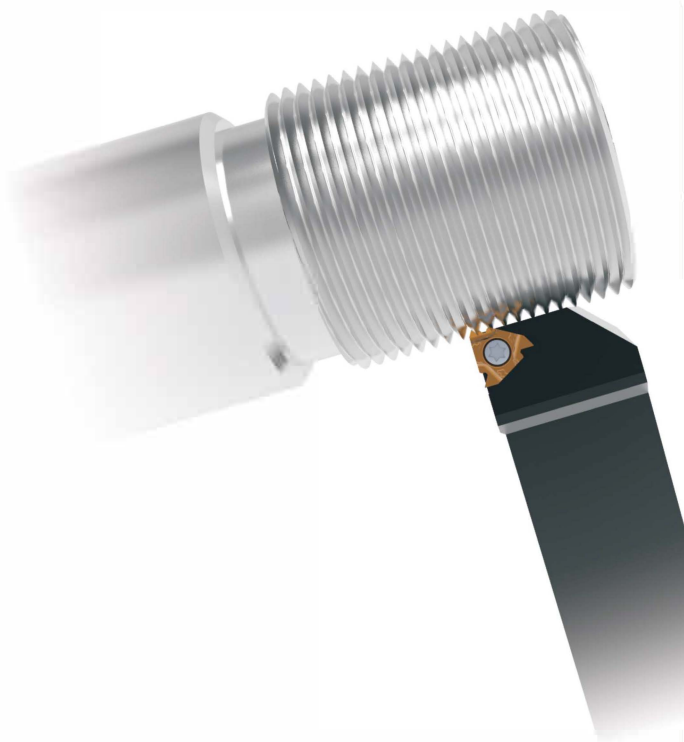


螺纹车削刀具

THREAD TURNING



螺纹车削刀具

Thread Turning

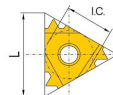
- 螺纹刀片命名规则
Code Key for Thread Inserts A187
- 螺纹车削刀片
Thread Turning Inserts A188
- 螺纹车削刀杆命名规则
Code Key for Thread Turning Tools A208
- 螺纹车削刀杆
Thread Turning Tools A209
- 切削参数推荐
Cutting Parameter Recommendations A212


螺纹刀片命名规则

Code Key for Thread Inserts

16	I	R	1.75	ISO
①	②	③	④	⑤

① 刀片尺寸	
Insert Size	
L (mm)	I.C
6	3.97mm=5/32"
8	4.76mm=3/16"
11	6.35mm=1/4"
16	9.525mm=3/8"
22	12.7mm=1/2"
27	15.875mm=5/8"



② 切削类型	
Cutting Type	
	
E	外螺纹切削 External
I	内螺纹切削 Internal

③ 螺纹旋向	
RH/LH Insert	
R	右旋 Right Hand Insert
L	左旋 Left Hand Insert

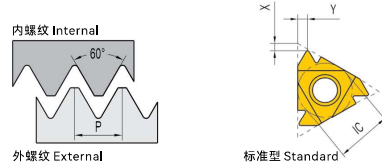
④ 螺距代号	
Pitch Code	
全牙型 Full Thread Profile	
(每英寸牙数 Number of Pitch Per Inch)	
0.35-9.0mm	
72-2 TPI(牙/英寸)	
72-2TPI (Tooth/Inch)	
V牙型 V Profile	
(范围以字母表示 Range by Letter)	
mm TPI(牙/英寸)	
mm TPI (Tooth/Inch)	
A 0.5-1.5 48-16	
AG 0.5-3.0 48-8	
G 1.75-3.0 14-8	
N 3.5-5.0 7-5	
U 5.5-9.0 4.5-2.75	
Q 5.5-6.0 4.5-4	

⑤ 螺纹刀片牙型	
Thread Profile	
60	通用型螺纹60° Partial Profile 60°
55	通用型螺纹55° Partial Profile 55°
ISO	ISO米制标准螺纹 ISO metric
UN	美制UN标准螺纹 American UN
NPT	60°美国标准锥管螺纹 NPT
NPTF	60°美国干密封螺纹 NPTF
BSPT	55°英制标准锥管螺纹 British Standard Pipe Thread
ACME	美制29°梯形螺纹 American ACME
UNJ	美制航空天螺纹 American Stub ACME
MJ	公制航天螺纹 Metric Aerospace ISO5855
TR	梯形螺纹 (DIN103) Trapeze
ABUT	美制锯齿螺纹 American Buttress
SAGE	公制锯齿螺纹 Metric Buttress
RD	圆螺纹 Round (DIN405) Round(DIN405)
API	美制石油管螺纹 American Petroleum Pipe Thread

60°通用型螺纹刀片

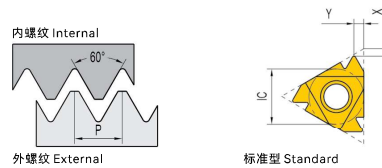
Partial Profile 60°

外螺纹 External



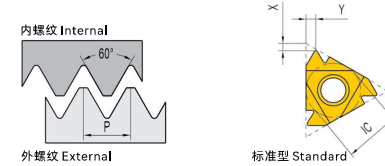
刀片外形	内接圆直径	导程&螺距		型号		尺寸(mm)		
Shape of insert	IC	Lead&Pitch		Type		Dimensions		
		mm	TPI	右旋螺纹	左旋螺纹	X	Y	T
				Right hand	Left hand			
	1/4"	0.5~1.5	48~16	11ER A 60	11EL A 60	0.80	0.90	
	3/8"	0.5~1.5	48~8	16ER A 60	16EL A 60	1.20	1.70	
		1.75~3.0	14~8	16ER G 60	16EL G 60	1.20	1.70	
		0.5~3.0	48~8	16ER AG 60	16EL AG 60	1.10	1.20	
	1/2"	3.5~5.0	7~5	22ER N 60	22EL N 60	1.60	2.40	
5/8"	5.5~6.0	4.5~4	27ER Q 60	27EL Q 60	2.30	3.10		

内螺纹 Internal

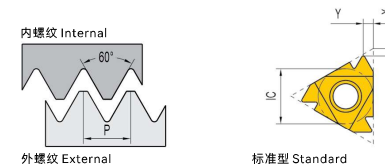


刀片外形	内接圆直径	导程&螺距		型号		尺寸(mm)		
Shape of insert	IC	Lead&Pitch		Type		Dimensions		
		mm	TPI	右旋螺纹	左旋螺纹	X	Y	T
				Right hand	Left hand			
	1/4"	0.5~1.5	48~16	11IR A 60	11IL A 60	0.80	0.90	
	3/8"	0.5~1.5	48~16	16IR A 60	16IL A 60	0.80	0.90	
		0.5~3.0	48~8	16IR AG 60	16IL AG 60	1.20	1.70	
		14~8	48~8	16IR G 60	16IL G 60	1.20	1.70	
	1/2"	3.5~5.0	7~5	22IR N 60	22IL N 60	1.60	2.40	

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade



P			M				K		N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	★			★				★							★
	★			★				★							★
	★			★				★							★
	☆			☆				☆			★				★
	☆			☆				☆							★

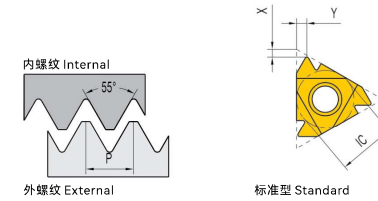
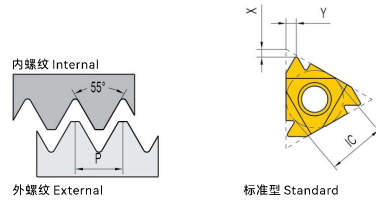


P			M				K		N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	★			★				★							★
	★			★				★			★				★
	★			★				★			★				★
	★			★				★			★				★
	☆			☆				☆							★

55°通用型螺纹刀片

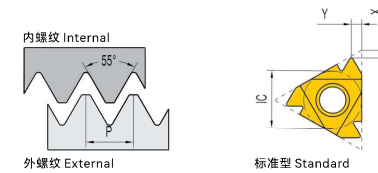
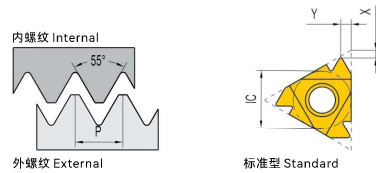
Partial Profile 55°

外螺纹 External



刀片外形	内接圆直径	导程&螺距		型号		尺寸(mm)		
Shape of insert	IC	Lead&Pitch		Type		Dimensions		
		mm	TPI	右旋螺纹	左旋螺纹	X	Y	T
				Right hand	Left hand			
	1/4"	0.5~1.5	48~16	11ER A 60	11EL A 60	0.80	0.90	
		0.5~1.5	48~16	16ER A 55	16EL A 55	0.80	0.90	
	3/8"	0.5~3.0	48~8	16ER AG 55	16EL AG 55	1.20	1.70	
		1.75~3.0	14~8	16ER G 55	16EL G 55	1.20	1.70	
1/2"	3.5~5.0	7~5	22ER AG 55	22EL AG 55	1.70	2.50		
	3.5~5.0	7~5	22ER N 55	22EL AG 55	1.70	2.50		

内螺纹 Internal



刀片外形	内接圆直径	导程&螺距		型号		尺寸(mm)		
Shape of insert	IC	Lead&Pitch		Type		Dimensions		
		mm	TPI	右旋螺纹	左旋螺纹	X	Y	T
				Right hand	Left hand			
	1/4"	0.5~1.5	48~16	11IR A 55	11IL A 55	0.80	0.90	
		0.5~1.5	48~16	16IR A 55	16IL A 55	0.80	0.90	
	3/8"	0.5~3.0	48~8	16IR AG 55	16IL AG 55	1.20	1.70	
		1.75~3.0	14~8	16IR G 55	16IL G 55	1.20	1.70	
1/2"	3.5~5.0	7~5	22IR N 55	22IL N 55	1.70	2.50		

P			M				K		N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*

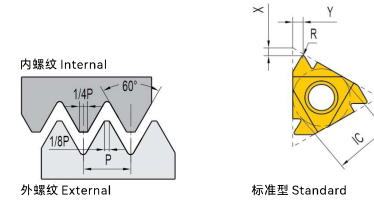
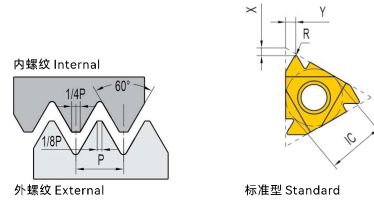
P			M				K		N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*
	*			*	*			*	*					*	*

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade

ISO米制60°标准螺纹刀片

ISO Metric 60°

外螺纹 External



刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		尺寸(mm) Dimensions				
Shape of insert	IC	Pitch	右旋螺纹 Right hand	左旋螺纹 Left hand	hmin	X	Y	R	T
			Type						
			1/4"	0.50					
0.45	0.60								
0.49	0.60								
0.60	0.60								
0.74	0.60								
0.90	0.60								
0.75	11ER 0.75ISO 11EL 0.75ISO	0.45		0.60	0.45	0.60	0.60	0.11	
		0.49		0.60					
		0.60		0.60					
		0.74		0.60					
		0.90		0.60					
		1.00		0.60					
0.80	11ER 0.80ISO 11EL 0.80ISO	0.49		0.60	0.49	0.60	0.60	0.12	
		0.60		0.60					
		0.74		0.60					
		0.90		0.60					
		1.00		0.60					
		1.25		0.60					
1.00	11ER 1.00ISO 11EL 1.00ISO	0.60	0.60	0.60	0.60	0.70	0.14		
		0.74	0.60						
		0.90	0.60						
		1.00	0.60						
		1.25	0.60						
		1.50	0.60						
1.25	11ER 1.25ISO 11EL 1.25ISO	0.74	0.60	0.74	0.60	0.90	0.18		
		0.90	0.60						
		1.00	0.60						
		1.25	0.60						
		1.50	0.60						
		1.50	0.60						
3/8"	0.50	16ER 0.50ISO 16EL 0.50ISO	0.29	0.60	0.29	0.60	0.60	0.072	
			0.45	0.60					
			0.60	0.70					
			0.74	0.80					
			0.90	0.80					
			1.00	0.70					
	0.75	16ER 0.75ISO 16EL 0.75ISO	0.45	0.60	0.45	0.60	0.60	0.11	
			0.60	0.70					
			0.74	0.80					
			0.90	0.80					
			1.00	0.70					
			1.25	0.80					
1.00	16ER 1.00ISO 16EL 1.00ISO	0.60	0.70	0.60	0.70	0.70	0.14		
		0.74	0.80						
		0.90	0.80						
		1.06	0.90						
		1.21	1.00						
		1.51	1.10						
1.25	16ER 1.25ISO 16EL 1.25ISO	0.74	0.80	0.74	0.80	0.90	0.18		
		0.90	0.80						
		1.06	0.90						
		1.21	1.00						
		1.51	1.10						
		1.83	1.20						
1.50	16ER 1.50ISO 16EL 1.50ISO	0.90	0.80	0.90	0.80	1.00	0.22		
		1.06	0.90						
		1.21	1.00						
		1.51	1.10						
		1.83	1.20						
		2.13	1.60						
1.75	16ER 1.75ISO 16EL 1.75ISO	1.06	0.90	1.06	0.90	1.20	0.25		
		1.21	1.00						
		1.51	1.10						
		1.83	1.20						
		2.13	1.60						
		2.44	1.70						
2.00	16ER 2.00ISO 16EL 2.00ISO	1.21	1.00	1.21	1.00	1.30	0.29		
		1.51	1.10						
		1.83	1.20						
		2.13	1.60						
		2.44	1.70						
		2.74	1.70						
2.50	16ER 2.50ISO 16EL 2.50ISO	1.51	1.10	1.51	1.10	1.50	0.36		
		1.83	1.20						
		2.13	1.60						
		2.44	1.70						
		2.74	1.70						
		3.05	1.70						
3.00	16ER 3.00ISO 16EL 3.00ISO	1.83	1.20	1.83	1.20	1.60	0.43		
		2.13	1.60						
		2.44	1.60						
		2.74	1.70						
		3.05	1.70						
		3.34	1.90						
1/2"	22ER 3.50ISO 22EL 3.50ISO	2.13	1.60	2.13	1.60	2.30	0.505		
		2.44	1.60						
		2.74	1.70						
		3.05	1.70						
		3.34	1.90						
		3.65	2.00						
5/8"	27ER 5.50ISO 27EL 5.50ISO	3.34	1.90	3.34	1.90	2.70	0.79		
		3.65	2.00						
		3.65	2.00						
		3.65	2.00						
		3.65	2.00						
		3.65	2.00						

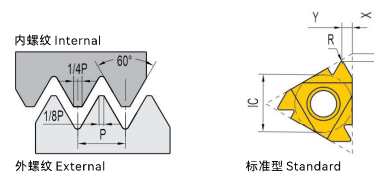
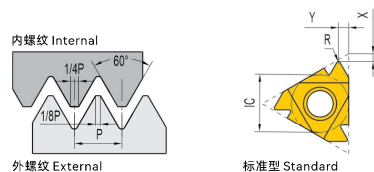
★ 为第一推荐牌号 Recommended grade
☆ 为第二推荐牌号 Optional grade


P			M			K			N			S			
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	☆			☆	☆										★
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	☆			☆	☆										★
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	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★
	★			★	☆										★

ISO米制60°标准螺纹刀片

ISO Metric 60°

内螺纹 Internal



刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		尺寸(mm) Dimensions				
			右旋螺纹 Right hand	左旋螺纹 Left hand	hmin	X	Y	R	T
	1/4"	0.50	111R 0.50ISO	111L 0.50ISO	0.29	0.60	0.60	0.04	
		0.75	111R 0.75ISO	111L 0.750ISO	0.43	0.60	0.60	0.05	
		1.00	111R 1.00ISO	111L 1.00ISO	0.58	0.60	0.60	0.07	
		1.25	111R 1.25ISO	111L 1.250ISO	0.72	0.70	0.70	0.09	
		1.50	111R 1.50ISO	111L 1.50ISO	0.87	0.80	0.90	0.11	
		1.75	111R 1.75ISO	111L 1.50ISO	1.00	0.80	1.00	0.13	
	2.00	111R 2.00 ISO	111L 2.00ISO	1.15	0.90	1.20	0.14		
	3/8"	0.50	161R 0.50ISO	161L 0.50ISO	0.29	1.00	1.30	0.04	
		0.75	161R 0.75ISO	161L 0.75ISO	0.43	0.60	0.60	0.05	
		1.00	161R 1.00ISO	161L 1.00ISO	0.58	0.70	0.70	0.07	
		1.25	161R 1.25ISO	161L 1.25ISO	0.72	0.80	0.90	0.09	
		1.50	161R 1.50ISO	161L 1.50ISO	0.87	0.80	1.00	0.11	
		1.75	161R 1.75ISO	161L 1.75ISO	1.00	0.90	1.20	0.13	
		2.00	161R 2.00ISO	161L 2.00ISO	1.15	1.00	1.30	0.14	
		2.50	161R 2.50ISO	161L 2.50ISO	1.43	1.10	1.50	0.18	
		3.00	161R 3.00ISO	161L 3.00ISO	1.73	1.10	1.50	0.22	
	1/2"	3.50	221R 3.50ISO	221L 3.50ISO	1.98	1.60	2.30	0.25	
		4.00	221R 4.00ISO	221L 4.00ISO	2.26	1.60	2.30	0.29	
4.50		221R 4.50ISO	221L 4.50ISO	2.56	1.60	2.40	0.33		
5.00		221R 5.00ISO	221L 5.00ISO	2.83	1.60	2.50	0.36		
5/8"	5.50	271R 5.50ISO	271L 5.50ISO	3.14	1.60	2.30	0.40		
	6.00	271R 6.00ISO	271L 6.00ISO	3.39	1.80	2.50	0.43		

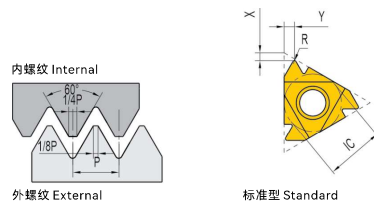
★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade

P				M				K				N				S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	☆			☆	☆														★
	☆			☆	☆														★
	☆			☆	☆										★				★
	☆			☆	☆										★				★
	☆			☆	☆										★				★
	☆			☆	☆														★
	☆			☆	☆														★
	★			★	☆														★
	★			★	☆														★
	★			★	☆														★
	★			★	☆														★
	★			★	☆														★
	★			★	☆														★
	★			★	☆														★

UN美制60°统一标准螺纹刀片

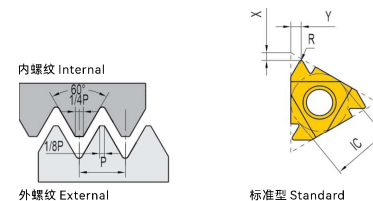
American UN 60°

外螺纹 External



刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		尺寸(mm) Dimensions			
			右旋螺纹 Right hand	左旋螺纹 Left hand	X	Y	R	T
			11ER 18UN	11EL 18UN				
	1/4"	18	11ER 18UN	11EL 18UN	0.80	1.00	0.203	
		32	16ER 32UN	16EL 32UN	0.60	0.60	0.115	
		28	16ER 28UN	16EL 28UN	0.60	0.70	0.131	
		24	16ER 24UN	16EL 24UN	0.70	0.80	0.153	
		20	16ER 20UN	16EL 20UN	0.80	0.90	0.183	
	3/8"	18	16ER 18UN	16EL 18UN	0.80	1.00	0.203	
		16	16ER 16UN	16EL 16UN	0.90	1.10	0.229	
		14	16ER 14UN	16EL 14UN	1.00	1.20	0.262	
		12	16ER 12UN	16EL 12UN	1.10	1.40	0.306	
		11	16ER 11UN	16EL 11UN	1.10	1.50	0.333	
		10	16ER 10UN	16EL 10UN	1.20	1.50	0.366	
		9	16ER 9UN	16EL 9UN	1.20	1.70	0.407	
		8	16ER 8UN	16EL 8UN	1.20	2.00	0.458	
	1/2"	7	22ER 7UN	22EL 7UN	1.60	2.30	0.524	
		6	22ER 6UN	22EL 6UN	1.60	2.30	0.611	
5/8"	4.5	27ER 4.5UN	27EL 4.5UN	1.90	2.70	0.815		
	4	27ER 4UN	27EL 4UN	2.10	3.00	0.917		

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade

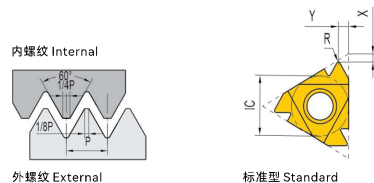


P				M				K		N			S		
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
															★
	★			★	☆				☆						
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
	★			★	☆				☆						★
															★

UN美制60°统一标准螺纹刀片

American UN 60°

内螺纹 Internal



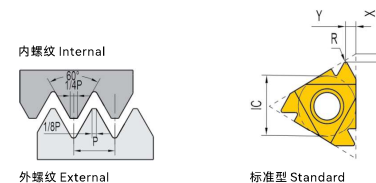
内螺纹 Internal

外螺纹 External

标准型 Standard

刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		尺寸(mm) Dimensions			
			右旋螺纹 Right hand	左旋螺纹 Left hand	X	Y	R	T
			11R 20UN	11L 20UN				
	1/4"	20	11R 20UN	11L 20UN	0.80	0.90	0.09	
		18	11R 18UN	11L 18UN	0.80	1.00	0.10	
	3/8"	24	16R 24UN	16L 24UN	0.70	0.80	0.08	
		20	16R 20UN	16L 20UN	0.80	0.90	0.09	
		18	16R 18UN	16L 18UN	0.80	1.00	0.10	
		16	16R 16UN	16L 16UN	0.90	1.10	0.12	
		14	16R 14UN	16L 14UN	1.00	1.20	0.13	
		12	16R 12UN	16L 12UN	1.10	1.40	0.15	
		11	16R 11UN	16L 11UN	1.10	1.50	0.17	
		10	16R 10UN	16L 10UN	1.10	1.50	0.18	
	1/2"	8	16R 8UN	16L 8UN	1.20	1.50	0.23	
		7	22R 7UN	22L 7UN	1.60	2.30	0.26	
	5/8"	6	22R 6UN	22L 6UN	1.60	2.30	0.31	
		4.5	27R 4.5UN	27L 4.5UN	1.90	2.40	0.41	

★ 为第一推荐牌号 Recommended grade
☆ 为第二推荐牌号 Optional grade



内螺纹 Internal

外螺纹 External

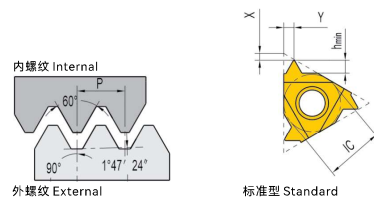
标准型 Standard


P			M			K			N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
☆															★
☆															
															★
				★	☆			☆							★
				★	☆			☆							★
				★	☆			☆							★
				★	☆			☆							★
				★	☆			☆							★
				★	☆			☆							★
															★
															★

60°美国标准锥管螺纹刀片

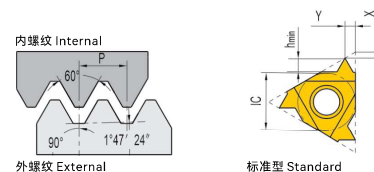
NPT 60°

外螺纹 External



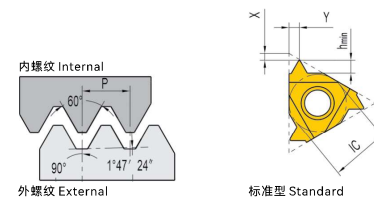
刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	3/8"	27	16ER 27NPT	16EL 27NPT	0.66	0.70	0.80	
		18	16ER 18NPT	16EL 18NPT	1.01	0.80	1.00	
		14	16ER 14NPT	16EL 14NPT	1.33	0.90	1.20	
		11.5	16ER 11.5NPT	16EL 11.5NPT	1.64	1.10	1.50	
		8	16ER 8NPT	16EL 8NPT	2.42	1.30	1.80	

内螺纹 Internal

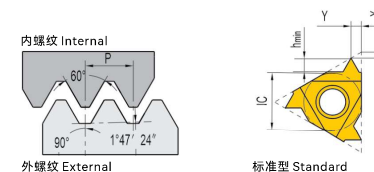


刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	1/4"	18	11R 18NPT	11L 18NPT	1.01	0.80	1.00	
		14	11R 14NPT	11L 14NPT	1.33	0.80	1.00	
	3/8"	27	16R 27NPT	16L 27NPT	0.66	0.70	0.80	
		18	16R 18NPT	16L 18NPT	1.01	0.80	1.00	
		14	16R 14NPT	16L 14NPT	1.33	0.90	1.20	
		11.5	16R 11.5NPT	16L 11.5NPT	1.64	1.10	1.50	
8	16R 8NPT	16L 8NPT	2.42	1.30	1.80			

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade



P			M			K			N			S			
BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205
	★			★	☆			★							
	★			★	☆			★							★
	★			★	☆			★							★
	★			★	☆			★							★

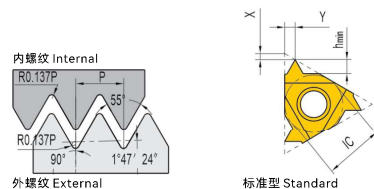


P			M			K			N			S			
BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205	BT12125	BT12225	BT14215	BT15205
	★			★	☆			☆							
	★			★	☆			☆							★
	★			★	☆			☆							★
	★			★	☆			☆							★
	★			★	☆			☆							★

55°英制标准锥管螺纹刀片

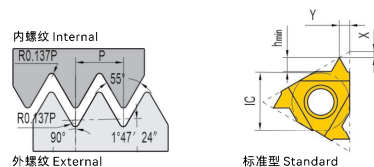
BSPT 55°

外螺纹 External



刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	3/8"	28	16ER 28BSPT	16EL 28BSPT	0.58	0.60	0.60	
		19	16ER 19BSPT	16EL 19BSPT	0.86	0.80	0.90	
		14	16ER 14BSPT	16EL 14BSPT	1.16	1.00	1.20	
		11	16ER 11BSPT	16EL 11BSPT	1.48	1.10	1.50	

内螺纹 Internal



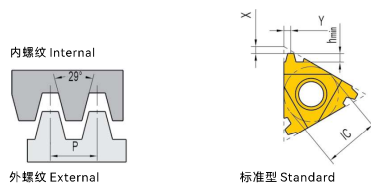
刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	1/4"	19	11IR 19BSPT	11IL 19BSPT	0.86	0.80	0.90	
		14	11IR 14BSPT	11IL 14BSPT	1.16	0.90	1.00	
	3/8"	19	16IR 19BSPT	16IL 19BSPT	0.86	0.80	0.90	
		14	16IR 14BSPT	16IL 14BSPT	1.16	1.00	1.20	
		11	16IR 11BSPT	16IL 11BSPT	1.48	1.10	1.50	

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade

美制29°梯形螺纹刀片

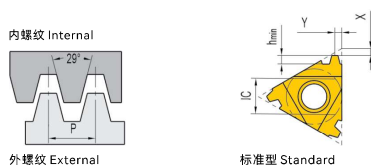
American ACME 29°

外螺纹 External



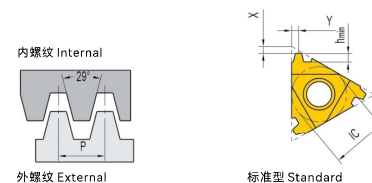
刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	3/8"	12	16ER 12ACME	16EL 12ACME	1.20	1.10	1.20	
		10	16ER 10ACME	16EL 10ACME	1.50	1.30	1.40	
		8	16ER 8ACME	16EL 8ACME	1.81	1.40	1.50	
	1/2"	6	22ER 6ACME	22EL 6ACME	2.35	1.70	1.90	
		5	22ER 5ACME	22EL 5ACME	3.20	1.80	2.10	
		4	27ER 4ACME	27EL 4ACME	3.55	2.00	2.30	

内螺纹 Internal

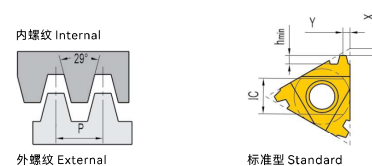


刀片外形	内接圆直径	螺距	型号		尺寸(mm)			
Shape of insert	IC	Pitch	Type		Dimensions			
			右旋螺纹	左旋螺纹	hmin	X	Y	T
			Right hand	Left hand				
	3/8"	12	16IR 12ACME	16IL 12ACME	1.20	1.10	1.20	
		10	116IR 10ACME	16IL 10ACME	1.50	1.30	1.40	
		8	16IR 8ACME	16IL 8ACME	1.81	1.40	1.50	
	1/2"	6	22IR 6ACME	22IL 6ACMET	2.35	1.70	1.90	
		5	22IR 5ACME	22IL 5ACME	3.20	1.80	2.10	
		4	27IR 4ACME	27IL 4ACME	3.55	2.00	2.30	

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade



P			M			K			N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
	★			★	☆			☆							★
	★			★	☆			☆							★
	★			★	☆			☆							★
															★

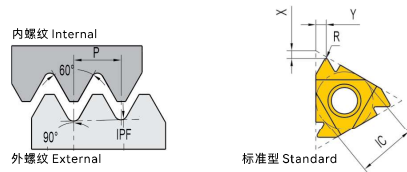


P			M			K			N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
				★	☆			☆							★
	★			★	☆			☆							★
	★			★	☆			☆							★
															★

60°API美制石油管螺纹

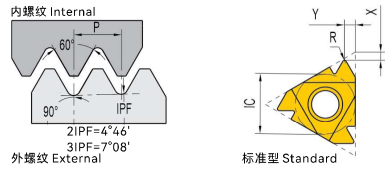
API 60°

外螺纹 External



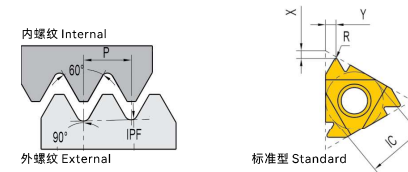
刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		锥度 Taper	API代码	尺寸(mm) Dimensions		
			右旋螺纹 Right hand	左旋螺纹 Left hand			X	Y	T
	1/2"	4	22ER 4API384	22EL 4API384	3	V-0.038R	2.10	2.80	0.965
		4	22ER 4API386	22EL 4API386	2	V-0.038R	2.10	2.80	0.965
		4	22ER 4API504	22EL 4API504	3	V-0.050	2.00	2.90	0.635
		4	22ER 4API506	22EL 4API506	2	V-0.050	2.00	2.90	0.635
		5	22ER 5API404	22EL 5API404	3	V-0.040	1.80	2.60	0.508
	5/8"	4	27ER 4API384	27EL 4API384	3	V-0.038R	2.10	2.80	0.965
		4	27ER 4API386	27EL 4API386	2	V-0.038R	2.10	2.80	0.965
		4	27ER 4API504	27EL 4API504	3	V-0.050	2.10	3.10	0.635
		4	27ER 4API506	27EL 4API506	2	V-0.050	2.10	3.10	0.635
		5	27ER 5API404	27EL 5API404	3	V-0.040	1.90	2.70	0.508

内螺纹 Internal



刀片外形 Shape of insert	内接圆直径 IC	螺距 Pitch	型号 Type		锥度 Taper	API代码	尺寸(mm) Dimensions		
			右旋螺纹 Right hand	左旋螺纹 Left hand			X	Y	T
	1/2"	4	22IR 4API386	22IL 4API386	2	V-0.038R	2.10	2.80	0.965
		4	22IR 4API506	22IL 4API506	2	V-0.050	2.10	3.10	0.635
		5	22IR 5API404	22IL 5API404	3	V-0.040	1.80	2.60	0.508
	5/8"	4	27IR 4API384	27IL 4API384	3	V-0.038R	2.10	2.80	0.965
		4	27IR 4API386	27IL 4API386	2	V-0.038R	2.10	2.80	0.965
		4	27IR 4API504	27IL 4API504	3	V-0.050	2.10	3.10	0.635
		4	27IR 4API506	27IL 4API506	2	V-0.050	2.10	3.10	0.635
		4	27IR 4API506	27IL 4API506	2	V-0.050	2.10	3.10	0.635
		4	27IR 4API506	27IL 4API506	2	V-0.050	2.10	3.10	0.635
		5	27IR 5API404	27IL 5API404	3	V-0.040	1.90	2.70	0.508

★为第一推荐牌号 Recommended grade
☆为第二推荐牌号 Optional grade



P			M			K			N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	

P			M			K			N			S			
BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205	BT2125	BT2225	BT4215	BT5205
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	
		☆				☆								★	

螺纹刀杆命名规则

Code Key for Thread Turning Tools

S	U	E	R	25	25	M	16
①	②	③	④	⑤	⑥	⑦	⑧



① 压紧方式	
Clamping	
C	压板压紧式 Rigid clamping
S	螺钉压紧式 Screw

③ 螺纹形式	
External / Internal	
E	外螺纹 External
I	内螺纹 Internal


④ 切削方向	
Cutting Direction	
R	□□□ Internal
	□□□ External
L	□□□ Internal
	□□□ External

⑥ 刀体高度	
Tool Height	
圆刀杆用00表示 Round tool holder is expressed by 00	

⑥ 刀体宽度	
Tool width	
圆刀杆用直径表示 Round tool holder is expressed by diameter	

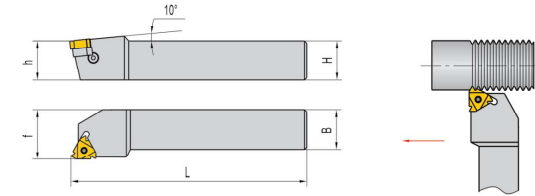
② 刀片形式	
Insert Form	
 V:立装刀片 Vertical	
 U:U形刀片 U Type	

⑦ 刀杆长度	
Tool Length	
代号 Code	长度 Length
F	80
H	100
K	125
M	150
P	170
R	200

⑧ 刀片尺寸			
Insert Dimension			
图例 Legend	代号 Code	三角形边长 Triangle side L	内切圆 Incircle
	8	4.76	8
	11	6.35	11
	16	9.525	16
	22	12.7	22
	27	15.875	27

螺钉压紧式外螺纹车刀杆

Screw Clamping Holders For External Threading



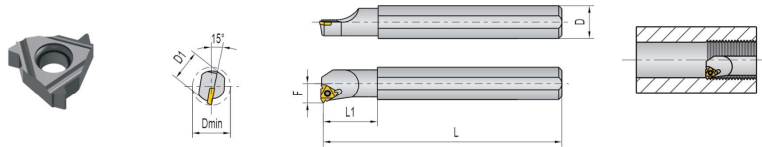
型号		库存	通用刀片		尺寸(mm)					刀垫	刀片螺钉	刀垫螺钉	扳手
Type		Stock Item	Available inserts		Dimensions					Shim	Screw	Shim Screw	Torx Key
右刀 Right hand	左刀 Left hand	R	L	h	L	H	B	f	Shim	Screw	Shim Screw	Torx Key	
SER1212F11	SEL1212F11			11ER/L...	12	125	12	12	12	-	M2.5*8	-	T8
SER1212F16	SEL1212F16			16ER/L...	16	80	12	12	16	ANE/116	M3.5*9	M3*6N	T15
SER1616H16	SEL1616H16				16	100	16	16	16				
SER2020K16	SEL2020K16				20	125	20	20	20				
SER2525M16	SEL2525M16				25	150	25	25	25				
SER3232P16	SEL3232P16				32	170	32	32	32				
SER2525M22	SEL2525M22			22ER/L...	25	150	25	25	25	ANE/122	M4*16	M4*6N	T15
SER3232P22	SEL3232P22				32	170	32	32	32				
SER4040R22	SEL4040R22				40	200	40	40	40				
SER3232P27	SEL3232P27			27ER/L...	32	170	32	32	32		M5*20	M4*6N	
SER4040R27	SEL4040R27				40	200	40	40	40				

注：以上刀杆均有1.5°螺旋角，请参考技术资料选择不同刀垫以形成不同的螺旋角。

Note: All the tool holders above have a 1.5° helix angle, Please choose proper shim for different helix angle reference to the technical documents.

螺钉压紧式内螺纹车刀杆

Screw Clamping Holder For Internal Threading



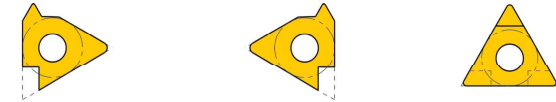
型号		库存	通用刀片		尺寸(mm)						刀片螺钉	扳手	刀垫	
Type		Stock Item	Available inserts		Dimensions						Screw	Torx Key	Shim	
右刀	左刀	R	L	R	L	D	D1	L	L1	F	Dmin	M2.5*5	T6	-
Right hand	Left hand					D	D1	L	L1	F	Dmin			
SIR0008K08	SIL0008K08			08IR/L...		8	7	125	20	5.50	9.90	M2.5*5	T6	-
SIR0010K11	SIL0010K11			11IR/L...		10	9	125	25	7.30	13	M2.5*5	T8	-
SIR0012K11	SIL0012K11					12	11	125	28	8.40	15	M3.5*9	T15	-
SIR0013M16	SIL0013M16					13	15	150	32	10.20	17			-
SIR0016Q16	SIL0016Q16					16	15	180	40	11.5	20	-		
SIR0020Q16	SIL0020Q16			16IR/L...		20	20	180	-	13.70	40	M3.5*12	T15	ANI/E16
SIR0025R16	SIL0025R16					25	25	200	-	16.20	45			
SIR0032S16	SIL0032S16					32	32	250	-	19.70	50			
SIR0040T16	SIL0040T16					40	400	300	-	23.70	55			
SIR0050U16	SIL0050U16			22IR/L...		50	50	350	-	28.70	60	M4*16	T20	ANI/E22
SIR0020Q22	SIL0020Q22					20	20	180	-	15.60	24			
SIR0025R22	SIL0025R22					25	25	200	-	18.10	29			
SIR0032S22	SIL0032S22					32	32	250	-	21.60	38			
SIR0040T22	SIL0040T22			27IR/L...		40	40	300	-	25.60	46	M5*20	T20	ANI/E27
SIR0050U22	SIL0050U22					50	50	350	-	30.60	56			
SIR0032S27	SIL0032S27					32	32	250	-	22.60	40			
SIR0040T27	SIL0040T27			27IR/L...		40	40	300	-	26.60	48	M5*20	T20	ANI/E27
SIR0050U27	SIL0050U27					50	50	350	-	31.60	58			

注：以上刀杆均有1.5°螺旋角，请参考技术资料选择不同刀垫以形成不同的螺旋角。

Note: All the tool holders above have a 1.5° helix angle, please choose proper shim for different helix angle reference to the technical documents.

螺纹刀垫

Shim For Threading Inserts



ER/IL

IR/EL

UE/UI

刀片尺寸		刀杆	刀垫编号							
Insert size			Tool holder	Shim Dimension						
IC.	L			$\beta=4.5^\circ$	$\beta=3.5^\circ$	$\beta=2.5^\circ$	$\beta=1.5^\circ$	$\beta=0.5^\circ$	$\beta=-0.5^\circ$	$\beta=-1.5^\circ$
3/8"	16	ER/IL16	ANE16-3P	ANE16-2P	ANE16-2P	ANE16	ANE16-1N	ANE16-2N	ANE16-3N	
		IR/EL16	ANI16-3P	ANI16-2P	ANI16-2P	ANI16	ANI16-1N	ANI16-2N	ANI16-3N	
1/2"	22	ER/IL22	ANE22-3P	ANE22-2P	ANE22-2P	ANE22	ANE22-1N	ANE22-2N	ANE22-3N	
		IR/EL22	ANI22-3P	ANI22-2P	ANI22-2P	ANI22	ANI22-1N	ANI22-2N	ANI22-3N	
		UE22	AUE22-3P	AUE22-2P	AUE22-2P	AUE22	AUE22-1N	AUE22-2N	AUE22-3N	
		UI22	AUI22-3P	AUI22-2P	AUI22-2P	AUI22	AUI22-1N	AUI22-2N	AUI22-3N	
5/8"	27	ER/IL27	ANE27-3P	ANE27-2P	ANE27-2P	ANE27	ANE27-1N	ANE27-2N	ANE27-3N	
		IR/EL27	ANI27-3P	ANI27-2P	ANI27-2P	ANI27	ANI27-1N	ANI27-2N	ANI27-3N	
		UE27	AUE27-3P	AUE27-2P	AUE27-2P	AUE27	AUE27-1N	AUE27-2N	AUE27-3N	
		UI27	AUI27-3P	AUI27-2P	AUI27-2P	AUI27	AUI27-1N	AUI27-2N	AUI27-3N	

刀垫 标准内外螺纹刀杆的螺旋升角为1.5°

Shim The helix angle of the standard internal and external thread tool holder is 1.5°

切削参数推荐

Recommended Cutting Parameters

ISO	材料 Materials	单位切削力 Cutting force N/mm ²	布氏硬度 Hardness HB	切削速度Vc(m/min)			
				涂层 Coated			未涂层 Uncoated
				BT2125	BT2225	BT4215	BT5205
P	非合金钢 Carbon steel						
	C=0.1-0.25%	1500	125		140-250		
	C=0.25-0.55%	1600	150		130-220		
	C=0.55-0.80%	1700	170		130-220		
	低合金钢 (合金元素≤5%) Low alloy steel						
	非淬硬钢 Non-hardened	1700	180		90-200		
	轴承钢 Bearing steel	1800	210		70-170		
	调质 Tempering steel	1850	275		90-120		
	调质 Tempering steel	2050	350		80-170		
	高合金钢 (合金元素 > 5%) High alloy steel						
	退火 Anneal	1950	200		50-120		
	淬硬工具钢 Quenched tool steel	3000	325		60-140		
	铸钢 Cast steel						
	非合金 Non-alloy	1550	180		50-120		
低合金 (合金元素≤5%) Low alloy	1600	200		120-210			
高合金 (合金元素 > 5%) High alloy	2050	225		90-120			
M	铁素体/马氏体/棒材/锻件 Ferrite/Martensite forged						
	非淬硬 Non-hardened	1800	200	70-170			
	沉淀硬化 Precipitation hardening	2850	330	90-180			
	淬硬 Hardened	2350	330	60-150			
	奥氏体 棒材/锻件 Austenite forged						
	奥氏体 Austenite	1800	180	90-180			
	沉淀硬化 Precipitation hardening	2850	330	60-150			
	超级奥氏体 Super austenite	2250	200	60-150			
	奥氏体-铁素体 (双相) 棒材/锻件 Duplex forged						
	不可焊接 ≥0.05% C Unweldable	2000	230	40-70			
	可焊接 <0.05% C Welding	2450	260	30-50			
	铁素体/马氏体 铸件 Ferrite/Martensite cast-on						
	非淬硬 Non-hardened	1700	200	30-40			
	沉淀硬化 Precipitation hardening	2450	330	15-25			
淬硬钢 Hardened	2150	330	15-30				
奥氏体 铸件 Austenite cast-on							
奥氏体 Austenite	1700	180	25-45				
沉淀硬化 Precipitation hardening	2450	330	15-30				
超级奥氏体 Super austenite	2150	200	15-30				
奥氏体-铁素体 (双相) 铸件 Duplex cast-on							
不可焊接 ≥0.05% C Unweldable	1800	230	15-30				
可焊接 <0.05% C Welding	2250	260	15-30				

ISO	材料 Materials	单位切削力 Cutting force N/mm ²	布氏硬度 Hardness HB	切削速度Vc(m/min)			
				涂层 Coated			未涂层 Uncoated
				BT2125	BT2225	BT4215	BT5205
K	可锻铸铁 Malleable cast-iron						
	铁素体 (短切屑) Ferrite (short chip)	790	130		100-200		
	珠光体 (长切屑) Pearlite (long chip)	900	230		90-180		
	灰口铸铁 Gray cast iron						
	低抗拉强度 Low tensile strength	890	180		190-300		
		970	220		120-220		
	球墨铸铁 SG Nodular cast iron						
	铁素体 Ferrite	900	160		190-300		
	珠光体 Pearlite	1350	250		120-220		
	马氏体 Martensite	2100	380		140-240		
N	铝合金 Aluminium alloy						
		400	60				600-1000
	锻造或锻造时效处理 Forging with aging treatment	650	100				400-600
	铝合金 Aluminium alloy						
	铸造, 非时效 Cast-on, non-aging	600	75				280-830
	铸造或铸造时效处理 Cast on with aging treatment	700	90				300-510
	铝合金 Aluminium alloy						
	铸造, 13-15% 硅 Cast-on, 13-15% silicon	700	130				200-400
	铸造, 16-22% 硅 Cast-on, 16-22% silicon	700	130				120-200
	铜和铜合金 Copper and copper alloy						
易切合金, ≥1% 铅 Easy to cut, ≥1% lead	550	110				90-150	
黄铜, 铅青铜, ≤1% 铅 Brass ≤1% lead	550	90				200-510	
	1350	100				130-300	
S	高温合金 铁基 Superalloy, iron-based						
		2400	200				50-70
		2500	280				30-50
	镍基 Nickel base						
	退火或固溶处理 Annealing	2650	250				30-50
		2900	350				20-40
		3000	320				20-40
	钴基 Cobalt base						
	退火或固溶处理 Annealing	2700	200				30-50
		3000	300				20-40
		3100	320				20-40
	钛合金2) Titanium alloy		Rm3)				
	商业纯 (99.5% Ti) Unalloyed Titanium	1300	400				
	α, 近α与α+β合金, 退火 Annealing (α+β)	1400	950				120-140
	1400	1050				40-60	