 4" opening.
- 18 gage capacity.
- Maximum angle 135 degree.
- Fully Steel construction with a machined bending edge.
- Both simple and complex forming, like boxes, trays, covers, etc.
- Unique toggle clamp designed for quick and positive clamping.



Order No. 130-3024

40" Bending Brake

40" 手动折弯机

- Dimension:
63-1/2"x23-1/2"x50".
- Bends 16 gauge steel.
- Weight 1600lbs.



Order No. 130-5140

Bending Brakes 手动折弯机



Order No. 130-5130

Order No. 130-5135

Specifications	Order No. 130-5130	Order No. 130-5135
Width	41"	42"
Capacity	18Gage	18Gage
Weight	205lbs	209lbs
Dimension	54"x40"x38-1/2"	51-1/2"x38-1/2"x30-1/2"

12" Bench Hand Brake 手动折弯机

Perfect for the home hobbyist and delicate forming jobs.

- Mild steel up to 18 gage.
- Adjustable cams for bending from 0 to 135 degree.
- Ground bed for clean, straight edge forming.



Order No. 130-5112

48" Hand Brake 台式手动折弯机

Solid Finger Model

Simple, easy to set up and operate. Body sections are welded steel plate, with heavy truss rods and braces.

- Capacity mild steel: 20 gage.
- Bending length: 48-1/4".
- Max. Depth of box: 4"
- Max. lift of beam: 1-1/4"



Order No. 130-5160

Hand Bending Brakes

手动折弯机

- Bending Length 97"
- Bends 22 gauge steel
- Weight 790lbs.

Order No. 130-5150

- Bending Length 60"
- Bends 20gauge steel
- Weight 680lbs.

Order No. 130-5145



Universal Brakes 组合折弯机

- Completely portable.
- Rigid cast iron.
- Bronze bushings.
- Maximum gage capacities are applicable when use mild steel.
- Using galvanized steel lowers the maximum gage capacity.

Max. Bending Length.....36"
Capacity Mild Steel.....16Gauge
Max. Lift of Beam3/4"
Finger Width.....1-6"
Max. Depth of Box.....3"
Weight.....405lbs



Order No. 130-3616

Pan & Box Brake 重型手动折弯机

Heavy-Duty Floor Model, 48"x12 Gauge

Capacity: Mild Steel.....12 Gauge
Stainless Steel.....16 Gauge
Max. Bending Length.....48-1/2"/1220mm
Max. Beam Lift.....1-1/2"/38mm
Beam Adjustment.....0-1/2"(0-13mm)
Net Weight.....1280lbs/581kg
Gross Weight.....1587lbs/720kg



Order No. 130-4812

Pan & Box Brakes

手动折弯机

These bench top model can handle 20 gauge mild steel and are built to take on any serious bench work

12"x20 Gauge

- Material capacity:
12"x20Gage Mild steel
- Brake angle 0-135 degree
- Box fingers: 2-1", 2-2" and 2-3"
- Weight: 63Lbs



Order No.130-7012

24"x20 Gauge

- Material capacity:
20"x24Gage Mild steel
- Brake angle 0-135 degree
- Box fingers: 4-2", 2-3" and 2-4"
- Weight: 100Lbs

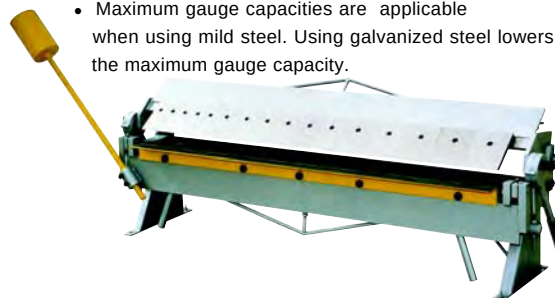


Order No.130-7024

Sheet Metal Pan & Box Brakes

手动折弯机

- Removable fingers.
- Maximum gauge capacities are applicable when using mild steel. Using galvanized steel lowers the maximum gauge capacity.



Specification	48"x22 Gauge Order No.130-4822	48"x16 Gauge Order No.130-4816
Capacity: Mild Steel	22 Gauge	16 Gauge
Stainless Steel	26 Gauge	20 Gauge
Max. Beam Lift	7/8"	1-1/4"
Max. Bend Length	48-1/4"	48-1/4"
Min. Reverse Bend	5/16"	5/16"
Finger Width	2", 3", 4"	2", 3", 4"
Number of Fingers	16	16
Max. Box Depth	3"	3"
Beam Adjustment	0-1/8"	0-5/8"

Brake Stands

for 48"x16 & 48"x22 Pan & Box Brakes



Bolted construction.
Painted steel plate

Order No. 130-4899

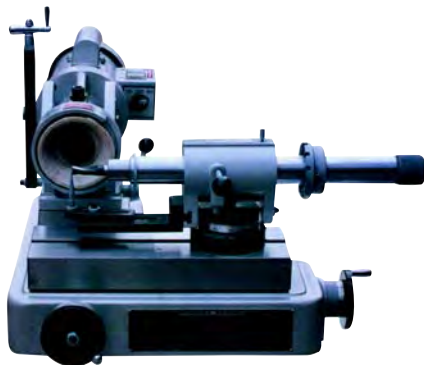
Cutter Master 磨刀机**End Mill Grinder**

Specialized for grinding various End Mills, Countersinks, Taps, Drills and Machine Tools

- Simple, safe operation—anyone can learn.
- High-grade castings throughout, precision machined and fitted!
- Rapid mounting of attachments.
- Sliding motor mount for rapid setting and lock.
- Wired for 110 Volts, single-phase motor.
- Uses standard 5C Collets.
- Dovetail ways with adjustable gibs.

Specifications

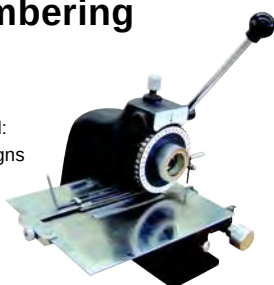
Max. Grinding Dia.....	8-21/32"
Max. Grinding Length.....	9-1/4"
Air Bearing Fixture Center Height.....	4-3/4"
Longitudinal Table Travel.....	6"
Worktable Surface Dimension	
Longitudinal.....	16-1/2"x5-21/32"
Cross.....	12-29/32"x5-21/32"
Worktable T-Slot.....	1/2"x3/4"x5/16"
Table Infeed Graduation.....	0.001
Max. Wheel.....	5"x2"x1-1/4"
Tilt Adjustment For Wheelhead.....	+30°-5°
Wheel Spindle Revolution.....	3450R.P.M.
Air Bearing Stroke.....	9-1/4"
Motor.....	1Phase,110V/220V
Overall Dimensions.....	24"x24-1/2"x19-3/4"

**Order No. 287-6540****Nameplate & Numbering Machine****压字机**

Such signs as follows can be printed:
ten numbers: 0-9; 26 letters: A-Z; signs

Specifications:

Size of Working Table:	250x200mm
Max.Depth of Pressing:	1mm
Packing Size:	460x300x300mm
G.W./N.W.:	13/11 kgs

**Order No. 805-1220****Metal Cutting Band Saws 金属带式锯床**

BS-100

Max. Capacity:

Circular 90°:	100mm
Rectangular 90°:	100x150mm
Circular 45°:	60mm
Rectangular 45°:	60x100mm

Blade speed 60Hz:54MPM
50Hz:45MPM

Blade size: 13x0.65x1470mm

Motor: 375W 1/2HP(3PH)
550W 3/4HP(1PH)

Drive: Gear

N.W./G.W.: 23/26Kg

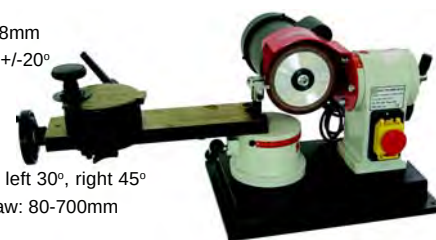
Order No. 199-5012

**Precision Drill Grinder****磨刀机****Specifications:**

point angle of drill bit:	40°-180°
range of grinding :	1.5-32mm
rpm of grinding wheel :	4200RPM
motor :	370W/400V,750W/230V
transversal stroke of grinding wheel :	50 mm
longitudinal stroke of grinding wheel.:	50mm
over size:	209xX90cm
size of packing:	66X135cm
GW/NW :	145/115kgs

Order No. 287-6510**Blade Grinder 磨刀机****Specifications:**

1.Stipulation:	125x10x32x8mm
2.Angle of grinding blade:	+/-20°
3.Angle of rotation frame:	left 30°, right 45°
4.Diameter of grindable saw:	80-700mm
5.Power:	250W
6.Revolution:	2850rpm(50HZ)/3400rpm(60HZ)
7.Size of appearance:	770x430x300mm
8.Weight:	60/50Kgs

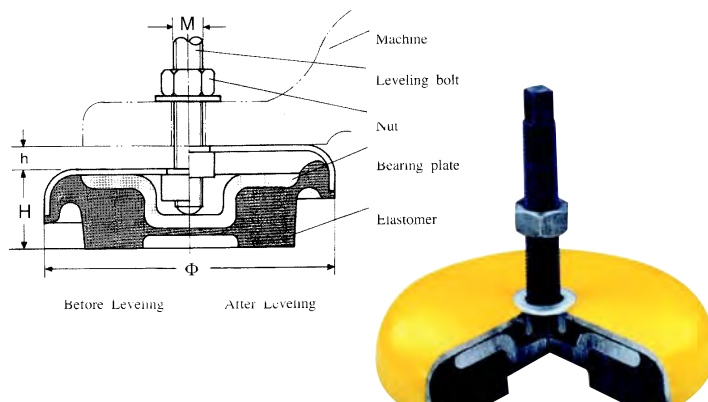
**Order No. 287-6640****Drill Presses****钻床****Order No. 125-1010**

Specification	Order No. 125-1010
Drilling Capacity	13mm/1/2"
Chuck Size	13mm/1/2"
Swing	359mm/14"
Spindle Travel	85mm/3-1/4"
Distance Spindle to Column	182mm/7.2"
Spindle Taper	B16
Column Diameter	72mm/2-7/8"
Spindle Speeds	4
Spindle Speeds Range	500-2500R.P.M
Motor	1/2HPHP
Overall Height	992mm/39"
Net Weigh	65Kg

Shock Proof Machine Mounts 机床减震垫铁

Light Duty

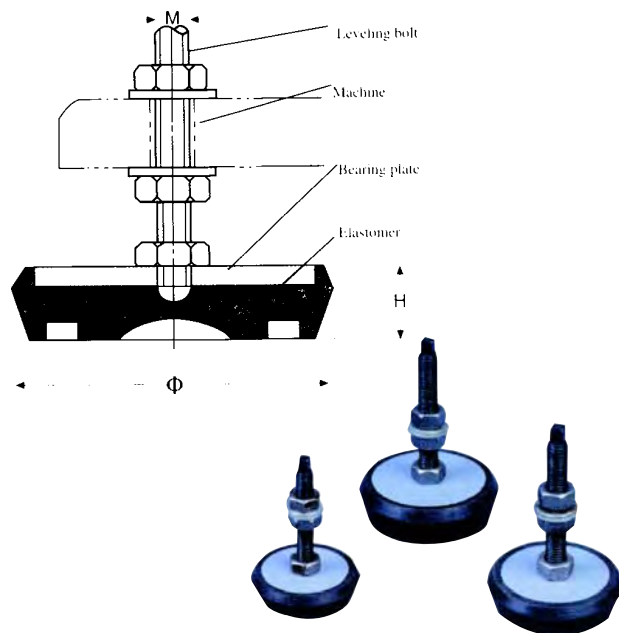
Extra tough rigid design,
Solid rubber base, Finest quality.
Extra tough support screw,
Supplied with bolt nut and washer.



Mount	Rubber				
Dia. x Height	Hardness	Adjust	Load		
	(ShoreA)	Height	Capacity	Bolt	Order No.
1-37/64x19/32" (40x15mm)	50	5mm	55lbs	M5x30	429-1015
3-5/32x63/64" (80x25mm)	50	8mm	220lbs	M10x80	429-1025
3-5/32x63/64" (80x25mm)	60	8mm	380lbs	M10x80	429-1026
3-5/32x63/64" (80x25mm)	70	8mm	550lbs	M10x80	429-1027
4-23/32x1-17/64" (120x32mm)	50	12mm	880lbs	M12x100	429-1035
4-23/32x1-17/64" (120x32mm)	60	12mm	1220lbs	M12x100	429-1036
4-23/32x1-17/64" (120x32mm)	70	12mm	1880lbs	M12x100	429-1037
4-23/32x1-17/64" (120x32mm)	80	12mm	2650lbs	M12x100	429-1038
6-19/64x1-3/8" (160x35mm)	50	12mm	2200lbs	M16x120	429-1045
6-19/64x1-3/8" (160x35mm)	60	12mm	4190lbs	M16x120	429-1046
6-19/64x1-3/8" (160x35mm)	70	12mm	5300lbs	M16x120	429-1047
6-19/64x1-3/8" (160x35mm)	80	12mm	7720lbs	M16x120	429-1048
7-9/32x1-17/32" (185x39mm)	60	12mm	4850lbs	M20x160	429-1056
7-9/32x1-17/32" (185x39mm)	70	12mm	6840lbs	M20x160	429-1057
7-9/32x1-17/32" (185x39mm)	80	12mm	9260lbs	M20x160	429-1058
9x2-1/8" (228x54mm)	60	12mm	7280lbs	M24x180	429-1066
9x2-1/8" (228x54mm)	70	12mm	9480lbs	M24x180	429-1067
9x2-1/8" (228x54mm)	80	12mm	14330lbs	M24x180	429-1068
12-13/32x2-3/4" (315x70mm)	70	12mm	16840lbs	M30x200	429-1077
12-13/32x2-3/4" (315x70mm)	80	12mm	20950lbs	M30x200	429-1078

Heavy Duty

- Designed for light duty metalcutting machines and textile, food, wood process machines etc.
- Feature long range height adjustment.



Mount Dia. x Height	Adjust Height	Load Capacity	Bolt	Order No.
2-31/64x11/16" (63x17mm)	15mm	180lbs	M10x80	429-2005
2-31/64x11/16" (63x17mm)	15mm	180lbs	M10x110	429-2006
3x25/32" (76x20mm)	20mm	300lbs	M12x100	429-2010
3x25/32" (76x20mm)	20mm	300lbs	M12x130	429-2011
3-3/8x1" (86x25mm)	20mm	700lbs	M12x100	429-2015
3-3/8x1" (86x25mm)	20mm	700lbs	M12x130	429-2016
4-21/64x1-7/64" (110x28mm)	25mm	1200lbs	M16x120	429-2020
4-21/64x1-7/64" (110x28mm)	25mm	1200lbs	M16x180	429-2021
5x1-3/16" (127x30mm)	25mm	2000lbs	M16x120	429-2025
5x1-3/16" (127x30mm)	25mm	2000lbs	M16x180	429-2026
5-29/32x1-19/64" (150x33mm)	25mm	3300lbs	M16x160	429-2030
5-29/32x1-19/64" (150x33mm)	25mm	3300lbs	M16x180	429-2031
6-3/4x1-3/8" (171x35mm)	25mm	4500lbs	M16x160	429-2035
6-3/4x1-3/8" (171x35mm)	25mm	4500lbs	M16x180	429-2036

Machine Feet

固定蹄脚

NEW



Base Diameter	Load Capacity	Thread Rod	Order No.
46mm	250kg	M10x47	429-2051
60mm	350kg	M16x120	429-2052
60mm	350kg	M16x200	429-2053
90mm	700kg	M16x200	429-2054
90mm	700kg	M16x200	429-2055

Universal Swivel Machine Feet

万向蹄脚

NEW



Base Diameter	Load Capacity	Thread Rod	Order No.
32mm	1000kg	M12x105	429-2113
45mm	1200kg	M12x105	429-2114
60mm	2000kg	M14x110	429-2115

Stickers for digital Calipers, Depth Gages

If you have any prefer sticker style more than us to choose for you, please let us know the sticker number as below.

Number	Styles
#1	
#2	
#3	
#4	
#5	
#6	
#7	
#8	
#9	
#10	
#11	
#12	
#13	
#14	
#15	
#16	
#17	
#18	
#19	
#20	

Decimal Equivalents Chart

Size	Decimal Inches	Size	Decimal Inches	Size	Decimal Inches	Size	Decimal Inches	Size	Decimal Inches	Size	Decimal Inches	Size	Decimal Inches
#80	.0135	#55	.0520	#36	.1065	#15	.1800	6.5mm	.2559	S	.3480	39/64"	.6094
.35mm	.0138	1.35mm	.0531	2.75mm	.1083	4.6mm	.1811	F	.2570	8.9mm	.3504	15.5mm	.6102
#79	.0145	#54	.0550	7/64"	.1094	#14	.1820	6.6mm	.2598	9mm	.3542	5/8"	.6250
1/64"	.0156	1.4mm	.0551	#35	.1100	#13	.1850	G	.2610	T	.3580	16mm	.6299
.4mm	.0157	1.45mm	.0571	2.8mm	.1102	4.7mm	.1850	6.7mm	.2638	9.1mm	.3583	41/64"	.6409
#78	.0160	1.5mm	.0591	#34	.1110	4.75mm	.1870	17/64"	.2656	23/64"	.3594	16.5mm	.6496
.45mm	.0177	#53	.0595	#33	.1130	3/16"	.1875	6.75mm	.2657	9.2mm	.3622	21/32"	.6562
#77	.0180	1.55mm	.0610	2.9mm	.1142	4.8mm	.1890	H	.2660	9.25mm	.3642	17mm	.6693
.5mm	.0197	1/16"	.0625	#32	.1160	#12	.1890	6.8mm	.2677	9.3mm	.3661	43/64"	.6719
#76	.0200	1.6mm	.0630	3mm	.1181	#11	.1910	6.9mm	.2717	U	.3680	11/16"	.6875
#75	.0210	#52	.0635	#31	.1200	4.9mm	.1929	I	.2720	9.4mm	.3701	17.5mm	.6890
.55mm	.0217	1.65mm	.0650	3.1mm	.1220	#10	.1935	7mm	.2756	9.5mm	.3740	45/64"	.7031
#74	.0225	1.7mm	.0669	1/8"	.1250	#9	.1960	J	.2770	3/8"	.3750	18mm	.7087
.6mm	.0236	#51	.0670	3.2mm	.1260	5mm	.1969	7.1mm	.2795	V	.3770	23/32"	.7188
#73	.0240	1.75mm	.0689	3.25mm	.1280	#8	.1990	K	.2810	9.6mm	.3780	18.5mm	.7283
#72	.0250	#50	.0700	#30	.1285	5.1mm	.2008	9/32"	.2812	9.7mm	.3819	47/64"	.7344
.65mm	.0256	1.8mm	.0709	3.3mm	.1299	#7	.2010	7.2mm	.2835	9.75mm	.3839	19mm	.7480
#71	.0260	1.85mm	.0728	3.4mm	.1339	13/64"	.2031	7.25mm	.2854	9.8mm	.3858	3/4"	.7500
.7mm	.0276	#49	.0730	#29	.1360	#6	.2040	7.3mm	.2874	W	.3860	49/64"	.7656
#70	.0280	1.9mm	.0748	3.5mm	.1378	5.2mm	.2047	L	.2900	9.9mm	.3898	19.5mm	.7677
#69	.0292	#48	.0760	#28	.1405	#5	.2055	7.4mm	.2913	25/64"	.3906	25/32"	.7812
.75mm	.0295	1.95mm	.0768	9/64"	.1406	5.25mm	.2067	M	.2950	10mm	.3937	20mm	.7874
#68	.0310	5/64"	.0781	3.6mm	.1417	5.3mm	.2087	7.5mm	.2953	X	.3970	51/64"	.7969
1/32"	.0312	#47	.0785	#27	.1440	#4	.2090	19/64"	.2969	Y	.4040	20.5mm	.8071
.8mm	.0315	2mm	.0787	3.7mm	.1457	5.4mm	.2126	7.6mm	.2992	13/32"	.4062	13/16"	.8125
#67	.0320	2.05mm	.0807	#26	.1470	#3	.2130	N	.3020	Z	.4130	21mm	.8268
#66	.0330	#46	.0810	3.75mm	.1476	5.5mm	.2165	7.7mm	.3031	10.5mm	.4134	53/64"	.8281
.85mm	.0335	#45	.0820	#25	.1495	7/32"	.2188	7.75mm	.3051	27/64"	.4219	27/32"	.8438
#65	.0350	2.1mm	.0827	3.8mm	.1496	5.6mm	.2205	7.8mm	.3071	11mm	.4331	21.5mm	.8465
.9mm	.0354	2.15mm	.0846	#24	.1520	#2	.2210	7.9mm	.3110	7/16"	.4375	55/64"	.8594
#64	.0360	#44	.0860	3.9mm	.1535	5.7mm	.2244	5/16"	.3125	11.5mm	.4528	22mm	.8661
#63	.0370	2.2mm	.0866	#23	.1540	5.75mm	.2264	8mm	.3150	29/64"	.4531	7/8"	.8750
.95mm	.0374	2.25mm	.0886	5/32"	.1562	#1	.2280	O	.3160	15/32"	.4688	22.5mm	.8858
#62	.0380	#43	.0890	#22	.1570	5.8mm	.2283	8.1mm	.3189	12mm	.4724	57/64"	.8906
#61	.0390	2.3mm	.0906	4mm	.1575	5.9mm	.2323	8.2mm	.3228	31/64"	.4844	23mm	.9055
1mm	.0394	2.35mm	.0925	#21	.1590	A	.2340	P	.3230	12.5mm	.4921	29/32"	.9062
#60	.0400	#42	.0935	#20	.1610	15/64"	.2344	8.25mm	.3248	1/2"	.5000	59/64"	.9219
#59	.0410	3/32"	.0938	4.1mm	.1614	6mm	.2362	8.3mm	.3268	13mm	.5118	23.5mm	.9252
1.05mm	.0413	2.4mm	.0945	4.2mm	.1654	B	.2380	21/64"	.3281	33/64"	.5156	15/16"	.9375
#58	.0420	#41	.0960	#19	.1660	6.1mm	.2402	8.4mm	.3307	17/32"	.5312	24mm	.9449
#57	.0430	2.45mm	.0965	4.25mm	.1673	C	.2420	Q	.3320	13.5mm	.5315	61/64"	.9531
1.1mm	.0433	#40	.0980	4.3mm	.1693	6.2mm	.2441	8.5mm	.3346	35/64"	.5469	24.5	.9646
1.15mm	.0453	2.5mm	.0984	#18	.1695	D	.2460	8.6mm	.3386	14mm	.5512	31/32"	.9688
#56	.0465	#39	.0995	11/64"	.1719	6.25mm	.2461	R	.3390	9/16"	.5625	25mm	.9843
3/64"	.0469	#38	.1015	#17	.1730	6.3mm	.2480	8.7mm	.3425	14.5mm	.5709	63/64"	.9844
1.2mm	.0472	2.6mm	.1024	4.4mm	.1732	E	.2500	11/32"	.3438	37/64"	.5781	1"	1.0000
1.25mm	.0492	#37	.1040	#16	.1770	1/4"	.2500	8.75mm	.3445	15mm	.5906		
1.3mm	.0512	2.7mm	.1063	4.5mm	.1772	6.4mm	.2520	8.8mm	.3465	19/32"	.5938		

Tap Drill Size(75% Prob.Thread)

Tap Size	Drill Size	Tap Size	Drill Size	Tap Size	Drill Size
0-80	3/64	10-32	21	5/8-18	37/64
M1.6x.35	1.25mm	M5x.8	4.2mm	M16x2	35/64
1-64	1/16	12-24	17	3/4-10	21/32
M2x.4	1/16	12-28	15	3/4-16	11/16
1-72	52	M6x1	10	M20x2.5	11/16
2-56	51	1/4-20	8	7/8-9	49/64
2-64	50	1/4-28	3	7/8-14	13/16
M2.5x.45	2.05mm	5/16-18	F	M24x3	53/64
3-48	5/64	5/16-24	I	1-8	7/8
3-56	46	M8x1.25	6.7mm	1-12	59/64
4-40	43	3/8-16	5/16	1-14	15/16
4-48	42	3/8-24	Q	1-1/8-7	63/64
M3x.5	40	M10x1.5	8.4mm	1-1/8-12	1-3/64
5-40	39	7/16-14	U	M30x3.5	1-3/64*
5-44	37	7/16-20	W	1-1/4-7	1-7/64*
M3.5x.6	33	M12x1.75	13/32	1-1/4-12	1-11/64*
6-32	36	1/2-13	27/64	1-3/8-6	1-7/32*
6-40	33	1/2-20	29/64	1-3/8-12	1-19/64*
M4x.7	3.25mm	M14x2	15/32	M36x4	1-1/4*
8-32	29	9/16-12	31/64	1-1/2-6	1-11/32*
8-36	29	9/16-18	33/64	1-1/2-12	1-27/64*
10-24	25	5/8-11	17/32		

* Reaming Recommended.

Pipe Tap Sizes

Tap Size	Drill Size NPT/NPTF(Taper)	Decimal Equivalent	Drill Size NPS(Straight)	Decimal Equivalent
1/8-27	R	.3390	11/32	.3438
1/4-18	7/16	.4375	7/16	.4375
3/8-18	37/64	.5781	37/64	.5781
1/2-14	45/64	.7031	23/32	.7188
3/4-14	59/64	.9219	59/64	.9219
1-11-1/2	1-5/32	1.1562	1-5/32	1.1562
1-1/4-11-1/2	1-1/2	1.5000	1-1/2	1.5000
1-1/2-11-1/2	1-47/64	1.7344	1-3/4	1.7500
2-11-1/2	2-7/32	2.2188	2-7/32	2.2188
2-1/2-8	2-5/8	2.6250	2-2/32	2.6562
3-8	3-1/4	3.2500		



Satisfy Your Need For Speed.....