



Mini Tools 迷你刀具



Vertical Inserts and Toolholders for threading, chamfering, grooving and turning 垂直安装刀片和刀柄用于螺纹、倒角、开槽、车削

Advantages 优点

Carbide grade:
硬质合金级别

BLU-Sub-micron grade with advanced PVD triple layer coating delivering high heat resistance and smooth cutting operation. 亚微颗粒级带先进的PVD三层涂层实现高耐热和平稳切削

- Carbide shank toolholder provides excellent vibration resistance. 硬质合金刀杆提供杰出的抗振
- Long reach. 长的延伸
- Through coolant. 内冷孔通过
- For threading, grooving, boring and chamfering. 螺纹, 切槽, 镗孔和倒角
- Quick indexing. 快速转位

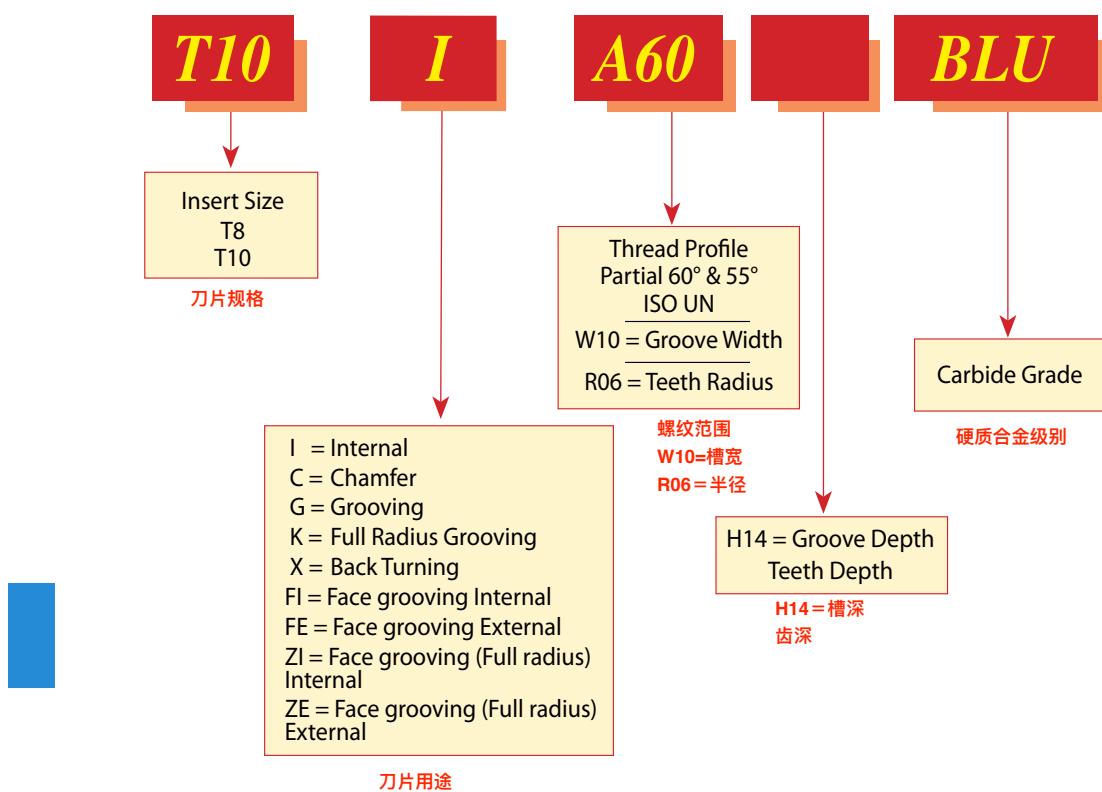
Typical Applications: 典型应用

- Long threads or applications requiring over-hang. 长螺纹或长悬伸加工需要
- Enables production of threads with large pitch/profile. 大螺距大螺距仿形加工需要
- Threading, grooving, boring, profiling and chamfering - It's possible to offer most of the Tiny Tools profiles on the insert. 大多数刀片都能够提供螺纹, 切槽, 镗孔, 仿形和倒角加工

Contents:	Page:	Contents:	Page:
Product Identification 产品标识	106	Full Radius Grooving R 槽刀	110
Partial Profile 60° 60°-不完整牙 (范围牙, 不带修光刃)	107	Back Turning 背车	110
Partial Profile 55° 55°-不完整牙 (范围牙不带修光刃)	107	Face Grooving 端面槽	111
ISO ISO螺纹60°- (完整牙带修光刃)	108	Face Grooving Full Radius R 端面槽	112
UN UN螺纹60°- (完整牙带修光刃)	108	Carbide Shank Toolholder 硬质合金刀杆	113
Chamfering 倒角	109	Steel Toolholders 钢刀杆	113
Grooving 切槽	109	Technical Section 技术部分	114



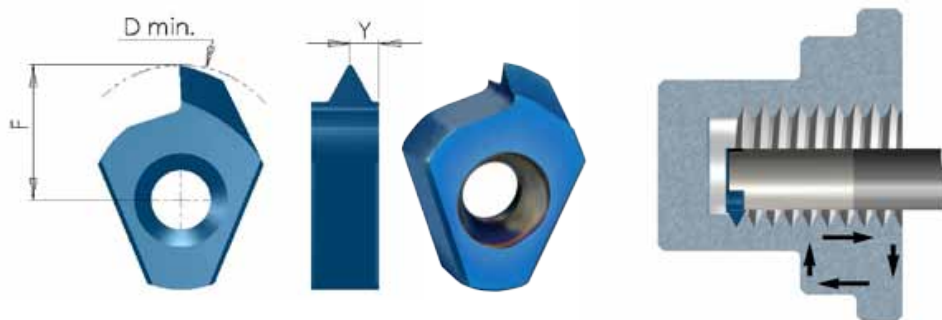
Product Identification 产品标识





Partial Profile 60° 60°-不完整牙-范围牙-不带修光刃

Same insert for internal and external thread 相同刀片内外螺纹通用



刀片类型	订货号	螺距范围公制	螺距牙数美制	最小直径		
Insert Type	Ordering Code	Pitch Range mm	Pitch Range TPI	D min	F	Y
T8	T8 A60	Int 0.5-0.75 Ex 0.4- 0.75	56-32 64-32	8.0	3.7	0.6
	T8 G60	Int 1.0-1.25 Ex 0.8- 1.0	28-20 32-28	8.4	4.1	0.8
T10	T10 A60	Int 0.5-0.8 Ex 0.4-0.8	56-28 64-32	11.6	6.4	0.6
	T10 G60	Int 1.0-2.0 Ex 0.8-1.75	28-13 32-15	12.3	7.1	1.3
	T10 D60	Int 2.0-3.0 Ex 1.75-2.5	13-8 15-10	13.1	7.9	1.5

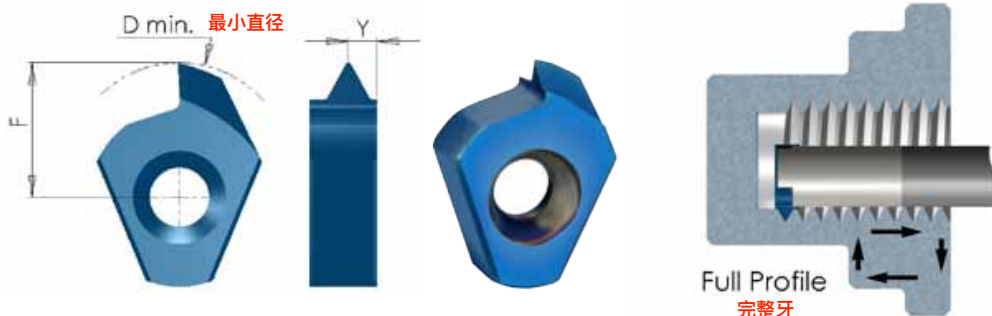
Partial Profile 55° 55°-不完整牙-范围牙-不带修光刃

Same insert for internal and external thread 相同刀片内外螺纹通用

刀片类型	订货号	螺距范围	螺距牙数英制	最小直径		
Insert Type	Ordering Code	Pitch Range mm	Pitch Range TPI	D min	F	Y
T8	T8 G55	1.25-1.5	19-18	9.1	4.8	1.0
	T8 U55	1.75-2.0	16-14	8.7	4.4	1.2
T10	T10 G55	1.25-2.0	19-14	12.4	7.2	1.2



Full Profile 完整牙带修光刃



ISO

Inserts for internal thread ISO, 用于内螺纹

刀片类型	订货号	螺距	M 粗牙	M 细牙	最小直径	F	Y
Insert Type	Ordering Code	Pitch mm	M coarse	M fine	D min	F	Y
T8	T8 I 0.5 ISO	0.5		M8.5	8.0	3.6	0.5
	T8 I 0.75 ISO	0.75		M9	8.1	3.8	0.6
	T8 I 1.0 ISO	1.0		M9	8.0	3.7	0.7
	T8 I 1.25 ISO	1.25		M10	8.2	3.9	0.8
	T8 I 1.5 ISO	1.5	M10	M12	8.4	4.1	1.0
	T8 I 1.75 ISO	1.75	M12	-	8.6	4.3	1.1
	T8 I 2.0 ISO	2.0	M14	M17	8.8	4.5	1.3
T10	T10 I 0.5 ISO	0.5		M12	11.3	6.1	0.5
	T10 I 0.75 ISO	0.75		M12	11.3	6.1	0.6
	T10 I 1.0 ISO	1.0		M13	11.7	6.5	0.7
	T10 I 1.5 ISO	1.5		M14	11.7	6.5	1.0
	T10 I 2.0 ISO	2.0	M16	M17	12.0	6.8	1.3
	T10 I 2.5 ISO	2.5	M18, M20	-	12.6	7.4	1.4
	T10 I 3.0 ISO	3.0	M24	M28	12.6	7.4	1.6

UN

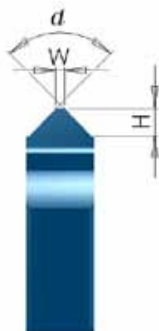
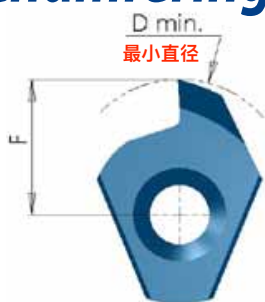
Inserts for internal thread UN 用于内螺纹

刀片类型	订货号	牙数	标准规格	UN 粗牙	UN 细牙	UN 特细牙	最小直径	F	Y
Insert Type	Ordering Code	Pitch TPI	Nominal size	UNC	UNF	UNEF	D min	F	Y
T8	T8 I 32UN	32	7/16, 1/2			3/8	8.3	4.0	0.6
	T8 I 28UN	28	3/8			7/16, 1/2	8.3	4.0	0.7
	T8 I 24UN	24			3/8		8.3	4.0	0.7
	T8 I 20UN	20	3/8		7/16, 1/2		8.2	3.9	0.9
	T8 I 16UN	16	7/16, 1/2				8.7	4.4	1.0
	T8 I 14UN	14		7/16			8.8	4.5	1.2
T10	T10 I 20UN	20	9/16, 5/8, 11/16			3/4	12.0	6.8	0.9
	T10 I 18UN	18			9/16, 5/8		12.0	6.8	1.0
	T10 I 16UN	16	9/16, 5/8, 11/16		3/4		12.0	6.8	1.1
	T10 I 14UN	14			7/8		12.1	6.9	1.2
	T10 I 12UN	12	5/8, 11/16, 3/4	9/16			12.1	6.9	1.4
	T10 I 11UN	11		5/8			12.5	7.3	1.5



倒角

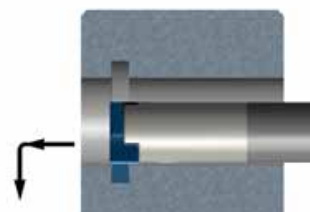
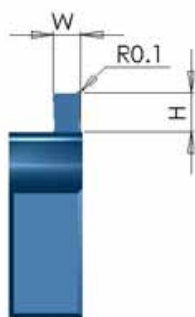
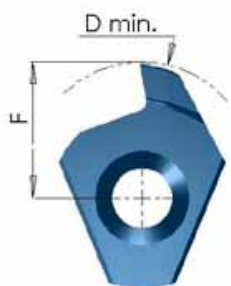
Chamfering



刀片类型	订货号	刀尖宽度	切削刃高度	切削刃角度	最小直径	
Insert Type	Ordering Code	W	H max	α	D min	F
T8	T8 C90	0.2	1.4	90°	8.8	4.5
T10	T10 C90	0.2	1.8	90°	12.7	7.5

Same insert for right and left hand chamfers 相同的片用于左右手倒角

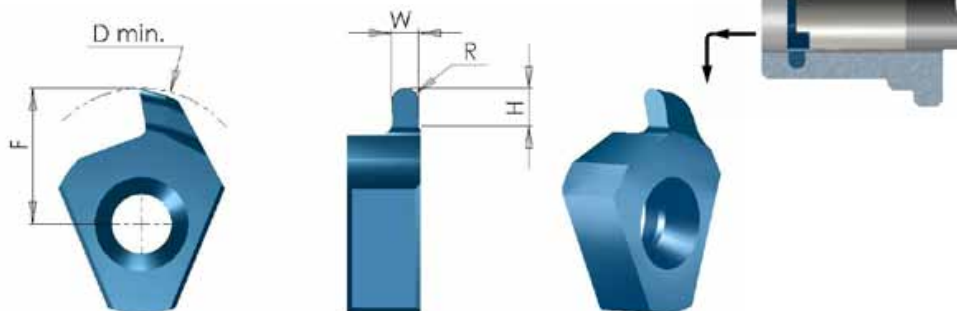
Grooving 切槽



刀片类型	订货号	刀尖宽度	切削刃高度	最小直径	
Insert Type	Ordering Code	W ±0.02	H max	D min	F
T8	T8 G W10 H20	1.0	2.0	9.4	5.1
	T8 G W15 H20	1.5			
	T8 G W20 H20	2.0			
	T8 G W25 H20	2.5			
	T8 G W30 H20	3.0			
T10	T10 G W10 H14	1.0	1.4	12.3	7.1
	T10 G W15 H14	1.5			
	T10 G W20 H14	2.0			
T10	T10 G W10 H23	1.0	2.3	13.1	7.9
	T10 G W15 H23	1.5			
	T10 G W20 H23	2.0			
	T10 G W25 H23	2.5			
	T10 G W30 H23	3.0			

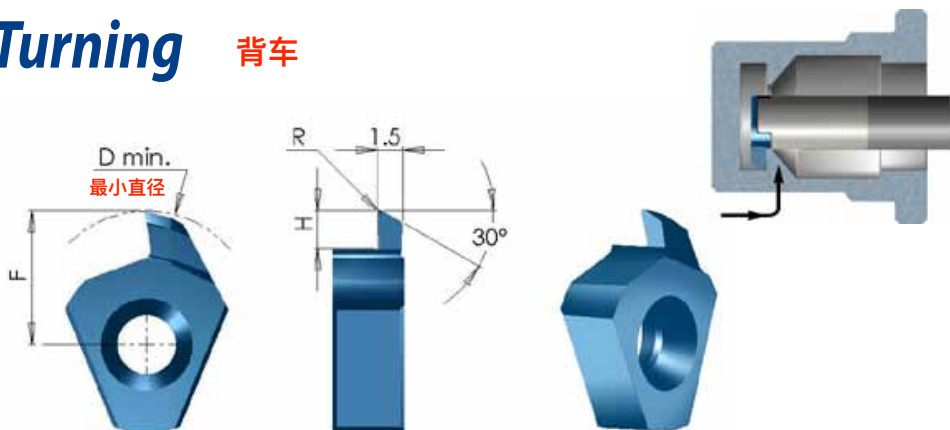


Full Radius Grooving R槽



刀片类型	订货号	切削刃宽度	R 值	切削刃高度	最小直径	
Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T8	T8 K R04 H10	0.8	0.4	1.0	8.4	4.1
	T8 K R06 H10	1.2	0.6			
	T8 K R09 H10	1.8	0.9			
T10	T10 K R04 H22	0.8	0.4	2.2	13.1	7.9
	T10 K R06 H22	1.2	0.6			
	T10 K R09 H22	1.8	0.9			
	T10 K R10 H22	2.0	1.0			

Back Turning 背车



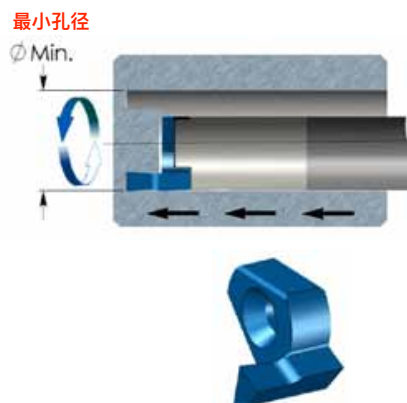
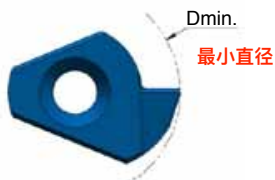
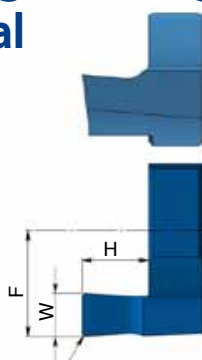
刀片类型	订货号	刀尖 R	切削刃高度	最小直径	
Insert Type	Ordering Code	R	H max	D min	F
T8	T8 X R02 H20	0.2	2.0	9.4	5.1
T10	T10 X R02 H23	0.2	2.3	13.1	7.9
	T10 X R04 H23	0.4			



Face grooving

Internal

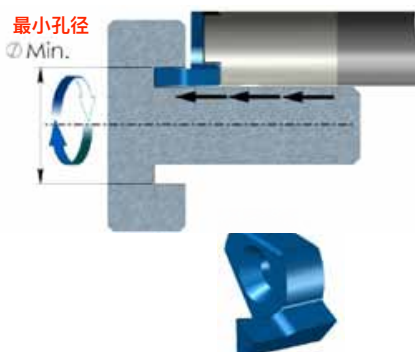
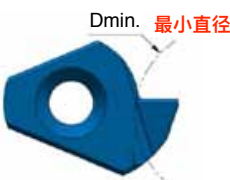
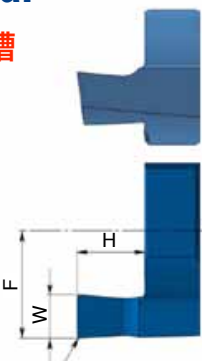
内端面槽



刀片类型	订货号	切削刃宽度	切削刃长度	最小直径	
Insert Type	Ordering Code	W ±0.02	H max	D min	F
T10	T10 FI W10 H15	1.0	1.5	14.0	8.0
	T10 FI W15 H25	1.5	2.5		
	T10 FI W20 H30	2.0	3.0		
	T10 FI W20 H50	2.0	5.0		
	T10 FI W25 H30	2.5	3.0		
	T10 FI W25 H50	2.5	5.0		
	T10 FI W30 H30	3.0	3.0		
	T10 FI W30 H50	3.0	5.0		

External

外端面槽



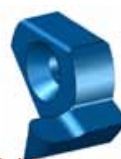
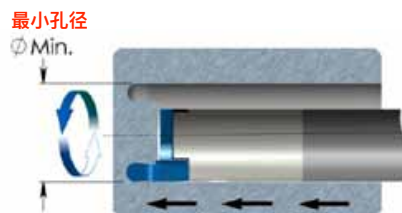
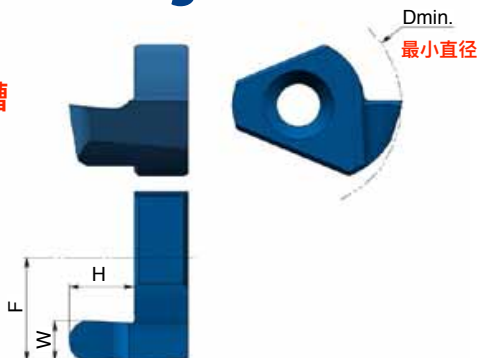
刀片类型	订货号	切削刃宽度	切削刃长度	最小直径	
Insert Type	Ordering Code	W ±0.02	H max	D min	F
T10	T10 FE W10 H15	1.0	1.5	12.0	8.0
	T10 FE W15 H25	1.5	2.5		
	T10 FE W20 H30	2.0	3.0		
	T10 FE W20 H50	2.0	5.0		
	T10 FE W25 H30	2.5	3.0		
	T10 FE W25 H50	2.5	5.0		
	T10 FE W30 H30	3.0	3.0		
	T10 FE W30 H50	3.0	5.0		



Face grooving, Full radius

Internal

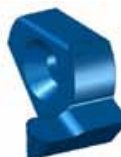
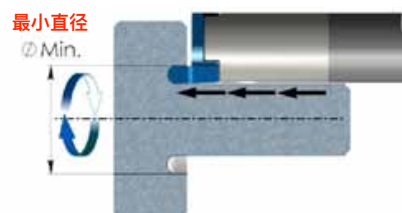
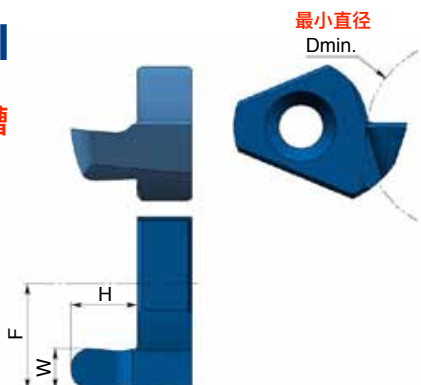
R 内端面槽



刀片类型	订货号	切削刃宽度	R 值	切削刃长度	最小直径	
Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T10	T10 ZI R05 H15	1.0	0.5	1.5	14.0	8.0
	T10 ZI R08 H25	1.6	0.8	2.5		
	T10 ZI R10 H30	2.0	1.0	3.0		
	T10 ZI R125 H30	2.5	1.25	3.0		
	T10 ZI R15 H30	3.0	1.5	3.0		

External

R 外端面槽

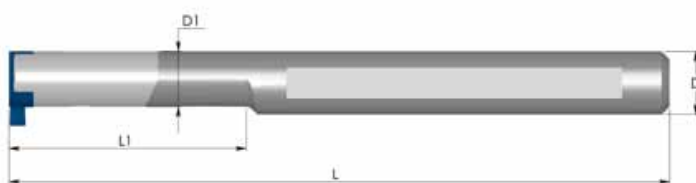


刀片类型	订货号	切削刃宽度	R 值	切削刃长度	最小直径	
Insert Type	Ordering Code	W ±0.02	R	H max	D min	F
T10	T10 ZE R05 H15	1.0	0.5	1.5	12.0	8.0
	T10 ZE R08 H25	1.6	0.8	2.5		
	T10 ZE R10 H30	2.0	1.0	3.0		
	T10 ZE R125 H30	2.5	1.25	3.0		
	T10 ZE R15 H30	3.0	1.5	3.0		

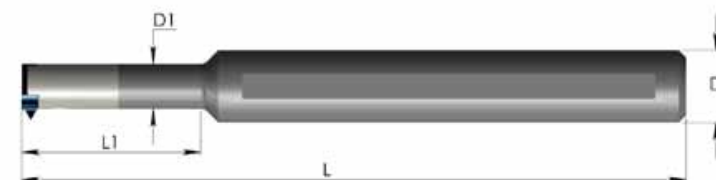


Carbide Shank Toolholders 硬质合金刀杆

With through coolant 带内冷



刀片类型	订货号					刀片螺丝	扳手
Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key
T8	ST 0008 L20 F08C	8	7	20	80	S5	K5
	ST 0008 L30 G08C	8	7	30	95	S5	K5
	ST 0008 L40 H08C	8	7	40	105	S5	K5

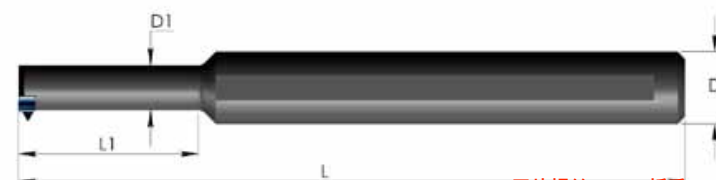


刀片类型	订货号					刀片螺丝	扳手
Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key
T10	ST 0010 M10C	10	10	-	150	S11	K11
	ST 0012 L40 J10C	12	10	40	110	S11	K11
	ST 0012 L55 K10C	12	10	55	125	S11	K11

Steel Toolholders 钢刀杆

With through coolant

带内冷



刀片类型	订货号					刀片螺丝	扳手
Insert Type	Ordering Code	D	D1	L1	L	Insert Screw	Torx Key
T10	ST 0012 L25 E10	12	10	25	70	S11	K11
	ST 0016 L25 G10	16	10	25	90	S11	K11
	ST 0016 L35 H10	16	10	35	100	S11	K11



Technical Section 技术部分

Cutting Data 切削参数

标准 ISO	材料 Materials	切削速度 Cutting Speed m/min	推荐进给范围 Recommended feed rate mm/rev
P	Low and Medium Carbon Steels <0.55%C 低和中碳钢	25 - 70	Grooving: 0.01-0.03 切槽 Back turning: 0.03-0.10 背车 Face grooving: 0.01-0.08 面槽 Chamfering: 0.02-0.08 倒角 进给参数: 切槽: 0.01-0.03mm 背车: 0.03-0.10mm 面槽: 0.01-0.08mm 倒角: 0.02-0.08mm
	High Carbon Steels ≥0.55%C 高碳钢	20 - 50	
	Alloy Steels, Treated Steels 合金钢, 热处理钢	15 - 30	
M	Stainless Steels - Free Cutting 易切不锈钢	25 - 70	
	Stainless Steels - Austenitic 奥氏体不锈钢	20 - 40	
	Cast Steels 铸钢	30 - 70	
K	Cast Iron 铸铁	15 - 30	
N	Aluminum ≤12%Si, Copper 硅含量小于12铝合金, 铜	30 - 90	
	Aluminum >12% Si 硅含量大于12铝合金	20 - 70	
	Synthetics, Duroplastics, Thermoplastics 合成材料, 硬质塑料, 热塑性塑料	20 - 70	
S	Nickel Alloys, Titanium Alloys 镍基合金, 钛合金	20 - 50	
H	Hardened Steel 45 - 50HRc 硬钢HRC45-50	10 - 40	

Threading Passes 走刀次数

Pitch: 螺距	mm	0.5	0.7	0.8	1.0	1.25	1.5	2-5
	TPI	48	36	32	24	20	16	14-5
Number of Passes 走刀次数		6-12	7-14	7-16	8-18	8-20	10-22	20-38

三 禄 切 削 刀 具
SUNROXM



上海三禄贸易有限公司



Carmex
Precision Tools Ltd.