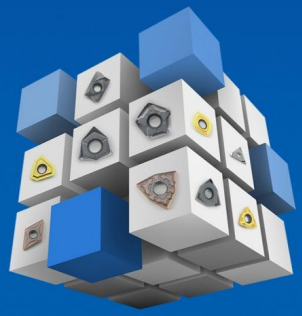
HIGH-PERFORMANCE



KC TOOLS Zhuzhou King Carbide Co., LTD

切削刀具

CUTTING TOOLS

2022-2023

- 车削刀具 Turning Tools
- 铣削刀具 Milling Tools
- 孔加工刀具 Hole Machining Tools
- 整硬刀具 Solid Carbide Cutting Tools

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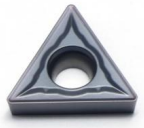

A 车削
Turning Tools

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车削刀片牌号一览表

Recommended Grade Table for Turning Inserts

ISO使用 ISO Use		普通车削 Turning				螺纹 Threading	切断切槽 Parting and Grooving	
工件材料 Workpiece materials	ISO代号 ISO Code	涂层 Coating		金属陶瓷 Cermet	硬质合金 Cemented carbide	涂层 Coating	涂层 Coating	
		CVD	PVD			PVD	PVD	CVD
P 钢件 Steel	P01		JGA05A					
	P10	JGP15T	JGA10E			JGA20F	JGA20F	JGP15T
	P20	JGP15S JGP25T	JGA20F JGA20H	JTN20				JGP25T
	P30	JGP25S JGP40T	JGA30F	JTN35				
	P40	JGP40S						
M 不锈钢 Stainless Steel	M01							
	M10	JGM20R	JGA10A			JGA20F		
	M20		JGA20F				JGA20F	
	M30							
	M40							
K 铸铁 Cast Iron	K01							
	K10	JGK10R				JGA20F		
	K20	JGK20R					JGA20F	JGP25TA
	K30							
N 有色金属 Non-Ferrous Metal	N01				JS10A			
	N10							
	N20				JS20A			
	N30							
S 钛合金 耐热合金 Titanium Alloy Heat Resisting Alloy	S01							
	S10	JGM20R	JGS20A					
	S20	JGM30R	JGS20C					
	S30							
H 高硬度材料 High Strength Material	H01		JGA05A					
	H10							
	H20		JGA05F					
	H30							

JGA05A

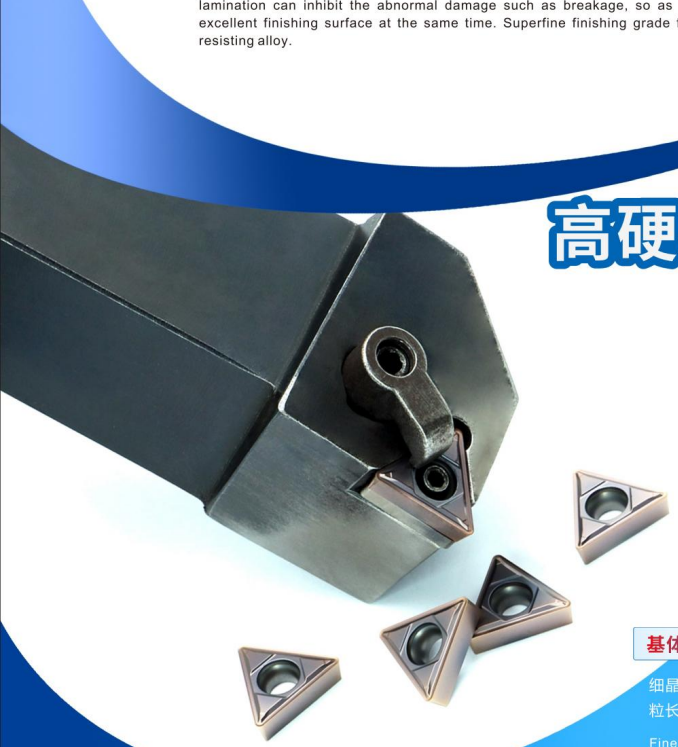
高硬度的超微粒硬质合金基材与韧性和耐磨性都很好的特殊纳米涂层相结合，可提供具有锋利的切削刃和机械冲击性，是不锈钢的要求小公差和高表面质量的精加工牌号。

High hardness superfine grain cemented carbide substrate, combined with special nano-coating with excellent toughness and wear resistance, It can provide sharp cutting edge and mechanical impact. Fine finishing grade for stainless steel cutting which requires small tolerance and high surface quality.

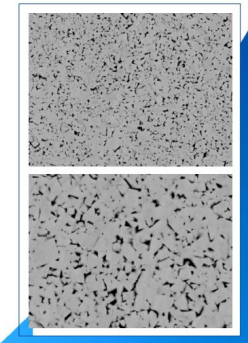
JGA05F

高硬度的超微粒硬质合金基材与韧性和耐磨性都极好的特殊纳米NEO PLUS涂层技术相结合，积层的间隔更薄，积层数的增加可抑制崩损等异常损伤，可同时实现长寿加工和优异的精加工面。适用不锈钢、耐热合金超精加工。

High hardness superfine grain cemented carbide substrate, combined with nano NEO PLUS coating with excellent toughness and wear resistance. It can make the interval of lamination thinner, and the increase of lamination can inhibit the abnormal damage such as breakage, so as to achieve long life machining and excellent finishing surface at the same time. Superfine finishing grade for cutting stainless steel and heat-resisting alloy.



高硬合金基体



基体介绍

细晶WC和低Co含量设计，添加少量的复合晶粒长大抑制剂，材质具有很高的硬度。

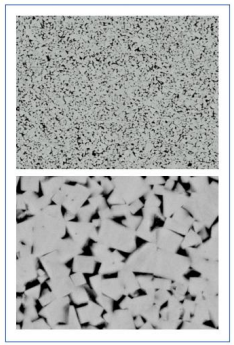
Fine grain WC and low Cobalt content design,
A small amount of grain growth inhibitor is added.
The material has a super high hardness.

自主研发
含Si涂层牌号

JGA10A

微细颗粒搭配自己研发含Si涂层，使得刀片具有更高耐磨性和抗氧化性。
应用于硬料、不锈钢加工，高速加工有着优秀的寿命表现和稳定性。

The combination of fine particles and our designed Si-Coating, can make the inserts with higher wear resistance and oxidation resistance. It is used for machining hard material and stainless steel. It has excellent life performance and stability during high speed processing.



基体介绍

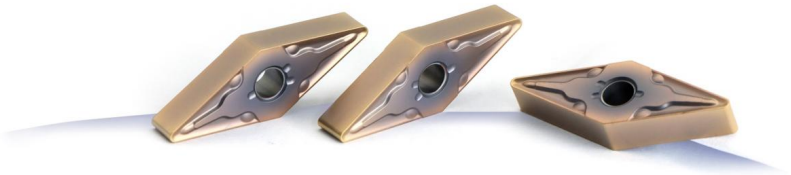
细晶WC和中Co含量设计，
添加少量的晶粒长大抑制剂。
高韧性和较高硬度的完美结合。

Fine grain WC and medium Cobalt content design,
A small amount of grain growth inhibitor is added.
The perfect combination of high toughness and high hardness.

应用领域

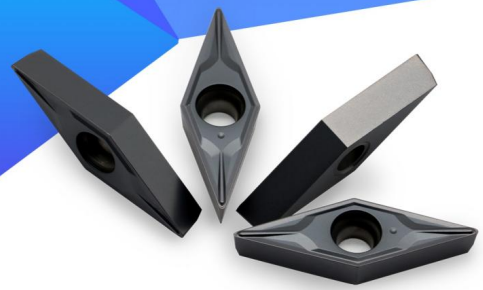
应用于钢件材料加工，汽车、模具行业加工。

Used in steel material processing, automobile, mold industry processing.



不锈钢车削加工技术新牌号

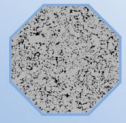
CVD 涂层硬质合金

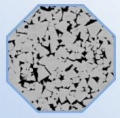


JGM20R

这种CVD涂层材质专门用于对奥氏体不锈钢材料进行中速、高速切削的精加工至一般加工。与特有槽型的结合可以避免切深处的破损，并且减少毛口的形成，减少微崩刃和积屑瘤的形成，并提高工作的精加工质量。

CVD coating material, specially used for medium speed and high speed cutting of austenitic stainless steel from fine finishing to rough processing. The combination with special chip-breakers can avoid the breakage of cutting depth, reduce the formation of burrs, the micro avalanche edge and built-up edges, and improve the finishing quality of the work.





基体介绍

中颗粒WC硬质相与粘结相Co的经典结合；
具有优异的韧性和适中的硬度。

Classic combination of medium particle WC hard phase and Co bonded phase.
With excellent toughness and moderate hardness.

应用领域

用于加工条件极为苛刻的铸造不锈钢材料加工。基体可用于重型断续切削，涂层具有耐磨性，可以延长刀具寿命。

Used for machining cast stainless steel materials under very harsh processing conditions. The substrate can be used for heavy intermittent cutting, the coating has good wear resistance and can prolong tool life.

JGM30R

这种CVD复合涂层，基体为一种韧性极强的材料，用于加工条件极为苛刻的铸造不锈钢材料加工。基体可用于重型断续切削，涂层具有耐磨性，可以延长刀具寿命。经过抛光处理的表面可以避免积屑瘤的形成，可以进行大进给大切削的加工。

CVD composite coating, the substrate is a very tough material, used for machining cast stainless steel materials under very harsh processing conditions. The substrate can be used for heavy-duty intermittent cutting, and the coating has good wear resistance and can prolong tool life. The polished surface can avoid the formation of built-up edges and can be machined with big feed cutting.

NEW 钢件加工

JGP25T

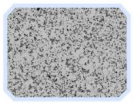
一种新型，具有很强的抗变形能力的富钴含量基材，专门设计的CVD复合涂层，用于对多种钢材料，铁素体，马氏体，PH不锈钢进行粗加工至半精加工的应用范围。具有卓越的抗变形性能以及出色的刀片刃口强度，采用先进的涂层去应力处理工艺的新型涂层，具有出色的加工效率，超长并可以预测的刀具寿命，以及卓越的工作表面加工质量。

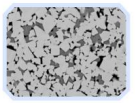
A new specially designed CVD composite coating with strong deformation resistance and rich cobalt content base material. Suitable for rough finishing to semi-finishing of various steel materials, ferrite, martensitic and PH stainless steel .With excellent deformation resistance and blade edge strength. A new coating with advanced coating stress removal process has excellent processing efficiency, predictable long tool life and excellent working surface processing quality.

JGP25S

一种特别设计的高钴硬质合金材质，以及具有出色的抗磨损性能的复合CVD厚涂层，用于多种工件材料，包括钢材料，铁素体、马氏体，钴基材料基体在抗变形性能和刀刃韧性之前有着良好的平衡性，厚涂层在高速切削中具有出色的耐磨性和抗月牙洼磨损性。光滑的涂层表面可以避免积屑和微崩刃现象，在苛刻的断续切削也具有很高的金属切除率。

A specially designed high cobalt cemented carbide material. A composite CVD thick coating with excellent wear resistance, used for processing a variety of workpiece materials, which includes steel material, ferrite, martensite . Cobalt-based material matrix has a good balance before deformation resistance and blade toughness. Thick coating has excellent wear resistance and crescent wear resistance in high speed cutting. Smooth coating surface can avoid chip accumulation and micro avalanche edge. It has high metal removal rates in harsh intermittent cutting.



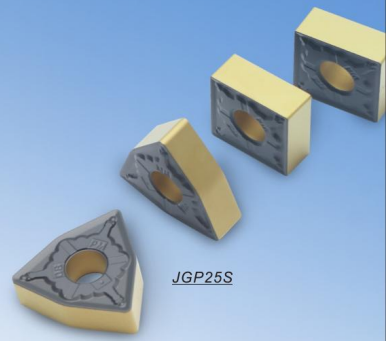


基体介绍

耐高温组元设计；刀片具有良好的红硬性和抗塑性变形能力；
专业化制备工艺使得基体韧性得以大幅度提升。

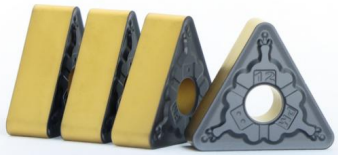
High temperature resistant component design;
The blade has good red hardness and resistance to plastic deformation;
The specialized preparation process can greatly improve the toughness of the matrix.

CVD 复合涂层牌号



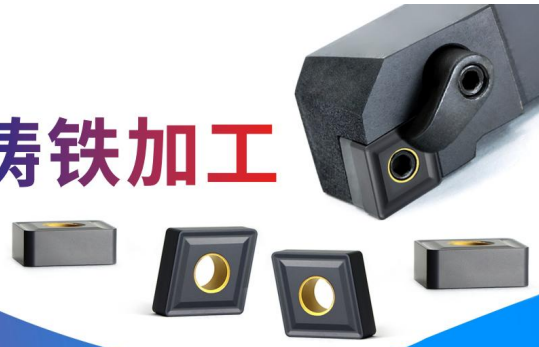
JGP25S

JGP25T



JGP25S

铸铁加工

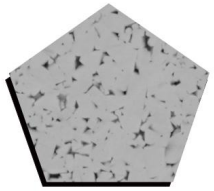


铸铁高效加工的首选

▶ JGK10R

硬的基体有很高的高温硬度，因此有良好的抗塑性变形性，用于灰铸铁和球墨铸铁材料的高速切削加工，具有很好的切削性能。这种基体允许刀片进行长时间的高速切削，刀片变形量很小，CVD厚涂层以及涂层去应力处理工艺使刀片具有卓越的耐磨性，确保刀具具有超长的使用寿命，是铸铁类高速切削的理想选择。

The hard matrix has very good high temperature hardness, so it has good plastic deformation resistance. It is used for high speed cutting of gray cast iron and nodular iron materials, and has very good cutting performance. CVD thick coating stress removal process can make the blades with excellent wear resistance and ensure the tool has long service life. It is an ideal choice for high speed cutting of cast iron.



基体介绍

细晶WC和低Co含量设计，添加少量的复合晶粒长大抑制剂，材质具有较高的硬度。

Fine-grained WC and low Co content design, a small amount of composite Grain growth inhibitor is added, The material has a super high hardness.

▶ JGK20R

一种经过特别增加韧性处理的MT-CVD，TICN-Al2O3涂层，基体具有很好的耐磨性，增加了涂层的附着性以及刀刃的强度，对灰铸铁和球墨铸铁材料进行湿式断续切削的理想材质。这种材质的应用范围广泛，从精加工到粗加工，在对高强度和加工可靠性有较高要求的加工中具有非常出色的加工效率。

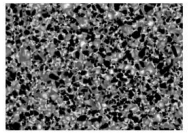
MT-CVD,TICN-Al2O3 coating treated with special increased toughness. The substrate has good wear resistance, increases the adhesion of the coating and the strength of the blade, and is an ideal material for wet intermittent cutting of gray cast iron and nodular iron materials. This material has a wide range of applications from fine finishing to rough processing , and has a excellent processing efficiency in the process which requires high strength and processing reliability.

金属陶瓷

▶ JTN20

金属陶瓷牌号，对金属陶瓷粘合剂（镍、钴）与特殊高熔点粘合剂进行特殊的强化混合技术，兼具优秀的抗崩损性与耐磨损性能，广泛覆盖钢的精加工到粗加工领域。

Cermet grade, with the special mixing enhancement technology for cermet adhesive (nickel, cobalt) and special high melting point adhesive, it has excellent edge wear resistance, widely used in the field of steel cutting from fine finishing to rough processing.



基体介绍

优化的粘结相与硬质相晶界设计，硬质相为黑芯灰环和白芯灰环等结构，该金属陶瓷材质获得了优异的高温和抗热震性能。

The optimized design of grain boundary between bonded phase and hard phase, the hard phase is of the structure of black core and white core with gray ring. The cermet material obtained excellent high temperature and thermal shock resistance.

应用领域

应用于汽车零部件行业，医疗器械行业等软钢类材料加工，具有耐磨性高，被加工表面光洁度好等特点。

Used for processing mild steel materials in auto parts industry and medical device industry. With high wear resistance and good surface finish.

▶ JTN35

INNOVA系列金属陶瓷牌号，对金属陶瓷粘合剂（镍、钴）与特殊高熔点粘合剂进行特殊的强化混合技术，有效抑制切削时粘合剂的软化，具有良好的抗塑性变形性，此牌号没有涂层，保证了在整个刀具寿命期间都有锋利的切削刃，这意味着良好的表面质量和低切削力，这是在高速和低速条件下能保证高表面质量的精加工牌号。

INNOVA series of cermet grades. with the special mixing enhancement technology of cermet adhesive (nickel, cobalt) and special high melting point adhesive, it is used to effectively inhibit the softening of adhesive during cutting, and has good plastic deformation resistance. This grade has no coating and ensures sharp cutting edges throughout the tool life, which means good surface quality and low cutting force. This is the fine finishing grade which can guarantee high surface quality under high speed and low speed conditions.

普通车削刀片型号命名规则
Naming Rules of Turning Inserts

刀片形状/代号
Blade shape/code

A	B	C	D	E
85°	82°	80°	55°	75°
H	**K**	**L**	**M**	**O**
120°	55°	90°	86°	135°
P	**R**	**S**	**T**	**T**
108°	360°	90°	60°	75°
V	**W**	**Z**		
35°	80°	其他		

形状代号
Blade shape/code

公制
Metric system

代号	有无孔	有无断削槽	刀片剖面	代号	有无孔	有无断削槽	刀片剖面
B	有	无	>65°	N	无	无	
H	有	单面	>65°	R	无	单面	
C	有	无	>65°	F	无	双面	
J	有	双面	>65°	A	有	无	
W	有	无	≤65°	M	有	单面	
T	有	单面	≤65°	G	有	双面	
Q	有	无	≤65°	X	——	——	特殊
U	有	双面	≤65°				

断屑槽及夹固形式
Chip breaking groove and clamping form

刀片形状
Shape of blades

内切圆直径（mm）	C	D	R	S	T	V	W
3.97					06		
5.0			05				
5.56					09		
6.0			06				
6.35	06	07			11	11	
8.0			08				
9.525	09	11	09	09	16	16	06
10.0			10				
12.0			12				
12.7	12	15	12	12	22	22	08
15.875	16		15	15	27		
16.0		19	16				
19.05	19		19	19	33		
20.0			20				
25.0	25	25	25				
25.4			25	25			
31.75			31				
32			32				

切削刃长度
Length of cutting edge

断屑槽型代号
Code of chip breaker type

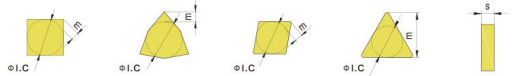
SM3	精加工
PM4	半精加工
PF3	精加工
HS2	精加工
KN5	半精加工

C N M G — **12 04 08 - SM3**

主切削刃后角
Main cutting edge relief angle

代号	后角(度)	代号	后角(度)
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	其他后角

公差
Tolerance



代号	刀尖高度m 公差（mm）	内切圆∅I.C 公差(MM)	厚度S_1 公差（mm）
A	±0.005	±0.025	±0.025
F	±0.005	±0.013	±0.025
C	±0.013	±0.025	±0.025
H	±0.013	±0.013	±0.025
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
J	±0.005	±0.05~±0.13	±0.025
K	±0.013	±0.05~±0.13	±0.025
L	±0.025	±0.05~±0.13	±0.025
M	±0.08~±0.18	±0.05~±0.13	±0.13
N	±0.08~±0.18	±0.05~±0.13	±0.025
U	±0.08~±0.18	±0.08~±0.25	±0.13

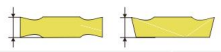
(参考)M级精度详细情况（按形状、大小分）

● 刀尖高度公差（mm）

内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
6.35	±0.08	±0.08	±0.08	±0.11	±0.16	——
9.525	±0.08	±0.08	±0.08	±0.11	±0.16	——
12.7	±0.13	±0.13	±0.13	±0.15	——	——
15.875	±0.15	±0.15	±0.15	±0.18	——	——
19.05	±0.15	±0.15	±0.15	±0.18	——	——
25.4	——	±0.18	——	——	——	——

● 内切圆∅I.C公差(mm)

内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
6.35	±0.05	±0.05	±0.05	±0.05	±0.05	——
9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
12.7	±0.08	±0.08	±0.08	±0.08	——	±0.08
15.875	±0.10	±0.10	±0.10	±0.10	——	±0.10
19.05	±0.10	±0.10	±0.10	±0.10	——	±0.10
25.4	——	±0.13	——	——	——	±0.13



厚度指刀片底面与切削刃最高部分之间的高度

代号	刀片厚度（mm）
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.58
03	3.18
T3	3.97
04	4.76
T4	4.96
05	5.56
T5	5.95
06	6.35
T6	6.75
07	7.94
09	9.52
T9	9.72
11	11.11
12	12.70

刀片厚度
Thickness of blades

刀尖圆弧代号
Arc code of tool tip

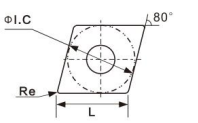
代号	刀尖圆弧半径(mm)
00	无圆角
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	其他
刀片直径尺寸Mo（公制）	圆形刀片

普通车削刀片
General Turning Inserts

普通车削刀片
General Turning Inserts

CNMA/CNMG

仿形车削



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	CNMA120404	12.70	12.90	4.76	5.16	0.4								●			
	CNMA120408	12.70	12.90	4.76	5.16	0.8								●			
	CNMA120412	12.70	12.90	4.76	5.16	1.2								●			
	CNMA160608	16.10	15.875	6.35	6.35	0.8								●			
	CNMG120408-KN5	12.70	12.90	4.76	5.16	0.8								●			
	CNMG120412-KN5	12.70	12.90	4.76	5.16	1.2								●			
	CNMG160608-KN5	16.10	15.875	6.35	6.35	0.8								●			
	CNMG120404-PM4	12.70	12.90	4.76	5.16	0.4	◐	●	●	●							
	CNMG120408-PM4	12.70	12.90	4.76	5.16	0.8	◐	●	●	●							
	CNMG120412-PM4	12.70	12.90	4.76	5.16	1.2	◐	●	●	●							
	CNMG120404-SM3	12.70	12.90	4.76	5.16	0.4					●	◐					
	CNMG120408-SM3	12.70	12.90	4.76	5.16	0.8					●	◐					
	CNMG120412-SM3	12.70	12.90	4.76	5.16	1.2					●	◐					
	CNMG120404-HS2	12.70	12.90	4.76	5.16	0.4										◐	●
	CNMG120408-HS2	12.70	12.90	4.76	5.16	0.8										◐	●
	CNMG120412-HS2	12.70	12.90	4.76	5.16	1.2										◐	●
	CNMG120404-PM3	12.70	12.90	4.76	5.16	0.4					◐	●					
	CNMG120408-PM3	12.70	12.90	4.76	5.16	0.8					◐	●					
	CNMG120412-PM3	12.70	12.90	4.76	5.16	1.2					◐	●					
	CNMG120408-PF4	12.70	12.90	4.76	5.16	0.8		◐		●							

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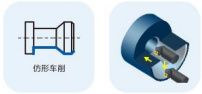
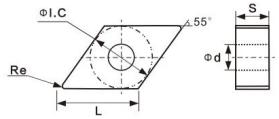
普通车削刀片
General Turning Inserts

DNMA/DNMG





刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	DNMA150404	12.70	15.50	4.76	5.16	0.4								●			
	DNMA150408	12.70	15.50	4.76	5.16	0.8								●			
	DNMA150604	12.70	15.50	6.35	5.16	0.4								●			
	DNMA150608	12.70	15.50	6.35	5.16	0.8								●			
	DNMG150404-KN5	12.70	15.50	4.76	5.16	0.4								●			
	DNMG150408-KN5	12.70	15.50	4.76	5.16	0.8								●			
	DNMG150604-KN5	12.70	15.50	6.35	5.16	0.4								●			
	DNMG150608-KN5	12.70	15.50	6.35	5.16	0.8								●			
	DNMG150404-PM4	12.70	15.50	4.76	5.16	0.4	◐	●	●	●							
	DNMG150408-PM4	12.70	15.50	4.76	5.16	0.8	◐	●	●	●							
	DNMG150412-PM4	12.70	15.50	4.76	5.16	1.2	◐	●	●	●							
	DNMG150604-PM4	12.70	15.50	6.35	5.16	0.4			●	●							
	DNMG150608-PM4	12.70	15.50	6.35	5.16	0.8	◐	●	●	●							
	DNMG150612-PM4	12.70	15.50	6.35	5.16	1.2	◐	●	●	●							
	DNMG150404-SM3	12.70	15.50	4.76	5.16	0.4					●	◐					
	DNMG150408-SM3	12.70	15.50	4.76	5.16	0.8					●	◐					
	DNMG150604-SM3	12.70	15.50	6.35	5.16	0.4					●	◐					
	DNMG150608-SM3	12.70	15.50	6.35	5.16	0.8					●	◐					
	DNMG150404-HS2	12.70	15.50	4.76	5.16	0.4										◐	●
	DNMG150408-HS2	12.70	15.50	4.76	5.16	0.8										◐	●
	DNMG150604-HS2	12.70	15.50	6.35	5.16	0.4										◐	●
	DNMG150608-HS2	12.70	15.50	6.35	5.16	0.8										◐	●
	DNMG150404-PM3	12.70	15.50	4.76	5.16	0.4					◐	●					
	DNMG150408-PM3	12.70	15.50	4.76	5.16	0.8					◐	●					
	DNMG150604-PM3	12.70	15.50	6.35	5.16	0.4					◐	●					
	DNMG150608-PM3	12.70	15.50	6.35	5.16	0.8					◐	●					
	DNMG150604L-VP	12.70	15.50	6.35	5.16	0.4	◐		●								
	DNMG150604R-VP	12.70	15.50	6.35	5.16	0.4	◐		●								
	DNMG150608L-VP	12.70	15.50	6.35	5.16	0.8	◐		●								
	DNMG150608R-VP	12.70	15.50	6.35	5.16	0.8	◐		●								

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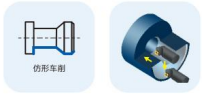
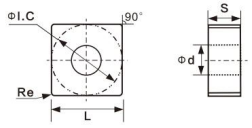
普通车削刀片
General Turning Inserts

SNMA/SNMG





刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	SNMA120404	12.70	12.70	4.76	5.16	0.4								●			
	SNMA120408	12.70	12.70	4.76	5.16	0.8								●			
	SNMA120412	12.70	12.70	4.76	5.16	1.2								●			
	SNMA150608	15.875	15.875	6.35	6.35	0.8								●			
	SNMA150612	15.875	15.875	6.35	6.35	1.2								●			
	SNMG120408-KN5	12.70	12.70	4.76	5.16	0.8								●			
	SNMG120412-KN5	12.70	12.70	4.76	5.16	1.2								●			
	SNMG150608-KN5	15.875	15.875	6.35	6.35	0.8								●			
	SNMG150612-KN5	15.875	15.875	6.35	6.35	1.2								●			
	SNMG120404-PM4	12.70	12.70	4.76	5.16	0.4	◐	●	●	●							
	SNMG120408-PM4	12.70	12.70	4.76	5.16	0.8	◐	●	●	●							
	SNMG150608-PM4	15.875	15.875	6.35	6.35	0.8			●	●							
	SNMG150612-PM4	15.875	15.875	6.35	6.35	1.2			●	●							
	SNMG120404-SM3	12.70	12.70	4.76	5.16	0.4					●	◐					
	SNMG120408-SM3	12.70	12.70	4.76	5.16	0.8					●	◐					
	SNMG150608-SM3	15.875	15.875	6.35	6.35	0.8					●	◐					
	SNMG150612-SM3	15.875	15.875	6.35	6.35	1.2					●	◐					
	SNMG120404-HS2	12.70	12.70	4.76	5.16	0.4										◐	●
	SNMG120408-HS2	12.70	12.70	4.76	5.16	0.8										◐	●
	SNMG150608-HS2	15.875	15.875	6.35	6.35	0.8										◐	●
	SNMG150612-HS2	15.875	15.875	6.35	6.35	1.2										◐	●
	SNMG120404-PM3	12.70	12.70	4.76	5.16	0.4					◐	●					
	SNMG120408-PM3	12.70	12.70	4.76	5.16	0.8					◐	●					
	SNMG120412-PM3	12.70	12.70	4.76	5.16	1.2					◐	●					
	SNMG120408-PF4	12.70	12.70	4.76	5.16	0.8		◐		●							

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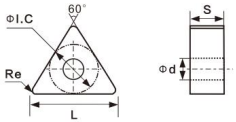
普通车削刀片
General Turning Inserts

TNMA/TNMG



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	TNMA160404	9.525	16.50	4.76	3.81	0.4								●			
	TNMA160408	9.525	16.50	4.76	3.81	0.8								●			
	TNMA220408	12.70	22.00	4.76	5.16	0.8								●			
	TNMA220412	12.70	22.00	4.76	5.16	1.2								●			
	TNMG160408-KN5	9.525	16.50	4.76	3.81	0.8								●			
	TNMG160412-KN5	9.525	16.50	4.76	3.81	1.2								●			
	TNMG220408-KN5	12.70	22.00	4.76	5.16	0.8								●			
	TNMG220412-KN5	12.70	22.00	4.76	5.16	1.2								●			
	TNMG160404-PM4	9.525	16.50	4.76	3.81	0.4	◐	●	●	●							
	TNMG160408-PM4	9.525	16.50	4.76	3.81	0.8	◐	●	●	●							
	TNMG160412-PM4	12.70	22.00	4.76	5.16	1.2	◐	●	●	●							
	TNMG220408-PM4	12.70	22.00	4.76	5.16	0.8			●	●							
	TNMG220412-PM4	12.70	22.00	4.76	5.16	1.2			●	●							
	TNMG160404-SM3	9.525	16.50	4.76	3.81	0.4					●	◐					
	TNMG160408-SM3	9.525	16.50	4.76	3.81	0.8					●	◐					
	TNMG220408-SM3	12.70	22.00	4.76	5.16	0.8					●	◐					
	TNMG220412-SM3	12.70	22.00	4.76	5.16	1.2					●	◐					
	TNMG160404-HS2	9.525	16.50	4.76	3.81	0.4										●	◐
	TNMG160408-HS2	9.525	16.50	4.76	3.81	0.8										●	◐
	TNMG160412-HS2	9.525	16.50	4.76	3.81	1.2										●	◐
	TNMG160404-PM3	9.525	16.50	4.76	3.81	0.4					●	◐					
	TNMG160408-PM3	9.525	16.50	4.76	3.81	0.8					●	◐					
	TNMG160412-PM3	9.525	16.50	4.76	3.81	1.2					●	◐					

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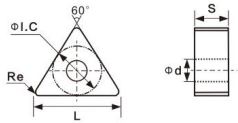
普通车削刀片
General Turning Inserts

TNMG/TNGG



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05F	JTN20	JTN35
	TNMG160404R-JP	9.525	16.50	4.76	3.81	0.4			●	●							
	TNMG160404L-JP	9.525	16.50	4.76	3.81	0.4			●	●							
	TNMG160408R-JP	9.525	16.50	4.76	3.81	0.8			●	●							
	TNMG160408L-JP	9.525	16.50	4.76	3.81	0.8			●	●							
	TNMG160408-PF4	9.525	16.50	4.76	3.81	0.8		◐		●							
	TNMG160404R-VF	9.525	16.50	4.76	3.81	0.4										◐	●
	TNMG160404L-VF	9.525	16.50	4.76	3.81	0.4										◐	●
	TNGG160402R-S	9.525	16.50	4.76	3.81	0.2									●	◐	●
	TNGG160402L-S	9.525	16.50	4.76	3.81	0.2									●	◐	●
	TNGG160404R-S	9.525	16.50	4.76	3.81	0.4									●	◐	●
	TNGG160404L-S	9.525	16.50	4.76	3.81	0.4									●	◐	●
	TNGG160402R-C	9.525	16.50	4.76	3.81	0.2									●	◐	●
	TNGG160402L-C	9.525	16.50	4.76	3.81	0.2									●	◐	●
	TNGG160404R-C	9.525	16.50	4.76	3.81	0.4									●	◐	●
	TNGG160404L-C	9.525	16.50	4.76	3.81	0.4									●	◐	●

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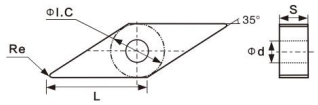
普通车削刀片
General Turning Inserts

VNMG/VNGG



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	VNMG160404-PM4	9.525	16.60	4.76	3.81	0.4	◐	●	●	●							
	VNMG160408-PM4	9.525	16.60	4.76	3.81	0.8	◐	●	●	●							
	VNMG160412-PM4	9.525	16.60	4.76	3.81	1.2			●	●							
	VNMG160404-SM3	9.525	16.60	4.76	3.81	0.4					●	◐					
	VNMG160408-SM3	9.525	16.60	4.76	3.81	0.8					●	◐					
	VNMG160404-HS2	9.525	16.60	4.76	3.81	0.4										◐	●
	VNMG160408-HS2	9.525	16.60	4.76	3.81	0.8										◐	●
	VNMG160412-HS2	9.525	16.60	4.76	3.81	1.2										◐	●
	VNGG160404R-H	9.525	16.60	4.76	3.81	0.4										◐	●
	VNGG160404L-H	9.525	16.60	4.76	3.81	0.4										◐	●
	VNGG160404R-F	9.525	16.60	4.76	3.81	0.4										◐	●
	VNGG160404L-F	9.525	16.60	4.76	3.81	0.4											●
	VNMG160408-KN5	9.525	16.60	4.76	3.81	0.8								●			
	VNMG160412-KN5	9.525	16.60	4.76	3.81	1.2								●			

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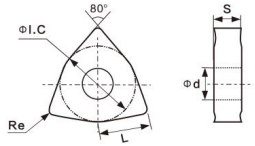
普通车削刀片
General Turning Inserts

WNMA/WNMG



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	WNMA080404	12.70	8.70	4.76	5.16	0.4								●			
	WNMA080408	12.70	8.70	4.76	5.16	0.8								●			
	WNMA080412	12.70	8.70	4.76	5.16	1.2								●			
	WNMG080404-PM4	12.70	8.70	4.76	5.16	0.4	◐	●	●	●							
	WNMG080408-PM4	12.70	8.70	4.76	5.16	0.8	◐	●	●	●							
	WNMG080412-PM4	12.70	8.70	4.76	5.16	1.2	◐	●	●	●							
	WNMG080404-SM3	12.70	8.70	4.76	5.16	0.4					●	◐					
	WNMG080408-SM3	12.70	8.70	4.76	5.16	0.8					●	◐					
	WNMG080412-SM3	12.70	8.70	4.76	5.16	1.2					●	◐					
	WNMG080404-HS2	12.70	8.70	4.76	5.16	0.4										●	◐
	WNMG080408-HS2	12.70	8.70	4.76	5.16	0.8										●	◐
	WNMG080412-HS2	12.70	8.70	4.76	5.16	1.2										●	◐
	WNMG080404-PM3	12.70	8.70	4.76	5.16	0.4					●	◐					
	WNMG080408-PM3	12.70	8.70	4.76	5.16	0.8					●	◐					
	WNMG080412-PM3	12.70	8.70	4.76	5.16	1.2					●	◐					
	WNMG080408-KN5	12.70	8.70	4.76	5.16	0.8								●			
	WNMG080412-KN5	12.70	8.70	4.76	5.16	1.2								●			
	WNMG080408-SF3	12.70	8.70	4.76	5.16	0.8					●						

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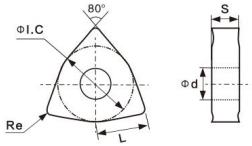
普通车削刀片
General Turning Inserts

WNMG



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	WNMG080404R-JP	12.70	8.70	4.76	5.16	0.4			●	●							
	WNMG080404L-JP	12.70	8.70	4.76	5.16	0.4			●	●							
	WNMG080408R-JP	12.70	8.70	4.76	5.16	0.8			●	●							
	WNMG080408L-JP	12.70	8.70	4.76	5.16	0.8			●	●							
	WNMG080408-PF4	12.70	8.70	4.76	5.16	0.8		◐		●							

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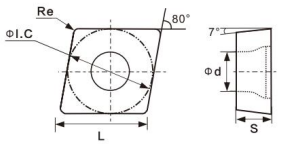
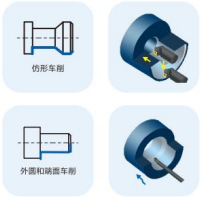
普通车削刀片
General Turning Inserts

CCMT





刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	CCMT060204-HS2	6.35	6.40	2.38	2.8	0.4										◐	●
	CCMT060208-HS2	6.35	6.40	2.38	2.8	0.8										◐	●
	CCMT09T304-HS2	9.525	9.70	3.97	4.4	0.4										◐	●
	CCMT09T308-HS2	9.525	9.70	3.97	4.4	0.8										◐	●
	CCMT120404-HS2	12.70	12.90	4.76	5.5	0.4										◐	●
	CCMT120408-HS2	12.70	12.90	4.76	5.5	0.8										◐	●
	CCMT060204-SM3	6.35	6.40	2.38	2.8	0.4					●	◐					
	CCMT060208-SM3	6.35	6.40	2.38	2.8	0.8					●	◐					
	CCMT09T304-SM3	9.525	9.70	3.97	4.4	0.4					●	◐					
	CCMT09T308-SM3	9.525	9.70	3.97	4.4	0.8					●	◐					
	CCMT120404-SM3	12.70	12.90	4.76	5.5	0.4					●	◐					
	CCMT120408-SM3	12.70	12.90	4.76	5.5	0.8					●	◐					
	CCMT060204-PF3	6.35	6.40	2.38	2.8	0.4									●		
	CCMT060208-PF3	6.35	6.40	2.38	2.8	0.8									●		
	CCMT09T304-PF3	9.525	9.70	3.97	4.5	0.4									●		
	CCMT09T308-PF3	9.525	9.70	3.97	4.5	0.8									●		
	CCMT120404-PF3	12.70	12.90	4.76	5.5	0.4									●		
	CCMT120408-PF3	12.70	12.90	4.76	5.5	0.8									●		
	CCMT060204-PM4	6.35	6.40	2.38	2.8	0.4	◐	●		●		◐					
	CCMT060204-PM4	6.35	6.40	2.38	2.8	0.8	◐	●		●		◐					
	CCMT09T304-PM4	9.525	9.70	3.97	4.4	0.4	◐	●		●		◐					
	CCMT09T308-PM4	9.525	9.70	3.97	4.4	0.8	◐	●		●		◐					
	CCMT120404-PM4	12.70	12.90	4.76	5.5	0.4	◐	●		●		◐					
	CCMT120408-PM4	12.70	12.90	4.76	5.5	0.8	◐	●		●		◐					

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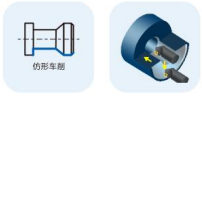
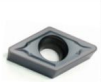
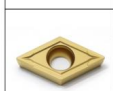
普通车削刀片
General Turning Inserts

DCMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	DCMT070204-HS2	6.35	7.80	2.38	2.8	0.4										◐	●
	DCMT070208-HS2	6.35	7.80	2.38	2.8	0.8										◐	●
	DCMT11T304-HS2	9.525	11.60	3.97	4.4	0.4										◐	●
	DCMT11T308-HS2	9.525	11.60	3.97	4.4	0.8										◐	●
	DCMT070204-PF3	6.35	7.80	2.38	2.8	0.4									●		
	DCMT070208-PF3	6.35	7.80	2.38	2.8	0.8									●		
	DCMT11T304-PF3	9.525	11.60	3.97	4.4	0.4									●		
	DCMT11T308-PF3	9.525	11.60	3.97	4.4	0.8									●		
	DCMT070204-SM3	6.35	7.80	2.38	2.8	0.4					●	◐					
	DCMT070208-SM3	6.35	7.80	2.38	2.8	0.8					●	◐					
	DCMT11T304-SM3	9.525	11.60	3.97	4.4	0.4					●	◐					
	DCMT11T308-SM3	9.525	11.60	3.97	4.4	0.8					●	◐					
	DCMT11T304-PM4	9.525	11.60	3.97	4.4	0.4	◐	●		●							
	DCMT11T308-PM4	9.525	11.60	3.97	4.4	0.8	◐	●		●							

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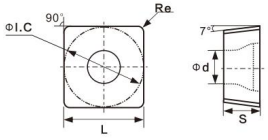
普通车削刀片
General Turning Inserts

SCMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	SCMT09T304-HS2	9.525	9.525	3.97	4.4	0.4										◐	●
	SCMT09T308-HS2	9.525	9.525	3.97	4.4	0.8										◐	●
	SCMT120404-HS2	12.70	12.70	4.76	5.56	0.4										◐	●
	SCMT120408-HS2	12.70	12.70	4.76	5.56	0.8										◐	●
	SCMT09T304-SM3	9.525	9.525	3.97	4.4	0.4					●	◐					
	SCMT09T308-SM3	9.525	9.525	3.97	4.4	0.8					●	◐					
	SCMT120404-SM3	12.70	12.70	4.76	5.56	0.4					●	◐					
	SCMT120408-SM3	12.70	12.70	4.76	5.56	0.8					●	◐					
	SCMT09T304-PF3	9.525	9.525	3.97	4.4	0.4									●		
	SCMT09T308-PF3	9.525	9.525	3.97	4.4	0.8									●		
	SCMT120404-PF3	12.70	12.70	4.76	5.56	0.4									●		
	SCMT120408-PF3	12.70	12.70	4.76	5.56	0.8									●		

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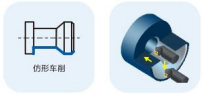
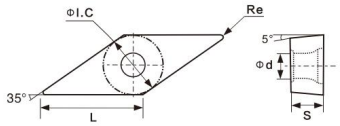
普通车削刀片
General Turning Inserts

VBMT/VCMT





刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	VBMT110304-HS2	6.35	11.00	3.18	2.8	0.4										◐	●
	VBMT110308-HS2	6.35	11.00	3.18	2.8	0.8										◐	●
	VBMT160404-HS2	9.525	16.50	4.76	4.4	0.4										◐	●
	VBMT160408-HS2	9.525	16.50	4.76	4.4	0.8										◐	●
	VBMT110304-SM3	6.35	11.00	3.18	2.8	0.4					●	◐					
	VBMT110308-SM3	6.35	11.00	3.18	2.8	0.8					●	◐					
	VBMT160404-SM3	9.525	16.50	4.76	4.4	0.4					●	◐					
	VBMT160408-SM3	9.525	16.50	4.76	4.4	0.8					●	◐					
	VBMT160404-MF3	9.525	16.50	4.76	4.4	0.4					●	◐					
	VBMT160408-MF3	9.525	16.50	4.76	4.4	0.8					●	◐					
	VBMT110304-PF3	6.35	11.00	3.18	2.8	0.4		◐							●		
	VBMT110308-PF3	6.35	11.00	3.18	2.8	0.8		◐							●		
	VBMT160404-PF3	9.525	16.50	4.76	4.4	0.4		◐							●		
	VBMT160408-PF3	9.525	16.50	4.76	4.4	0.8		◐							●		
	VCMT160404-SM3	9.525	16.50	4.76	4.4	0.4					●	◐					
	VCMT160408-SM3	9.525	16.50	4.76	4.4	0.8					●	◐					

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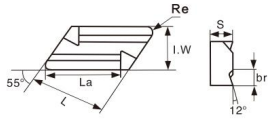
普通车削刀片
General Turning Inserts

KNUX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)						牌号 Grade										
								P					M		K	H	金陶	
		La	L	I.W	S	br	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	KNUX160405-L11	17.2	16.15	9.25	4.76	2.7	0.5		●	●								
	KNUX160410-L11	17.2	16.15	9.25	4.76	2.7	1.0		●	●								
	KNUX160405-R11	17.2	16.15	9.25	4.76	2.7	0.5		●	●								
	KNUX160410-R11	17.2	16.15	9.25	4.76	2.7	1.0		●	●								

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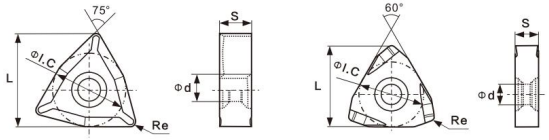
普通车削刀片
General Turning Inserts

TNMX

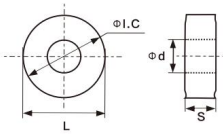


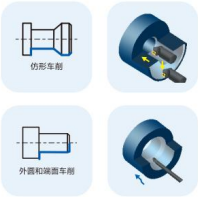
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	TNMX1509L-W	22.23	28.21	9.66	6.9	1.6		●									
	TNMX1507-HR8	22.10	27.64	8.01	7.0	1.6			●								

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

普通车削刀片
General Turning Inserts

RNMG/RCMX





刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
						P					M		K	H	金陶		
		ΦI.C	L	S	Φd	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	RNMG120400	12.70	12.70	4.76	5.16		○	●								
	RCMX160600-PR8	16.00	16.00	6.35	5.50		○	●								
	RCMX200600-PR8	20.00	20.00	6.35	6.50		○	●								
	RCMX250700-PR8	25.00	25.00	7.94	7.18	●	○									
	RCMX320900-PR8	32.00	32.00	9.52	9.80	●	○									

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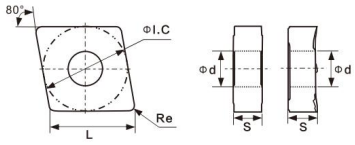
普通车削刀片
General Turning Inserts

CNMG/CNMM

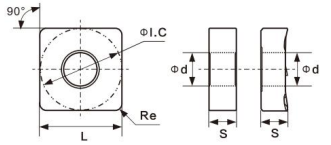


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	CNMG190612	19.05	19.34	6.35	7.94	1.2		●	◐								
	CNMG160612-PR8	15.875	16.12	6.35	6.35	1.2		●	◐								
	CNMG190608-PR8	19.05	19.34	6.35	7.94	0.8		●	◐								
	CNMG190612-PR8	19.05	19.34	6.35	7.94	1.2		●	◐								
	CNMG190616-PR8	19.05	19.34	6.35	7.94	1.6		●	◐								
	CNMG250924-PR8	25.40	25.79	9.35	9.10	2.4		●	◐								
	CNMM190612-PR8	19.05	19.34	6.35	7.94	1.2		●	◐								
	CNMM190616-PR8	19.05	19.34	6.35	7.94	1.6		●	◐								
	CNMM190624-PR8	19.05	19.34	6.35	7.94	2.4		●	◐								
	CNMM250924-PR8	25.40	25.79	9.35	9.10	2.4		●	●	◐							

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

普通车削刀片
General Turning Inserts

SNMA/SNMG/SNMM

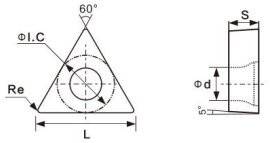


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	SNMA190612	19.05	19.05	6.35	7.94	1.2								●			
	SNMG190612	19.05	19.05	6.35	7.94	1.2		●	◐								
	SNMG250924	25.40	25.40	9.525	9.12	2.4		●	◐								
	SNMG190612-PR8	19.05	19.05	6.35	7.94	1.2		●	◐								
	SNMG190624-PR8	19.05	19.05	6.35	7.94	2.4		●	◐								
	SNMG250924-PR8	25.40	25.40	9.525	9.12	2.4		●	◐								
	SNMM190612-PR8	19.05	19.05	6.35	7.94	1.2		●	◐								
	SNMM190616-PR8	19.05	19.05	6.35	7.94	1.6		●	◐								
	SNMM250924-PR8	25.40	25.40	9.525	9.12	2.4		●	◐								

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

镗孔精车刀片
Boring Inserts for precision turning

T*GT/T*GH/TNMG

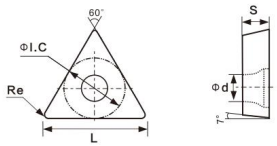


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	TBGT060102L-W	3.97	6.876	1.59	2.2	0.2										◐	●
	TBGT060104L-W	3.97	6.876	1.59	2.2	0.4										◐	●
	TCGT110202L-W	6.35	11.0	2.38	2.8	0.2										◐	●
	TCGT110204L-W	6.35	11.0	2.38	2.8	0.4										◐	●
	TPGT080202L-W	4.76	8.2	2.38	2.4	0.2										◐	●
	TPGT080204L-W	4.76	8.2	2.38	2.4	0.4										◐	●
	TPGT090202L-W	5.56	9.6	2.38	2.8	0.2										◐	●
	TPGT090204L-W	5.56	9.6	2.38	2.8	0.4										◐	●
	TPGT110302L-W	6.35	11.0	3.18	3.4	0.2										◐	●
	TPGT110304L-W	6.35	11.0	3.18	3.4	0.4										◐	●
	TPGH080204L-FS	4.76	8.2	2.38	2.4	0.4										◐	●
	TPGH090204L-FS	5.56	9.6	2.38	2.8	0.4										◐	●
	TPGH110304L-FS	6.35	11.0	3.18	3.4	0.4										◐	●
	TNMG160404R-2G	9.525	16.50	4.76	3.81	0.4										◐	●

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

镗孔精车刀片
Boring Inserts for precision turning

TCMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
							P					M		K	H	金陶	
		ΦI.C	L	S	Φd	Re	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	TCMT090204-HS2	5.56	9.60	2.38	2.5	0.4										◐	●
	TCMT090208-HS2	5.56	9.60	2.38	2.5	0.8										◐	●
	TCMT110204-HS2	6.35	11.00	2.38	2.8	0.4										◐	●
	TCMT110208-HS2	6.35	11.00	2.38	2.8	0.8										◐	●
	TCMT16T304-HS2	9.525	16.50	3.97	4.4	0.4										◐	●
	TCMT16T308-HS2	9.525	16.50	3.97	4.4	0.8										◐	●
	TCMT090204-SM3	5.56	9.60	2.38	2.5	0.4					●	◐					
	TCMT090208-SM3	5.56	9.60	2.38	2.5	0.8					●	◐					
	TCMT110204-SM3	6.35	11.00	2.38	2.8	0.4					●	◐					
	TCMT110208-SM3	6.35	11.00	2.38	2.8	0.8					●	◐					
	TCMT16T304-SM3	9.525	16.50	3.97	4.4	0.4					●	◐					
	TCMT16T308-SM3	9.525	16.50	3.97	4.4	0.8					●	◐					
	TCMT090204-PF3	5.56	9.60	2.38	2.5	0.4		◐						○	●		
	TCMT090208-PF3	5.56	9.60	2.38	2.5	0.8		◐						○	●		
	TCMT110204-PF3	6.35	11.00	2.38	2.8	0.4		◐						○	●		
	TCMT110208-PF3	6.35	11.00	2.38	2.8	0.8		◐						○	●		
	TCMT16T304-PF3	9.525	16.50	3.97	4.4	0.4		◐						○	●		
	TCMT16T308-PF3	9.525	16.50	3.97	4.4	0.8		◐						○	●		

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

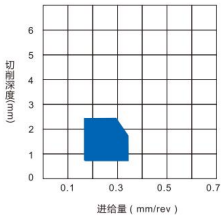
钢件车削
Turning Inserts for Steel

槽型特点
Characteristics of Chip-breakers

-PM4正刀片 PM4 Positive Inserts

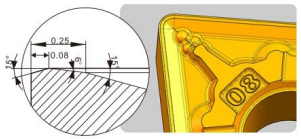
碳钢、合金钢、软钢、不锈钢、铸铁中切削用断屑槽；
扁平棱边与大前角组合，确保刀刃强度与切削锋利性。

Chip-breaker for cutting carbon steel, alloy steel, soft steel, stainless steel and cast iron;
The combination of flat edge and large front angle can ensure edge strength and cutting sharpness.



-PM4负刀片 PM4 Negative Inserts

钢件半精加工首选槽型，能够实现高效、稳定的加工；
具备较宽排屑范围的通用断屑槽，通用性高；
靠近刀尖设计独特的形状凸起和大前角；
确保断屑槽保持切削性能的锋利和低切削力。

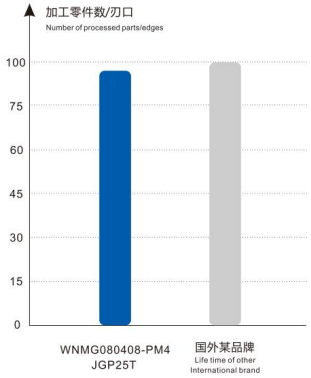


Preferred chip-breakers for semi-finishing machining of steel cutting, and can realize efficient and stable processing; Universal chip-breaker with wide chip-breaking effect and high versatility;
Designed near the tip of the knife, with a distinctive shape bulge and large front angle.
Ensure the chip-breakers maintaining sharp cutting performance and low cutting force.

案例分析
Case Analysis

- 被加工材料 Processed material　轮毂单元 Hub Unit /65Mn
- 线速度 Linear velocity　Vc=110m/min
- 进给量 Feeding Rate　f=0.23mm/r
- 切削深度 Cutting Depth　ap=1.0-1.5mm

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	92件/刃
国外某品牌 Life time of other International brand	100件/刃

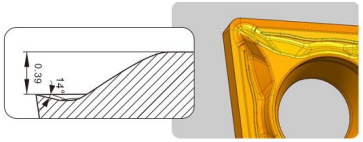


-性价比优势高。
Cost-effective advantage.

钢件车削
Turning Inserts for Steel

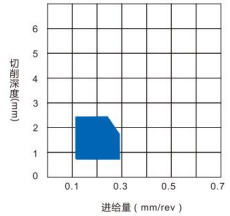
槽型特点
Characteristics of Chip-breakers

-PF3正刀片 PF3 Positive Inserts



用于精加工的断屑槽型，正前角精加工；
采用平行切削刃设计；
特殊的双前角三维槽型设计，切削力小，断屑范围宽；
大前角设计，与较深的断屑槽之间的高低差提升锋利度；
根据不同程度的切削深度对应凸起的断屑槽，
应用领域较为广泛。

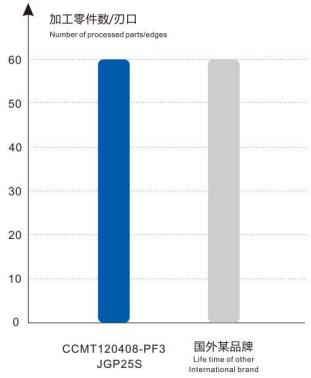
Chip-breaker for precision processing with front angle finishing;
Design of parallel cutting edges ;
Special design of 3D chip-breakers with double front angle,
small cutting force and wide chip- breaking ;
Large front angle design, and the deep chip chute between the height difference to enhance the edge sharpness ;
According to different levels of cutting depth, there are corresponding raised chip-breakers,
The application field is extensive.



案例分析
Case Analysis

- 被加工材料 Processed material　齿轮内孔/30Cr
- 线速度 Linear velocity　Vc=120m/min
- 进给量 Feeding Rate　f=0.18mm/r
- 切削深度 Cutting Depth　ap=2.0mm

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	60件/刃
国外某品牌 Life time of other International brand	60件/刃



-性能与竞争对手一致，我司产品加工出来的产品光洁度更好。
With the same performance as competitors, but the products machined by our carbide inserts are of better surface finish.

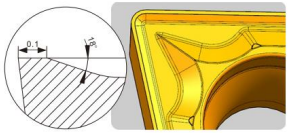
不锈钢车削
Turning Inserts for Stainless Steel

槽型特点
Characteristics of Chip-breakers

-SM3正刀片 SM3 Positive Inserts

中切削用断屑槽，采用大容屑槽。在大切削深度条件下也可降低切削阻力，减少高频震颤与切屑堵塞现象。

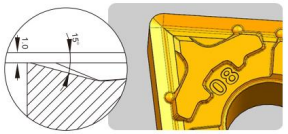
Medium Cutting Chip-breakers,Use Large chip-holding groove.
Reduce cutting resistance even at large depth of cutting,
Reduce high frequency vibration and cutting blocking.



-SM3负刀片 SM3 Negative Inserts

不锈钢、软钢、难切削材料中切削；用优先推荐断屑槽，M级双面断屑槽；尖锐切削刃，切削锋利性高。通用性高的断屑槽形状。

Medium Cutting for Stainless Steel, Soft steel, hard cutting material;
Use preferred recommended chip-breakers,M-class double-sided chip-breakers
Sharp cutting edges, High cutting sharpness.Highly versatile chip-breaker shape.

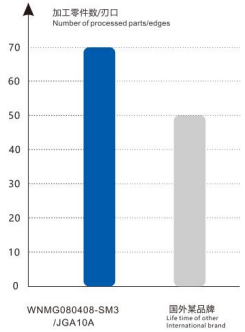


案例分析
Case Analysis

案例 A

- 被加工材料 Processed material — 40Cr（减速机轴类加工）
- 工件直径 Diameter of workpiece — D=Φ35mm
- 转速 Rotating speed — n=3800r/min
- 进给量 Feeding Rate — f=0.06mm/r
- 切削深度 Cutting Depth — ap=0.8mm

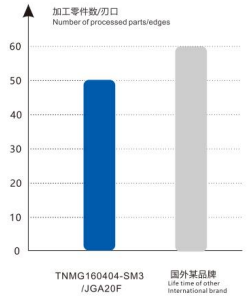
切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	70件/刃
国外某品牌 Life time of other International brand	50件/刃



案例 B

- 被加工材料 Processed material — 304不锈钢
- 工件直径 Diameter of workpiece — D = Φ40mm
- 转速 Rotating speed — n=1500r/min
- 进给量 Feeding Rate — f=0.08mm/r
- 切削深度 Cutting Depth — ap=0.6mm

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	50件/刃
国外某品牌 Life time of other International brand	60件/刃



-性价比优势高，具有较好的排屑效果。
High cost-effective advantage and good chip-breaking effect.

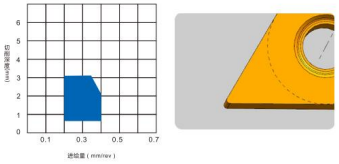
铸铁车削
Turning Inserts for Cast Iron

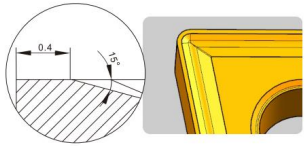
平面槽： 脆性材料、高硬材料槽型，结构强度高，与刀杆贴合性强，更适合铸铁的不稳定车削。

Flat chip-breakers:
Chip-breaker for cutting brittle and hard material,
with high structural strength and a good match to the tool holder.
More suitable for unstable turning of cast iron.

通槽： 通用加工槽型，双面断屑槽，尤其适合加工K类材料

Universal chip-breakers:
Universal chip-breaker type, double-sided chip-breakers,
especially suitable for machining K-type materials.





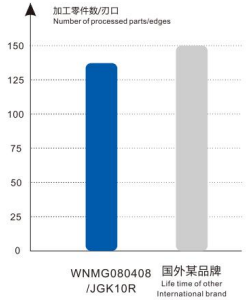
加工铸铁时的非正常失效与解决方案：
Unusual failures and solutions when processing cast iron:

非正常失效 Unusual failures		解决方案 Solutions
崩缺 Tipping	前刀面的倒棱处崩缺 Tipping at the chamfer on the front edge	加大倒棱负前角。 Increase the negative front angle of the chamfer.
	精加工灰口铸铁时刃口崩缺 Tipping of the cutting edge during grey cast iron finishing	
磨损 Wear	切削球墨铸铁时的磨损 Wear in cutting ductile iron	改用干式切削。 Change to dry cutting.
	干式切削时的磨损 Wear during dry cutting	降低切削线速度。 Reduce cutting line speed.
	切削灰口铸铁时的磨损 Wear during grey cast iron cutting	改用干式切削；提高切削线速度。 Change to dry cutting, increase line speed cutting.
表面质量 Surface quality	粗糙度差 Poor roughness	提高切削线速度；加大刀尖圆弧半径；降低进给量。 Increase cutting line speed; increase radius of the cutting edge; reduce the feeding rate.
	圆柱度、同轴度差 Poor cylindricity and coaxiality	减小刀尖圆弧半径；提高系统刚性；改用正角刀片。 Decrease radius of the tool tip arc; increase the rigidity of the system; change to positive-angle inserts.
	毛刺 Burrs	改用正角刀片；减小倒棱宽度。 Change to positive-angle inserts; reduce chamfer width.

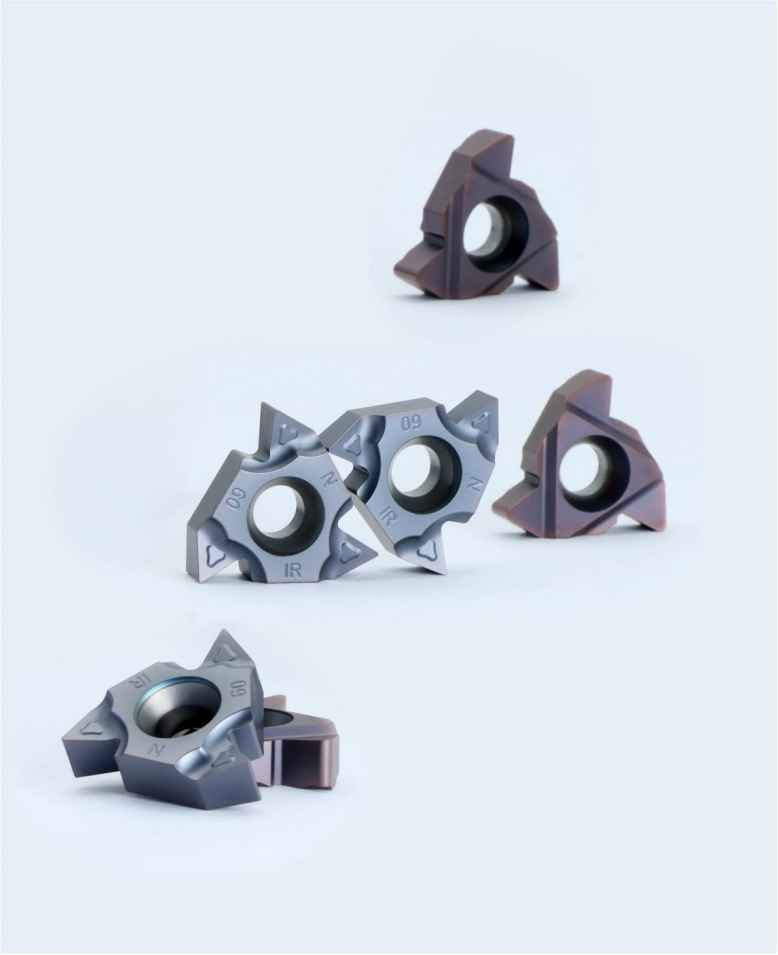
案例分析
Case Analysis

- 被加工材料 Processed material — 加工空调曲轴/HT250材质
- 工件直径 Diameter of workpiece — D = 60mm
- 线速度 Linear velocity — Vc=380m/min
- 进给量 Feeding Rate — f=0.23mm/r
- 切削深度 Cutting Depth — ap=1.5mm

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	135件/刃
国外某品牌 Life time of other International brand	150件/刃

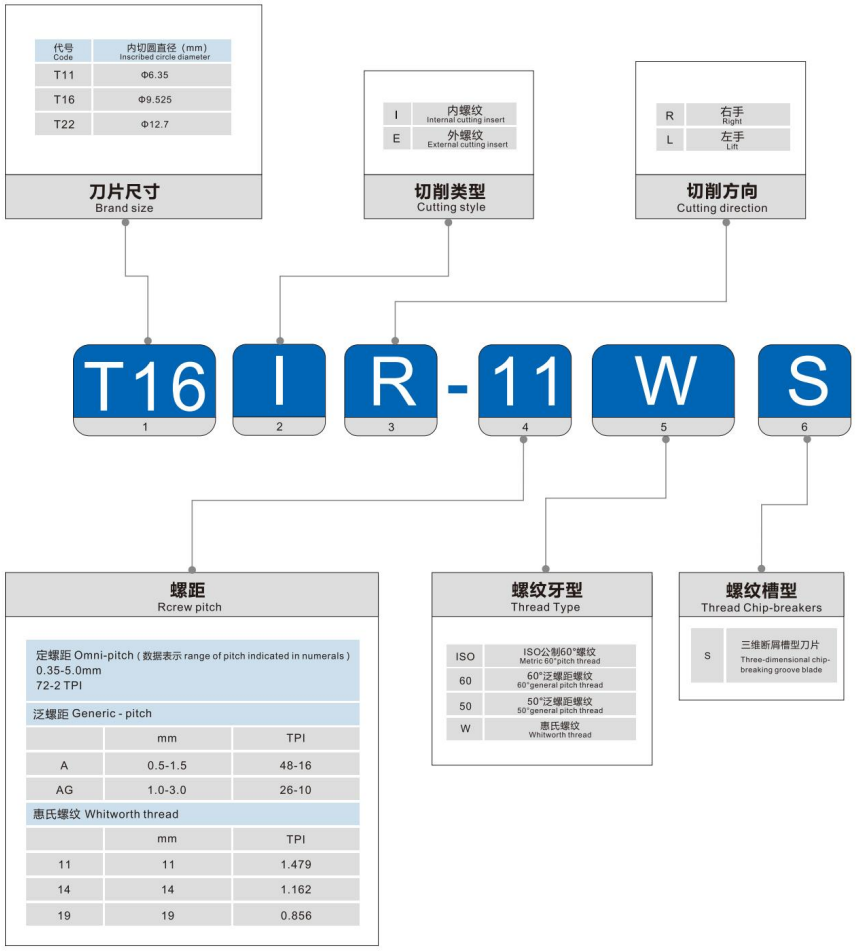


-性能为国外某品牌的90%左右，性价比优势明显。
Performance is about 90% of a foreign brand, with obvious cost-effective advantage.



螺纹车削
Threading Inserts

螺纹刀片型号命名规则
Naming Rules of Threading Turning Inserts



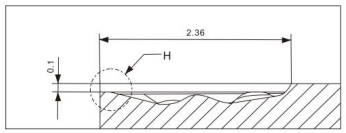
螺纹车削
Threading Inserts

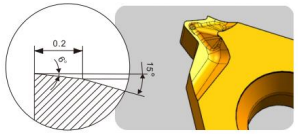
槽型特点
Characteristics of Chip-breakers

三维断屑槽型刀片
Three-dimensional chip-breaking groove blade

合理的槽型设计保证了加工中切削的有效排出；
加工表面光洁度高；
能实现钢、不锈钢，难切削材料等多种材质的螺纹加工。

Reasonable design of chip-breakers can ensure the effective discharge of cutting during machining;
With a high surface finish ;
It can realize thread processing of steel, stainless steel and hard cutting materials.





案例分析
Case Analysis

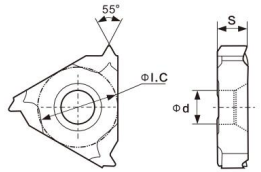
- 被加工材料 Processed material：45#钢 45#steel
- 加工方式 Processing methods：车削外圆加工 External Turning Processing
- 使用刀片 Use of inserts：T16IR1.5ISO/JGA20F
- 加工参数 Processing parameters：Vc=128m/min , f=0.22mm/r

-在同等加工条件下，我司 T16IR刀片切削轻块，断屑能力相当。性价比优势明显。

Under the same processing conditions, our T16IR cut easier and chip-breaking effect is good. Cost-effective advantage is obvious.

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	160件/刃
国外某品牌 Life time of other International brand	160件/刃

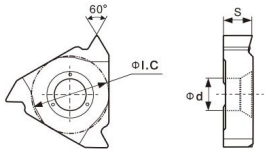
螺纹车削
Threading Inserts

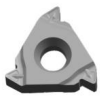


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade										
						P					M		K	H	金陶	
		螺距	ΦI.C	S	Φd	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	T16IR-11WS	11	9.525	3.52	4.00					●	◐					
	T16IR-14WS	14	9.525	3.52	4.00					●	◐					
	T16ER-11WS	11	9.525	3.52	4.00					●	◐					
	T16ER-14WS	14	9.525	3.52	4.00					●	◐					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

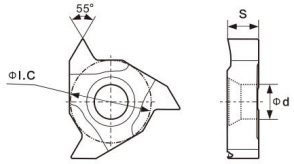
螺纹车削
Threading Inserts



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
						P					M		K	H	金陶		
		螺距	ΦI.C	S	Φd	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	T16IR-1.0ISOS	1.0	9.525	3.52	4.00					●	◐					
	T16IR-1.5ISOS	1.5	9.525	3.52	4.00					●	◐					
	T16IR-2.0ISOS	2.0	9.525	3.52	4.00					●	◐					
	T16IR-2.5ISOS	2.5	9.525	3.52	4.00					●	◐					
	T16IR-3.0ISOS	3.0	9.525	3.52	4.00					●	◐					
	T16ER-1.0ISOS	1.0	9.525	3.52	4.00					●	◐					
	T16ER-1.5ISOS	1.5	9.525	3.52	4.00					●	◐					
	T16ER-2.0ISOS	2.0	9.525	3.52	4.00					●	◐					
	T16ER-2.5ISOS	2.5	9.525	3.52	4.00					●	◐					
	T16ER-3.0ISOS	3.0	9.525	3.52	4.00					●	◐					

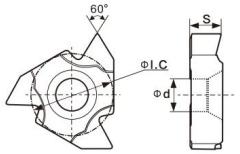
● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

螺纹车削
Threading Inserts



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
						P					M		K	H	金陶		
		螺距	ΦI.C	S	Φd	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	T16ER-AG55S	0.5-3.0	9.525	3.52	4.00					●	◐					
	T16ER-AG60S	0.5-3.0	9.525	3.52	4.00					●	◐					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

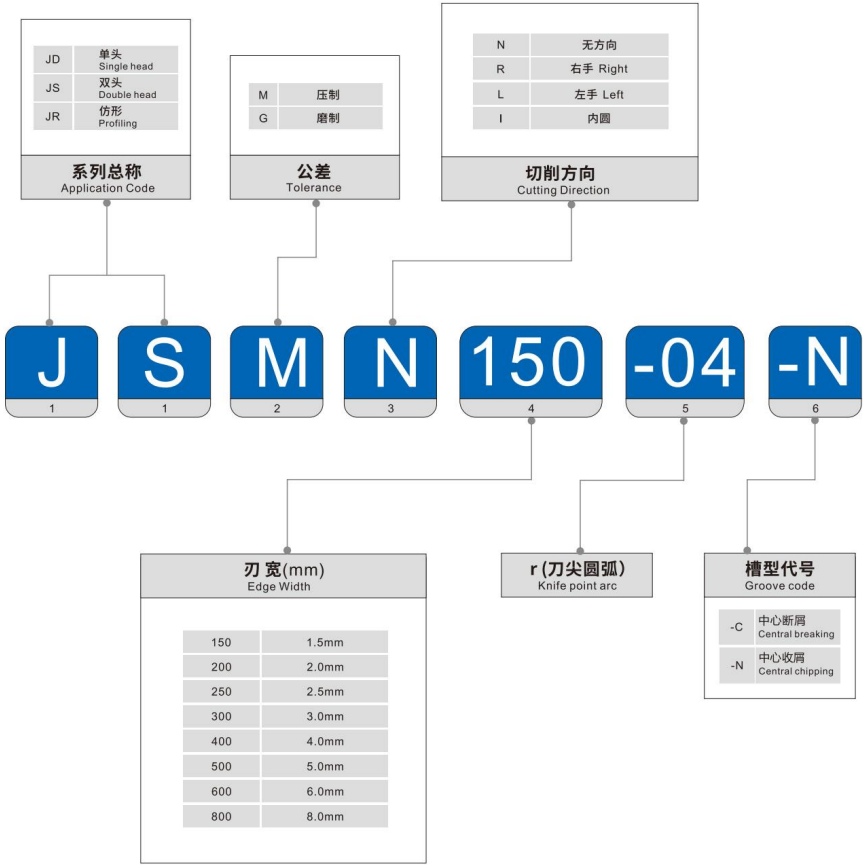


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
						P					M		K	H	金陶		
		螺距	ΦI.C	S	Φd	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	22IRN60-TC	3.5-5.0	12.70	4.71	5.00					●	◐					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

切断切槽车削系列
Parting and Grooving Inserts

切断切槽刀片型号命名规则
Naming Rule of Parting and Grooving Inserts



切断切槽车削
Parting and Grooving Inserts

切断切槽刀片特点
The features of parting and grooving inserts

刀片能够用于切槽和车削加工，是一款多功能通用加工刀片；
优化的三维切屑槽型对切屑实现有效控制，最大限度降低了切削阻力，减小了加工振动；
槽加工专门开发的硬质合金基体和涂层的结合，兼备了耐磨性和韧性，提高了加工寿命和加工的可靠性。

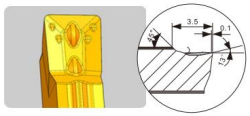
The inserts is a multifunctional general-purposed machining inserts, which can be used for grooving and turning;
The optimized 3D chip-breakers can effectively control chip-breaking,
minimize the cutting resistance and reduce the machining vibration;
The combination of carbide matrix and coating specially developed for processing chip-breakers,
has both wear resistance and toughness, and improves the processing life and reliability.

槽型特点
Characteristics of Chip-breakers

-C

满足切断、切槽、车削等各种加工需要，切削过程变得轻松，
排屑更为流畅，达到理想的加工表面质量。

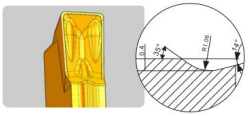
To meet different needs of cutting, grooving, turning and etc,
the cutting process becomes easier, the chip-breaking effect is good,
and the ideal machining surface quality is achieved.



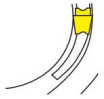
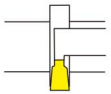
-N

特殊的后刀面结构使切削阻力降低20%，减少振动，进一步提高
表面质量。特殊的刃口设计使断屑效果更好，可以横向走刀。

The special flank structure reduces the cutting resistance by 20%,
reduces vibration and further improves the surface quality.
The special cutting edge design makes the chip-breaking effect better,
and the tool can be moved horizontally.

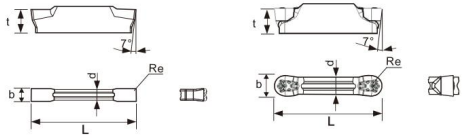


加工方式
Processing methods

外圆切断加工 external cutting processing	外圆沟槽加工 External groove processing	端面沟槽加工 End groove processing	内圆沟槽加工 Internal groove processing
			

切断切槽车削
Parting and Grooving Inserts

JSMN/JRMN



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
							P					M		K	H	金陶	
		b	Re	L	d	t	JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	JSMN150-02-N	1.50	0.15	16.0	1.2	3.5			●		●						
	JSMN200-02-N	2.00	0.20	16.0	1.6	3.5			●		●						
	JSMN250-02-N	2.50	0.20	18.5	2.0	3.85			●		●						
	JSMN300-04-C	3.00	0.40	21.0	2.35	4.8			●		●						
	JSMN400-04-C	4.00	0.40	21.0	3.3	4.8			●		●						
	JSMN500-08-C	5.00	0.80	26.0	4.1	5.8			●		●						
	JSMN600-08-C	6.00	0.80	26.0	4.1	5.8			●		●						
	JRMN200-10-C	2.00	1.00	16.0	1.50	3.5			●		●						
	JRMN300-15-C	3.00	1.50	21.0	2.35	4.8			●		●						
	JRMN400-20-C	4.00	2.00	21.0	3.3	4.8			●		●						
	JRMN500-25-C	5.00	2.50	26.0	4.1	5.8			●		●						
	JRMN600-30-C	6.00	3.00	26.0	4.1	5.8			●		●						
	JRMN800-40-C	8.00	4.00	31.0	4.1	6.5			●		●						

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

切断切槽车削加工案例
Parting and Grooving Inserts Application Cases

切断切槽加工 Parting and Grooving processing

- 被加工材料 Processed material：42CrMo
- 加工方式 Processing methods：连续切削外圆槽 Continuous External Turning
- 使用刀片 Use of inserts：JSMN 250-02-N/JGA10A
- 加工参数 Processing parameters：Vc=110m/min , f=0.16mm/r

-在同等加工条件下，我司N槽型排屑好，切削轻块，性价比优势明显。

Under the same processing conditions, our N type chip-breaker has good chip-breaking effect and cut easier. Cost-effective advantage is obvious.

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	280件/刃
国外某品牌 Life time of other International brand	330件/刃

切槽 Grooving

- 被加工材料 Processed material：45#钢 45#steel
- 加工方式 Processing methods：车削外圆加工 External Turning Processing
- 使用刀片 Use of inserts：JSMN 300-04-C/JGA20F
- 加工参数 Processing parameters：Vc=128m/min , f=0.22mm/r

-在同等加工条件下，我司JSMN刀片切削轻块，断屑能力相当，性价比优势明显。

Under the same processing conditions, our JSMN insert has good chip breaking effect and cut easier. Cost-effective advantage is obvious.

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	160件/刃
国外某品牌 Life time of other International brand	160件/刃

仿形 Profiling

- 被加工材料 Processed material：45#钢 45#steel
- 加工方式 Processing methods：车削外圆加工 External Turning Processing
- 使用刀片 Use of inserts：JRMN400-20-C/JGP25T
- 加工参数 Processing parameters：Vc=220m/min , f=0.18mm/r

-C槽型切削轻块，优良的槽型结构排屑效果良好,性价比优势明显。

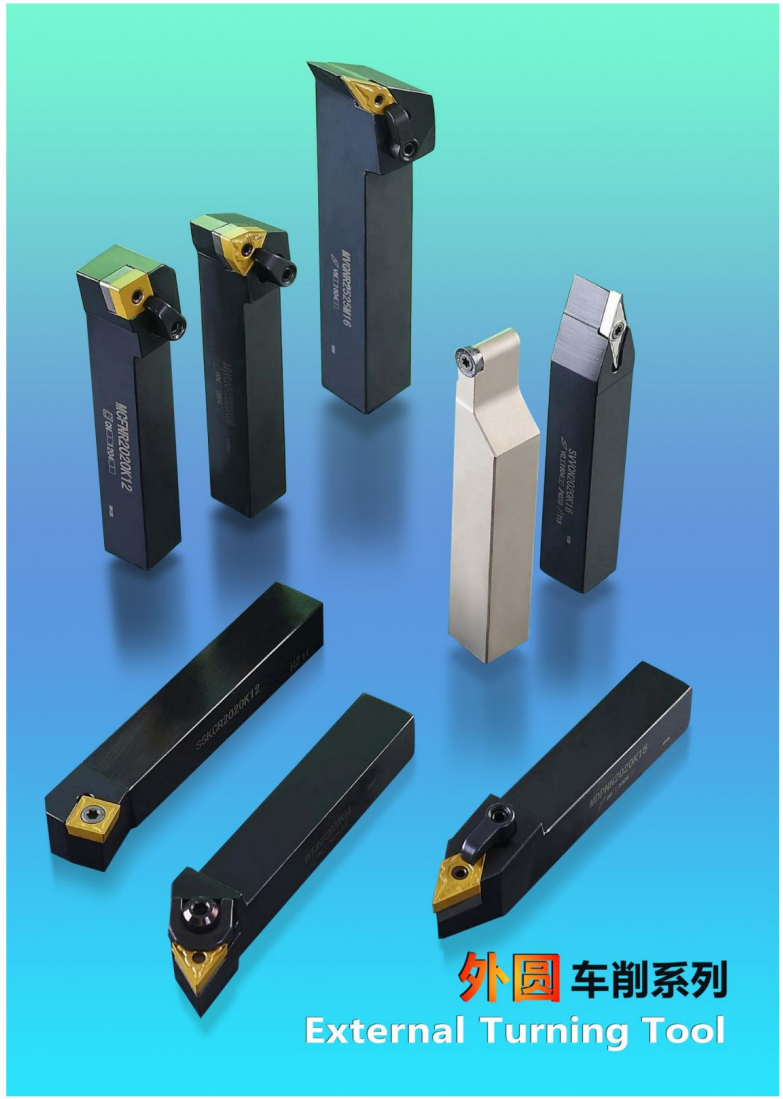
C type chip breaker has good chip-breaking effect and cut easier. Cost-effective advantage is obvious.

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	100件/刃
国外某品牌 Life time of other International brand	100件/刃

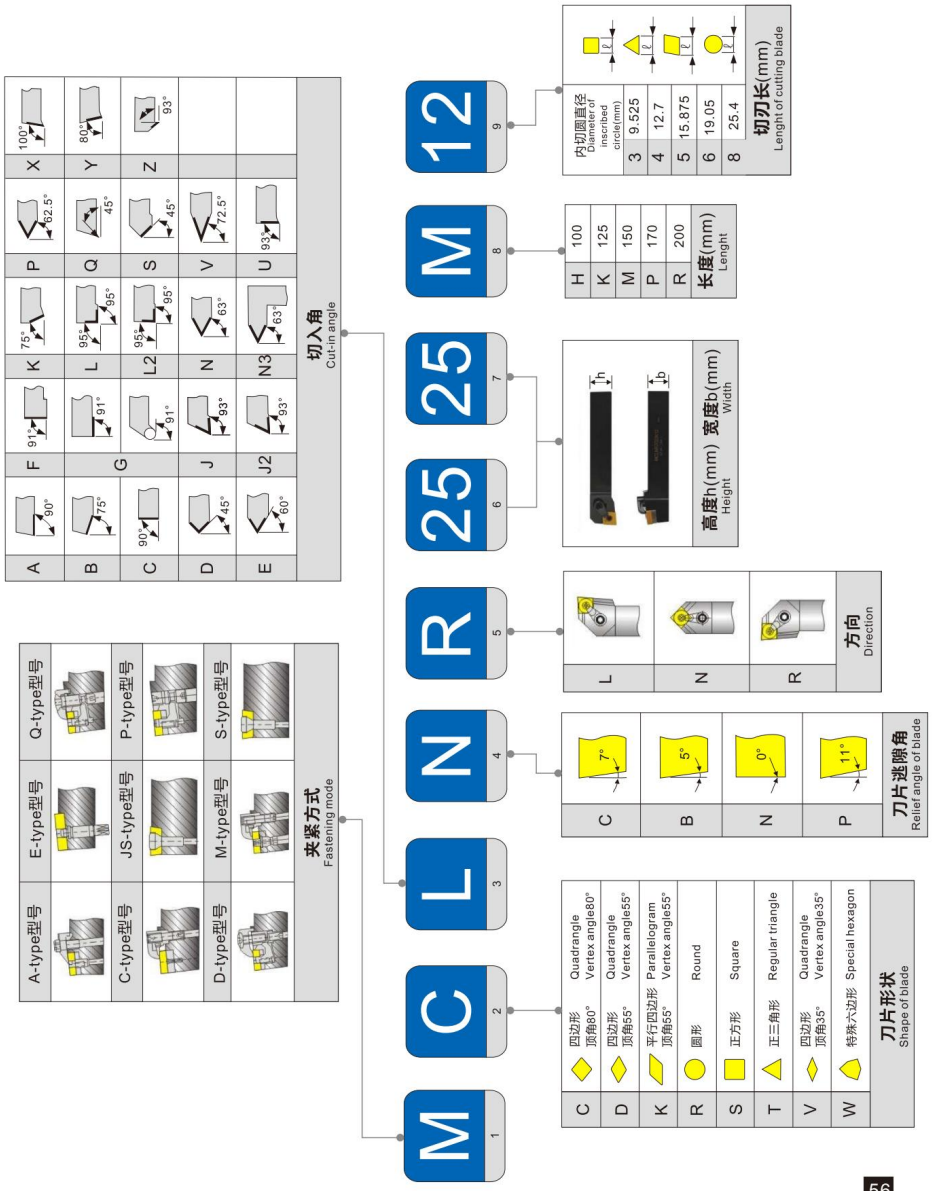
车削加工常见问题及解决方案
Common Problems and Solutions In Turning

常见问题 Main problem	选择条件 Selection condition		刀具材料选择 Selection of Tool material: 硬度更高的材料 Material with higher hardness	刀具材料选择: 韧性好的材料 material with good toughness	切削条件 Cutting Condition: 切削速度 cutting speed	切削条件: 进给 feeding
刀尖磨损过大 Too much wear for the knifepoint	加工中精度超标 Machining accuracy beyond standard	后刀面磨损增大 Flank wear increases	√			
		切削条件不适合 Cutting condition is not suitable			↓	↑
表面精度恶化 Surface accuracy deterioration	表面质量差 Poor surface quality	刀具磨损增大、刀刃不够锋利 Tool wear increases and the blade is not sharp enough	√		↓	
		切削刃缺损 Cutting edge defect		√		↓
		切削刃几何形状不合适 Cutting edge geometry is not appropriate				
		切削条件不合适 Cutting condition is not suitable			↑	↓
		振动、发颤 Vibration and tremble		√	↑↓	↓
		积屑瘤 built- up edge			↑	↑
发热 Heat	切削热的影响 Cutting heat effect	切削条件不合适 Cutting condition is not suitable			↓	
		切削刃几何形状不合适 Cutting edge geometry is not appropriate	√			
尺寸精度差 Poor dimensional accuracy	加工中尺寸波动 Dimension fluctuation in machining	刀片精度不合适 The blade accurancy is not suitable				
		工件、刀具位置偏移 Work tool offset			↑	
刀具切削刃损伤 Cutting edge damage	后刀面、前刀面磨损增大 Wear increases on the back and front knife surfaces	后刀面磨损 The front edge wears	√		↓	
		前刀面磨损 The back edge wears	√		↓	↓
	微崩 Minor Tipping	振动、冲击 Vibration and impact		√		↓
	积屑瘤 Built-up edge	工件硬度与刀具切削条件不适合 The hardness of the tool material is not suitable for cutting condition				↑
	热龟裂 Thermal cracking	工件材料的硬度与刀具材料和切削条件不适合 The hardness of the tool material is not suitable for cutting condition			↓	↓
	切削刃刀尖部分变形 Cutting edge deformation	在断续切削大进给时发生 Occurs when intermittent cutting in large feeding	√			↓
	刀具寿命 Life time of tools	材料、切削条件不合适 Tool material is not suitable for cutting condition		√		↓
切屑控制 Cutting control	长切屑缠绕 long cutting chips, winding	切削条件不合适 Cutting condition is not suitable			↓	↑
		刀刃几何形状不合适 Cutting edge geometry is not appropriate				
	切屑太短，导致飞溅 Short cutting chips, causing splash	切削条件不合适 Cutting condition is not suitable				↓
		刀刃几何形状不合适 Cutting edge geometry is not appropriate				
毛刺、塌边 Burr, Collapse	钢、铝，产生毛刺 Steel and aluminum, burrs	切削条件不适合 Cutting condition is not suitable			↑	↓
		刀具磨损、几何形状不合适 Cutting tool wears and Cutting edge geometry is not appropriate	√			
	铸铁，塌边 Cast iron, collapse	切削条件不合适 Cutting condition is not suitable			↓	↑
		刀具磨损、几何形状不合适 Cutting tool wears and Cutting edge geometry is not appropriate	√			
	软钢，毛边 Mild steel, burrs	切削条件不合适 Cutting condition is not suitable				↓
		刀具磨损、几何形状不合适 Cutting tool wears and Cutting edge geometry is not appropriate	√			

切削条件 Cutting Condition: 切深 cutting depth	切削条件: 切削液 Cutting fluid	刀具形状 Shape of tool: 改变刀片槽型 Change chip breakers of the inserts	前角 front angle	刀尖圆弧半径 corner radius	主偏角 cutting edge angle	切削刃强度 cutting edge strength	提高刀片精度 Improve blade accuracy	提高刀具刚性 improve blade rigidity	机床装夹 Machine tool clamping: 工件刀柄装夹 Workpiece holder clamping	刀柄悬伸 Tool holder overhanging	动力、机床间隙 Power machine clearence
				↑			√				
	√		↑	↑		↓			√	√	√
↓		√		↑		↑					
		√		↑		↓	√				
↓	√										
↓	√	√	↑	↓	↑	↓			√	√	√
	√	√	↑			↓	√				
			↑								
		√	↑			↓					
							√				
		√	↑	↓	↑			√	√	√	√
		√	↑	↑		↓					
↓		√	↑		↓						
↓		√			↓	↑		√	√	√	√
	√	√	↑			↓	√				
↓	√	√	↑			↓					
↓	√	√	↑	↑	↓	↓					
↓		√		↑	↓	↑		√	√	√	√
↑	√										
		√		↓	↑						
↓	√										
		√		↑	↓						
	√										
		√	↑	↓	↑	↓					
	√										
		√	√	↓	↓	↓					
↓											
		√	↑	↑		↑		√	√	√	√

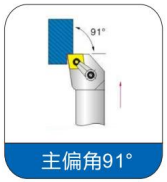


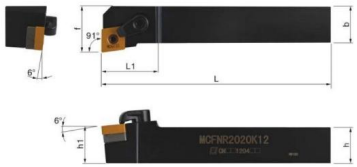
外圆车刀杆命名规则
Naming Rules of External Turning Tool holders



外圆车刀杆系列
Series of External Turning Tool Holders

MCFNR/L



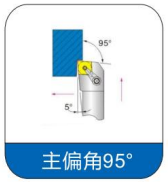


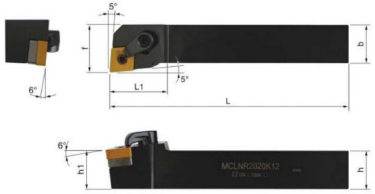
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MCFNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	CTM617	HL1813	ML0625	L3.0
MCFNR/L2525M12		25	25	150	32	25	32					
MCFNR/L3232P12		32	32	170	32	32	40					
MCFNR/L3232P19	CN□□1906□□	32	32	170	36	32	40	MC1904	CTM1022	HL2217	ML0830	L4.0

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DCFNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	M6×21	HLD-1	M6×9P	L3.0
DCFNR/L2525M12		25	25	150	32	25	32					
DCFNR/L3232P12		32	32	170	32	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

MCLNR/L



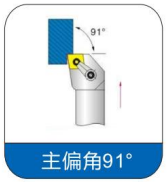


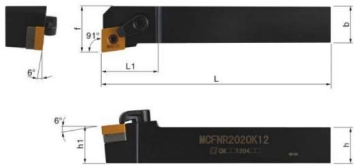
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MCLNR/L2020K12	CN□□1204□□	20	20	125	30	20	25	MC1204	CTM617	HL1813	ML0625	L3.0
MCLNR/L2525M12		25	25	150	31	25	32					
MCLNR/L3232P12		32	32	170	33	32	40					
MCLNR/L2525M16	CN□□1606□□	25	25	150	37	25	40	MC1604	CTM822	HL2217	ML0830	L3.0 L4.0
MCLNR/L3232P16		32	32	170	36	32	40					
MCLNR/L3232P19	CN□□1906□□	32	32	170	39	32	40	MC1904	CTM1022	HL2217	ML0830	L4.0

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DCLNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	M6×21	HLD-1	M6×9P	L3.0
DCLNR/L2525M12		25	25	150	32	25	32					
DCLNR/L3232P12		32	32	170	33	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

MCFNR/L



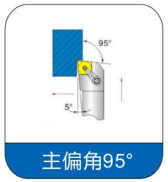


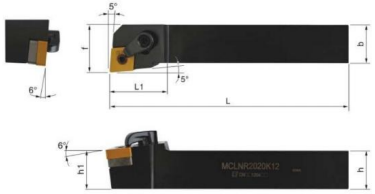
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MCFNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	CTM617	HL1813	ML0625	L3.0
MCFNR/L2525M12		25	25	150	32	25	32					
MCFNR/L3232P12		32	32	170	32	32	40					
MCFNR/L3232P19	CN□□1906□□	32	32	170	36	32	40	MC1904	CTM1022	HL2217	ML0830	L4.0

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DCFNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	M6×21	HLD-1	M6×9P	L3.0
DCFNR/L2525M12		25	25	150	32	25	32					
DCFNR/L3232P12		32	32	170	32	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

MCLNR/L



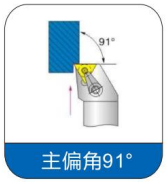


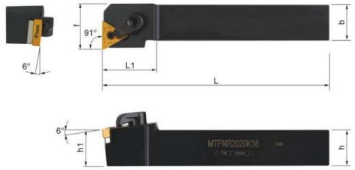
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MCLNR/L2020K12	CN□□1204□□	20	20	125	30	20	25	MC1204	CTM617	HL1813	ML0625	L3.0
MCLNR/L2525M12		25	25	150	31	25	32					
MCLNR/L3232P12		32	32	170	33	32	40					
MCLNR/L2525M16	CN□□1606□□	25	25	150	37	25	40	MC1604	CTM822	HL2217	ML0830	L3.0 L4.0
MCLNR/L3232P16		32	32	170	36	32	40					
MCLNR/L3232P19	CN□□1906□□	32	32	170	39	32	40	MC1904	CTM1022	HL2217	ML0830	L4.0

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DCLNR/L2020K12	CN□□1204□□	20	20	125	32	20	25	MC1204	M6×21	HLD-1	M6×9P	L3.0
DCLNR/L2525M12		25	25	150	32	25	32					
DCLNR/L3232P12		32	32	170	33	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

MTFNR/L



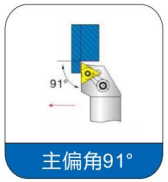


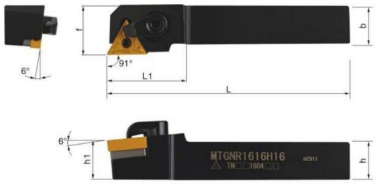
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MTFNR/L2020K16	TN□□1604□□	20	20	125	29	20	25	MT1603	CTM513	HL1813	ML0625	L2.0 L3.0
MTFNR/L2525M16		25	25	150	31	25	32					
MTFNR/L3232P16		32	32	170	32	32	40					
MTFNR/L2525M22	TN□□2204□□	25	25	150	36	25	32	MT2204	CTM617	HL1917	ML0830	L3.0 L4.0
MTFNR/L3232P22		32	32	170	36	32	40					

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DTFNR/L2020K16	TN□□1604□□	20	20	125	32	20	25	MT1603	M6×21	HLD-3	M5×9P	L3.0
DTFNR/L2525M16		25	25	150	31	25	32					
DTFNR/L3232P16		32	32	170	31	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

MTGNR/L



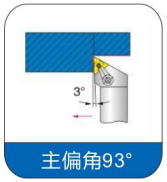


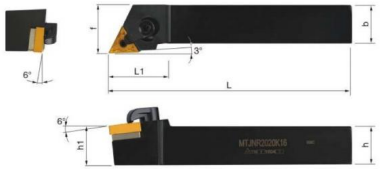
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MTGNR/L2020K16	TN□□1604□□	20	20	125	29	20	25	MT1603	CTM513	HL1813	ML0625	L2.0 L3.0
MTGNR/L2525M16		25	25	150	30	25	32					
MTGNR/L3232P22	TN□□2204□□	32	32	170	32	32	40	MT2204	CTM617	HL1917	ML0830	L3.0 L4.0

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DTGNR/L2020K16	TN□□1604□□	20	20	125	29	20	25	MT1603	M6×21	HLD-3	M5×9P	L3.0
DTGNR/L2525M16		25	25	150	30	25	32					
DTGNR/L3232P22	TN□□2204□□	32	32	170	32	32	40	MT2204	M6×21	HLD-2	M5×9P	

外圆车刀杆系列
Series of External Turning Tool Holders

MTJNR/L

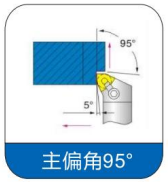


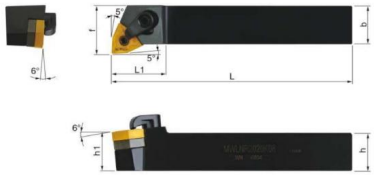


型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MTJNR/L2020K16	TN□□1604□□	20	20	125	32	20	25	MT1603	CTM513	HL1813	ML0625	L2.0 L3.0
MTJNR/L2525M16		25	25	150	34	25	32					
MTJNR/L3232P16		32	32	170	36	32	40					
MTJNR/L2020K22	TN□□2204□□	20	20	125	37	20	25	MT2204	CTM617	HL1917	ML0830	L3.0 L4.0
MTJNR/L2525M22		25	25	150	38	25	32					
MTJNR/L3232P22		32	32	170	40	32	40					

外圆车刀杆系列
Series of External Turning Tool Holders

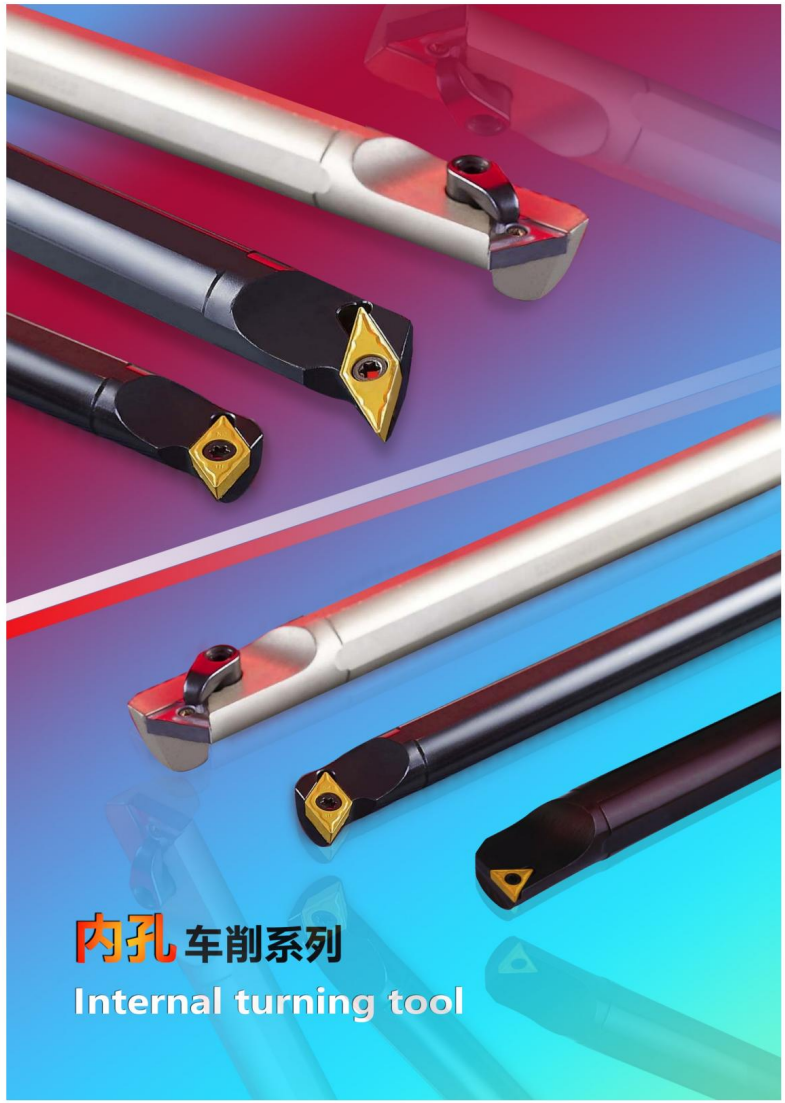
MWLNR/L



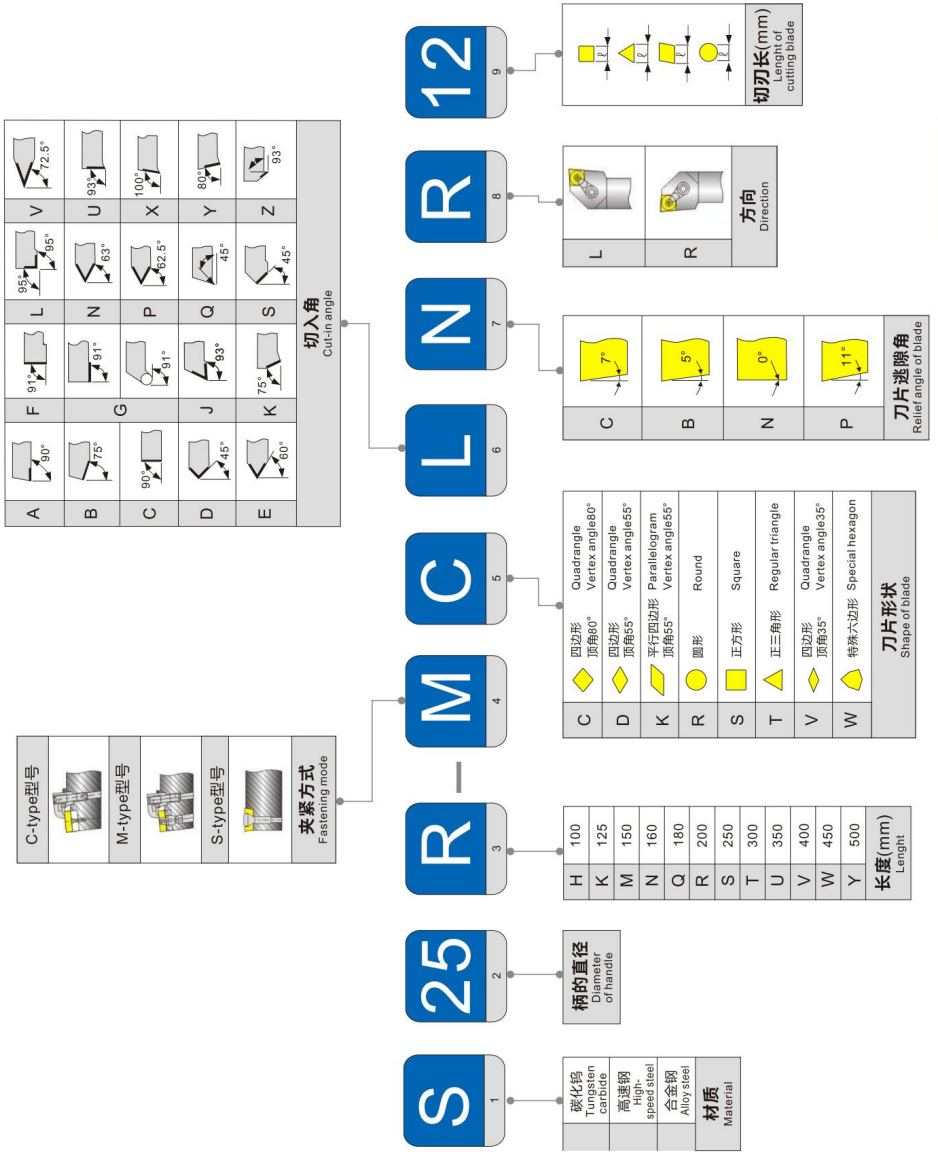


型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		h	b	L	L1	h1	f					
MWLNR/L2020K06	WN□□0604□□	20	20	125	26	20	25	MW0603	CTM513	HL1813	ML0625	L2.0 L3.0
MWLNR/L2525M06		25	25	150	32	25	32					
MWLNR/L3232P06		32	32	170	40	32	40					
MWLNR/L2020K08	WN□□0804□□	20	20	125	28	20	25	MW0804	CTM617	HL1813	ML0625	L3.0
MWLNR/L2525M08		25	25	150	32	25	32					
MWLNR/L3232P08		32	32	170	32	32	40					

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)						刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	刀垫螺钉 Shim screw	扳手 Wrench
		h	b	L	L1	h1	f					
DWLNR/L2020K06	WN□□0604□□	20	20	125	26	20	25	MW0603	M6×21	HLD-3	M5×9P	L3.0
DWLNR/L2525M06		25	25	150	32	25	32					
DWLNR/L3232P06		32	32	170	40	32	40					
DWLNR/L2020K08	WN□□0804□□	20	20	125	28	20	25	MW0804		HLD-1	M6×9P	
DWLNR/L2525M08		25	25	150	32	25	32					
DWLNR/L3232P08		32	32	170	32	32	40					

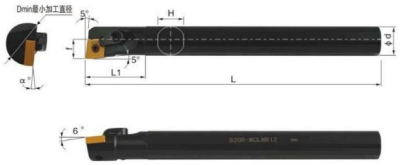


内孔车刀杆命名规则
Naming Rules of Internal Turning Tool Holders



内孔车刀杆系列
Series of Internal Turning Tool Holders

MCLNR/L

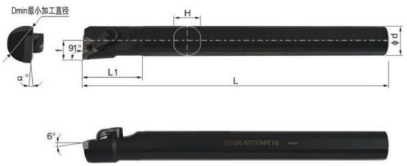


型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-MCLNR/L12	CN□□1204□□	20	16	180	35	14.8	11	18°		CTM613	HL1810	ML0620	L3.0
S20R-MCLNR/L12		25	20	200	45	19	13	15°					
S25S-MCLNR/L12		29	32	250	45	24	15	12°					

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	弹簧 Spring	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S20R-DCLNR/L12	CN□□1204□□	25	20	200	45	19	13	15°		M6×21	HLD-1	TH810	L3.0
S25S-DCLNR/L12		29	25	250	45	24	15	12°					

内孔车刀杆系列
Series of Internal Turning Tool Holders

MTFNR/L

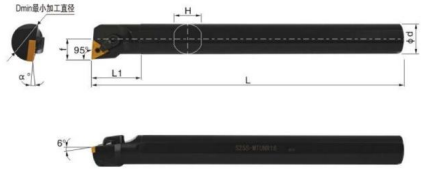


型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-MTFNR/L16	TN□□1604□□	20	16	180	35	15	11	15°		CTM511	HL1810	ML0620	L2.0 L3.0
S20R-MTFNR/L16		25	20	200	40	19	13	15°					
S25S-MTFNR/L16		30	25	250	45	24	15.5	15°					

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	弹簧 Spring	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-DTFNR/L16	TN□□1604□□	20	16	180	35	15	11	15°		M6×21	HLD-3	TH810	L3.0
S20R-DTFNR/L16		25	20	200	40	19	13	15°					
S25S-DTFNR/L16		30	25	250	45	24	15.5	12°					

内孔车刀杆系列
Series of Internal Turning Tool Holders

MTUNR/L

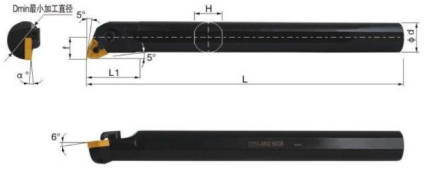


型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-MTUNR/L16	TN□□1604□□	20	16	180	40	15	11	15°		CTM511	HL1810	ML0620	L2.0 L3.0
S20R-MTUNR/L16		25	20	200	40	13	13.5	15°					
S25S-MTUNR/L16		30	25	250	45	24	15.5	12°					

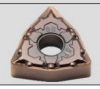
型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	弹簧 Spring	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-DTUNR/L16	TN□□1604□□	20	16	180	40	15	11	15°		M6×21	HLD-3	TH810	L3.0
S20R-DTUNR/L16		25	20	200	40	13	13.5	15°					
S25S-DTUNR/L16		30	25	250	45	24	15.5	12°					

内孔车刀杆系列
Series of Internal Turning Tool Holders

MWLNR/L



型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°					
S16Q-MWLNR/L06	WN□□0604□□	20	16	180	35	15	11	18°		CTM511	HL1511	ML0520	L2.0
S20R-MWLNR/L06		24	20	200	40	19	13	15°		CTM511	HL1810	ML0620	L2.0 L3.0
S25S-MWLNR/L06		32	25	250	45	23	17	12°					
S16Q-MWLNR/L08	WN□□0804□□	20	16	180	35	15	11	15°		CTM613	HL1810	ML0620	L3.0
S20R-MWLNR/L08		25	20	200	40	19	13	15°					
S25S-MWLNR/L08		30	25	250	36	23	16.5	12°					

型号 Type	适用刀片 Adaptable Inserts	基本尺寸 Dimension(mm)							刀垫 Shim	压板螺钉 Plate screws	压板 Clamp	弹簧 Spring	刀垫螺钉 Shim screw	扳手 Wrench
		ΦDmin	Φd	L	L1	H	f	α°						
S20R-DWLNR/L06	WN□□0604□□	24	20	200	40	19	13	15°	MW0603	M6×21	HLD-3	TH810	M5×9P	L3.0
S25S-DWLNR/L06		32	25	250	45	23	17	12°						
S20R-DWLNR/L08	WN□□0804□□	25	20	200	40	19	13	15°	MW0804	M6×21	HLD-1	TH810	M6×9P	L3.0
S25S-DWLNR/L08		30	25	250	36	23	16.5	12°						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铣削
Milling Tools

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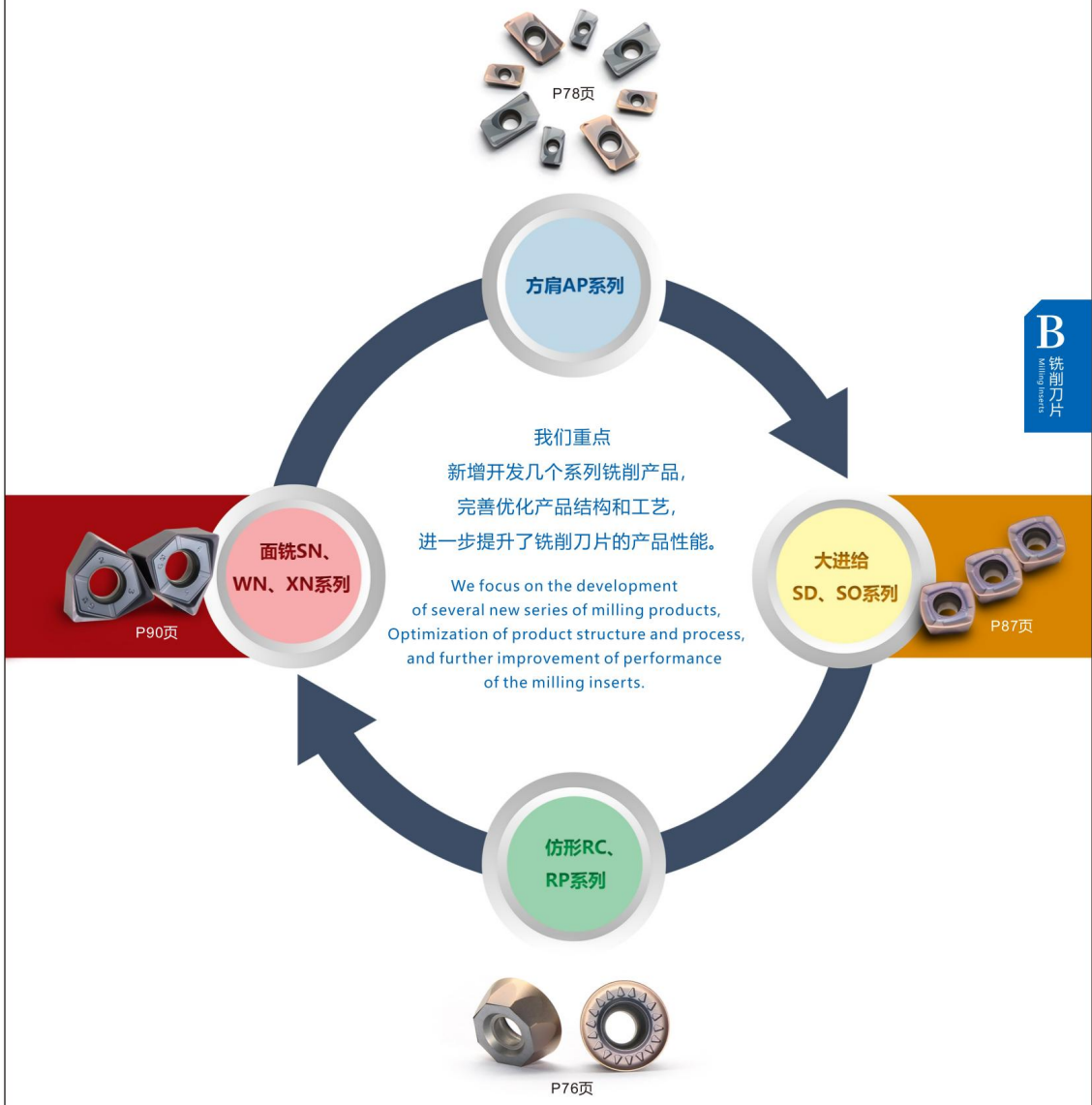
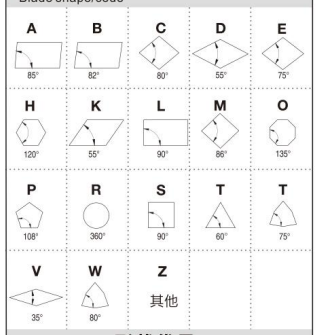
铣削产品牌号一览表
Recommended Grade Table for Milling Inserts

工件材料 Workpiece materials	ISO代号 ISO Code	涂层 Coating		金属陶瓷 Cermet	硬质合金 Cemented carbide	超硬材料 Workpiece materials
		CVD	PVD			
P 钢件 Steel	P01		JGA05A	JTN20		
	P10		JGA20F			
	P20		JGA20H			
	P30		JGA10A	JTN35		
	P40		JGA30F			
M 不锈钢 Stainless Steel	M01					
	M10		JGA10A			
	M20			JTN20		
	M30	JGM30R		JTN35		
	M40					
K 铸铁 Cast Iron	K01					
	K10	JGK15R				
	K20					
	K30					
N 有色金属 Non-Ferrous Metal	N01					
	N10					
	N20					
	N30					
S 钛合金 耐热合金 Titanium Alloy Heat Resisting Alloy	S01					
	S10		JGS20A			
	S20		JGS20C			
	S30					
H 高硬度材料 High Strength Material	H01		JGA05A			
	H10					
	H20					
	H30					



普通铣削刀片型号命名规则
Naming Rules of Milling Inserts

刀片形状/代号 Blade shape/code



形状代号 Blade shape/code

公制 Metric system

代号	有无孔	有无断削槽	刀片剖面	代号	有无孔	有无断削槽	刀片剖面
B	有	无	>65°	N	无	无	
H	有	单面	>65°	R	无	单面	
C	有	无	>65°	F	无	双面	
J	有	双面	>65°	A	有	无	
W	有	无	≤65°	M	有	单面	
T	有	单面	≤65°	G	有	双面	
Q	有	无	≤65°	X	——	——	特殊
U	有	双面	≤65°				

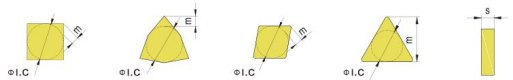
断屑槽及夹固形式 Chip breaking groove and clamping form

S P K N

主切削刃后角 Main cutting edge relief angle

代号	后角(度)	代号	后角(度)
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	其他后角

公差 Tolerance



代号	刀尖高度m 公差（mm）	内切圆∅I.C 公差(MM)	厚度S_1 公差（mm）
A	±0.005	±0.025	±0.025
F	±0.005	±0.013	±0.025
C	±0.013	±0.025	±0.025
H	±0.013	±0.013	±0.025
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
J	±0.005	±0.05~±0.13	±0.025
K	±0.013	±0.05~±0.13	±0.025
L	±0.025	±0.05~±0.13	±0.025
M	±0.08~±0.18	±0.05~±0.13	±0.13
N	±0.08~±0.18	±0.05~±0.13	±0.025
U	±0.08~±0.18	±0.08~±0.25	±0.13

(参考)M级精度详细情况（按形状、大小分）

● 刀尖高度公差（mm）

内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
6.35	±0.08	±0.08	±0.08	±0.11	±0.16	——
9.525	±0.08	±0.08	±0.08	±0.11	±0.16	——
12.7	±0.13	±0.13	±0.13	±0.15	——	——
15.875	±0.15	±0.15	±0.15	±0.18	——	——
19.05	±0.15	±0.15	±0.15	±0.18	——	——
25.4	——	±0.18	——	——	——	——

● 内切圆∅I.C公差(mm)

内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
6.35	±0.05	±0.05	±0.05	±0.05	±0.05	——
9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
12.7	±0.08	±0.08	±0.08	±0.08	——	±0.08
15.875	±0.10	±0.10	±0.10	±0.10	——	±0.10
19.05	±0.10	±0.10	±0.10	±0.10	——	±0.10
25.4	——	±0.13	——	——	——	±0.13

刀片形状 Shape of blades

内切圆直径（mm）	C	D	R	S	T	V	W
3.97					06		
5.0			05				
5.56					09		
6.0			06				
6.35	06	07			11	11	
8.0			08				
9.525	09	11	09	09	16	16	06
10.0			10				
12.0			12				
12.7	12	15	12	12	22	22	08
15.875	16		15	15	27		
16.0		19	16				
19.05	19		19	19	33		
20.0			20				
25.0	25	25	25				
25.4			25	25			
31.75			31				
32			32				

切削刃长度 Length of cutting edge

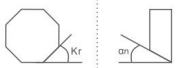
厚度指刀片底面与切削刃最高部分之间的高度

代号	刀片厚度（mm）
00	0.79
T0	0.99
01	1.59
T1	1.98
02	2.38
T2	2.58
03	3.18
T3	3.97
04	4.76
T4	4.96
05	5.56
T5	5.95
06	6.35
T6	6.75
07	7.94
09	9.52
T9	9.72
11	11.11
12	12.70

刀片厚度 Thickness of blades

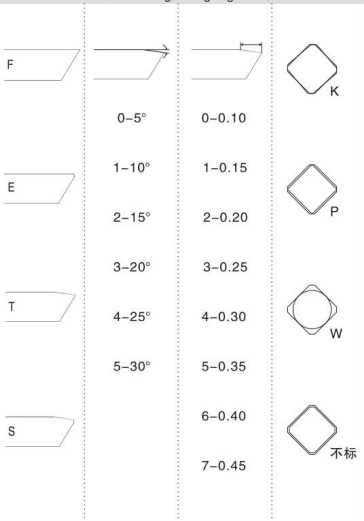
12 04 ED T21 R - NR8

修光刃 Smoothing edge



A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	其他	F	25°
		G	30°
		N	0°
		P	11°
		Z	其他

切削刃倒棱（mm） Chamfering cutting edge



断屑槽型代号 Code of chip breaker type

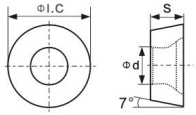
NR8	半精加工
GM	半精加工
CM3	半精加工
GM3	快进给

切削方向 Cutting direction

R	右
L	左
N	双向

普通铣削刀片
General Milling Inserts

RCKT

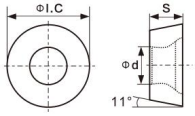


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade								
					P			M		K		金陶	
		ΦI.C	S	Φd	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JGP15S	JTN20	JTN35
	RCKT10T3MO-DS3	10	3.97	4.4									●
	RCKT1204MO-DS3	12	4.76	4.0									●
	RCKT1606MO-BR8	16	6.35	5.5		◐	●	○					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

普通铣削刀片
General Milling Inserts

RPMW/RPMT



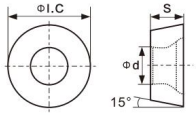
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade								
					P			M		K		金陶	
		ΦI.C	S	Φd	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JGP15S	JTN20	JTN35
	RPMW08T2MOT	8	2.8	3.3		◐	●	○					
	RPMW1003MO	10	3.18	4.5		◐	●	○					
	RPMW10T3MO	10	3.97	4.6		◐	●	○					
	RPMW1204MO	12	4.76	4.4		◐	●	○					
	RPMT08T2MOE-SL	8	2.58	3.3		◐	●						
	RPMT10T3MOE-SL	10	3.97	4.4		◐	●						
	RPMT1204MO-SL	12	4.76	4.3		◐	●						
	RPMT1204MO-DL	12	4.76	4.4		◐		●					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

B 铣削刀片 Milling Inserts

普通铣削刀片
General Milling Inserts

RDMW/RDMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade							
					P		M		K		金陶	
		ΦI.C	S	Φd	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	RDMW1204MO-NR8	12	4.76	4.4		◐	●					
	RDMW1605MO-NR8	16	5.56	5.5		◐	●					
	RDMW1204MO	12	4.76	4.4		●	◐					
	RDMW1604MO	16	4.76	5.0		●	◐					
	RDMW1605MO	16	5.56	5.5		●	◐					
	RDMT0802MO-SN	8	2.48	3.4		●	◐					
	RDMT10T3MO-SN	10	3.97	4.5		●	◐					
	RDMT1204MO-SN	12	4.76	4.4		●	◐					

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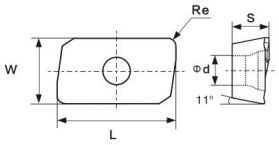
APMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK15R	JTN20	JTN35
	APMT1135PDER-FR	11.32	3.5	6.19	2.85	0.8		◐	●			●		
	APMT160408PDER-FR	17.21	4.76	9.29	4.48	0.8		◐	●			●		
	APMT1135PDER-HM2	11.22	3.5	6.20	2.8	0.8		◐	●			●		
	APMT160408PDER-HM2	17.25	4.76	9.26	4.4	0.8		◐	●			●		
	APMT1135PDER-DL	11.28	3.6	6.22	2.8	0.8		◐		●				
	APMT160408PDER-DL	17.37	5.33	9.32	4.5	0.8		◐		●				

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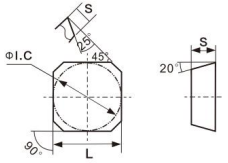
SEEN/SPKN



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade							
					P		M		K		金陶	
		ΦI.C	L	S	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SEEN1203AFTN	12.7	12.7	3.18							◐	●
	SEEN1504AFTN	15.875	15.875	4.76							◐	●
	SPKN1203ERER	12.7	12.7	3.18			●				◐	●
	SPKN1203EDEL	12.7	12.7	3.18			●					

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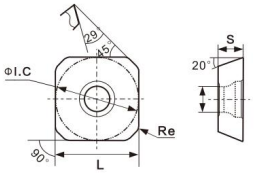
SEET



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SEET12T3-BS3	13.4	13.4	3.97	4.1	1.532			●					

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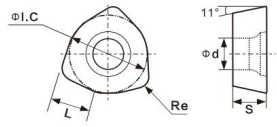
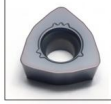
WPGT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	WPGT080615ZSR	12.85	6.35	5.8	5.5	1.5			●		◐			

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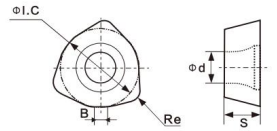
WDMW



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade							
						P		M		K		金陶	
		ΦI.C	S	B	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	WDMW06T320ZTR	10.00	3.97	1.20	2.00			●		○			
	WDMW080520ZTR	13.00	5.50	1.50	2.00			●		○			
	WDMW10X620ZTR	13.00	6.00	1.20	2.00			●		○			

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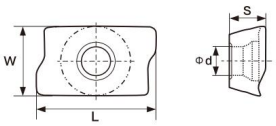
APKT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade							
						P		M		K		金陶	
		W	S	L	Φd	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	APKT1705PER-TT	10.68	5.56	18.54	4.46		●						

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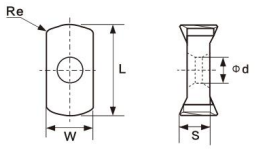
LNMU/LOGU



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	LNMU0303ER-GM3	11.9	3.75	6.0	2.85	1.2		◐	●		○			
	LNMU0303ER-GS3	11.9	3.75	6.0	2.85	1.2		◐	●		○			
	LOGU030310ER-GM3	12.0	3.96	6.22	3.45	1.0		◐	●		○			

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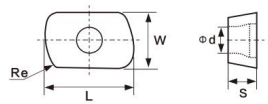
EPMT/EPNW

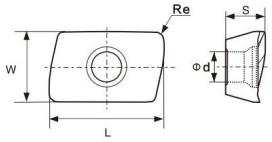


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	EPMT0603SN-R8	10.00	3.18	6.35	2.8	8.0	○		●	◐				
	EPNW0603TN-RL	10.00	3.18	6.35	2.8	8.0	○		●	◐				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

普通铣削刀片
General Milling Inserts

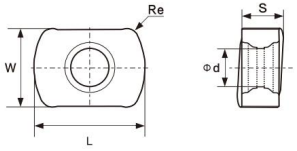
XOMX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	XOMX10T308TR-M2	10.2	3.85	6.90	2.96	0.80	○	◐	●					
	XOMX120408TR-M3	12.7	5.07	8.20	3.85	0.80	○	◐	●					
	XOMX120412TR-M1	12.7	5.05	8.20	3.9	1.20	○	◐	●					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

BLMP

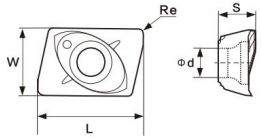


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	BLMP0603R-TT	9.0	3.73	6.39	3.1	1.0		◐	●	○				
	BLMP0904R-TT	11.95	4.39	9.15	4.1	1.35		◐	●	○				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

普通铣削刀片
General Milling Inserts

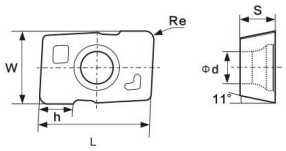
JDMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	JDMT070204R-RL	7.1	2.45	4.25	1.9	0.40	●	◐	○					
	JDMT070208R-RL	7.1	2.45	4.25	1.9	0.80	●	◐	○					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

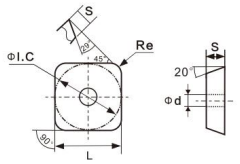
MPHW



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		L	S	W	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	MPHW060308ZEL-RL	10.0	3.18	6.57	2.9	0.8	●	◐	○					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

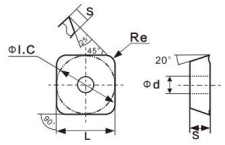
SEMT/SEKT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SEMT13T3AGSN-ZY	13.4	3.97	13.4	4.4	1.0		◐	●		○			
	SEKT1204AFTN-DR7	12.7	4.76	12.7	5.5	0.8		◐	●		○			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

SEMR/SEKR

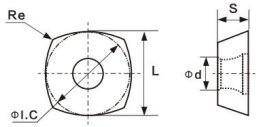


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SEMR1203AFTN	12.7	3.18	12.7	2.3	1.6			●		○			
	SEMR1504AFTN	15.875	4.76	15.875	3.2	1.6			●		○			
	SEKR1203AFTN	12.7	3.18	12.7	2.3	1.6			●		○			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

快进给铣削刀片
Fast Feeding Milling Inserts

SDMT

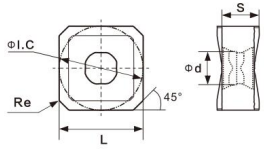


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SDMT09T3	12.66	5.54	15.3	4.4	1.2		◐	●		○			
	SDMT1204	12.7	4.76	12.7	4.4	1.2		◐	●		○			
	SDMT120512-GM3	12.66	5.54	12.66	4.4	1.2		◐	●		○			
	SDMT150512-GM3	15.875	5.56	15.875	5.5	1.2		◐	●		○			
	SDMT1205ZDTN-RL	12.7	5.54	12.7	4.6	2.8		●	◐		○			
	SDMT1505ZDTN-RL	15.875	5.56	15.875	5.5	0.8		●	◐		○			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

面铣刀片
Face Milling Inserts

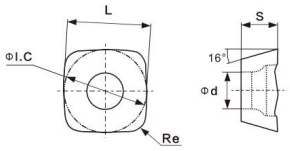
SNMX/SNGX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SNMX1306ENTN-M	13.5	6.8	13.5	5.4	0.4			●		◐			
	SNGX1306ANTN-TT	13.5	5.97	13.5	5.4	0.4			●		◐			
	SNMX120512-WLT	12.7	5.62	12.7	6.0	1.2			●		◐			
	SNMX1205ANN-WLT	12.7	5.51	12.7	6.0	0.8			●		◐			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

SOMT

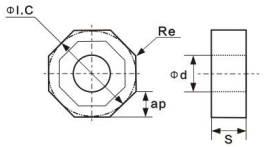


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SOMT100420ER-GM3	10.39	4.59	10.39	4.6	2.0		◐	●		○	◐		
	SOMT140520ER-GM3	14.16	5.56	14.16	5.8	2.0		◐	●		○	◐		

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

面铣刀片
Face Milling Inserts

ONMU



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	ap	BS	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	ONMU050505-TN	13.0	5.5	3.5	5.0	0.5			●		◐			

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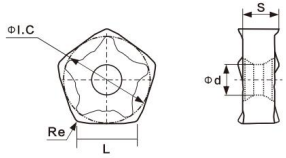
PNMU

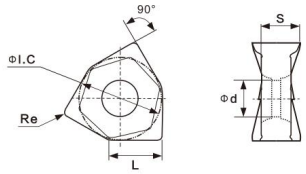


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	PNMU0905XNER-GM3	13.4	6.19	9.3	4.64	0.8		◐	●				○	

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

面铣刀片
Face Milling Inserts

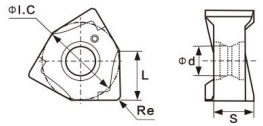
WNMU



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	WNMU080608EN-GM3	14.02	6.55	8.87	6.20	0.8			●		○	●		

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

XNEX

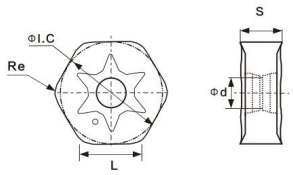


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	XNEX040304TR-EM3	6.71	3.29	4.3	3.1	0.4			●			◐		
	XNEX040308TR-EM3	6.71	3.29	4.3	3.1	0.8			●			◐		
	XNEX080608TR-NR8	12.48	6.45	8.0	4.65	0.8			●			◐		

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

负型六边形铣削刀片
Negative Heptagonal Milling Inserts

HNGX

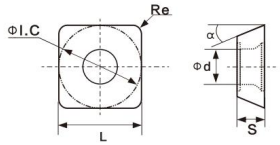


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	HNGX0906ANSN-PLT	16.5	6.35	9.1	4.9	1.0			●		◐	◐		

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

玉米铣刀系列
Corn Milling Inserts Series

SPMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P		M		K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SPMT120408	12.70	4.76	12.70	5.5	0.8			●	◐	○			
	SPMT120608	12.70	6.35	12.70	5.5	0.6			●	◐	○			

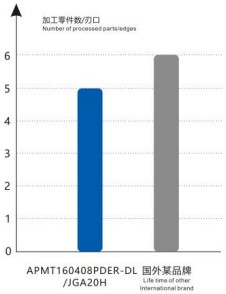
● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

铣削刀片加工案例
Application Case for Milling Insert Processing

案例分析 Case Analysis

- 被加工材料 Processed material：扎辊底座 / ZG35CrMo
- 加工方式 Processing methods：方肩铣 Square shoulder milling
- 使用刀片 Use of inserts：APMT160408PDER-DL/JGA20H
- 加工参数 Processing parameters：f=200mm/r，ap=0.5mm；Vc=125m/min，n=160
- 切削性能 Cutting performance

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	5件/刃
国外某品牌 Life time of other International brand	6件/刃



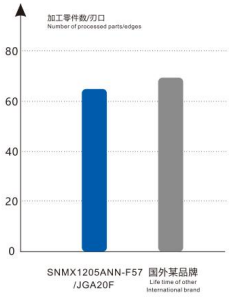
我司品牌产品寿命为国外竞争对手产品的80%以上，性价比优势明显。

The service life of our branded products can be reached to more than 80% of the products from foreign competitors, with obvious cost-effective advantage.

案例分析 Case Analysis

- 被加工材料 Processed material：发动机缸体/HT250
- 加工方式 Processing methods：面铣 Face milling
- 使用刀片 Use of inserts：SNMX1205ANN-F57/JGA20F
- 加工参数 Processing parameters：f=0.12mm/r，ap=3.0mm；Vc=230m/min
- 切削性能 Cutting performance

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	65件/刃
国外某品牌 Life time of other International brand	70件/刃



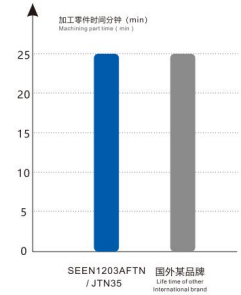
发动机缸体面铣加工45°刀盘，切削轻块。

For face milling of engine cylinders with 45° cutter, cutting easier.

案例分析 Case Analysis

- 被加工材料 Processed material：模具 / Cr12
- 加工方式 Processing methods：面铣 Face milling
- 使用刀片 Use of inserts：SEEN1203AFTN / JTN35
- 加工参数 Processing parameters：f=0.11mm/r，ap=0.5mm；Vc=155m/min，n=750
- 切削性能 Cutting performance

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	25分钟
国外某品牌 Life time of other International brand	25分钟



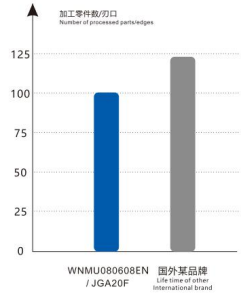
专机模具材料面铣加工，我司产品寿命与竞争对手一致，磨损均匀。

For face milling of specialized mould materials, the life of our products is same as that of our competitors, with uniform wear.

案例分析 Case Analysis

- 被加工材料 Processed material：曲轴 / 40Cr
- 加工方式 Processing methods：曲轴侧铣 Crankshaft side milling
- 使用刀片 Use of inserts：WNMU080608EN / JGA20F
- 加工参数 Processing parameters：f=0.2mm/r，ap=2.0mm；Vc=180m/min
- 切削性能 Cutting performance

切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	100台/刃
国外某品牌 Life time of other International brand	120台/刃



曲轴侧铣加工，进给较快，切削效率高。

For crankshaft side milling, our products feed faster, and has higher cutting efficiency.

铣削加工常见问题及解决方案
Common Problems and Solutions In Milling

常见问题 Main problem		选择条件 Selection condition	刀具材料选择 Selection of Tool material		切削条件 Cutting Condition			
			硬度更高的材料 Material with higher hardness	韧性好的材料 material with good toughness	切削速度 cutting speed	进给 feeding	切深 cutting depth	改变铣刀直径与宽度 Change diameter and width of milling tools
刀尖的损伤 Knifepoint Damage	后刀面磨损 Flank wear	切削条件不合适 Cutting condition is not suitable			↓			
		切削刃几何形状不合适 Cutting edge geometry is not appropriate	√					
	前刀面磨损大 Front edge wear	切削条件不合适 Cutting condition is not suitable			↓	↓	↓	
		切削刃几何形状不合适 Cutting edge geometry is not appropriate	√					
	切削刃破损 Cutting edge wear	切削条件不合适 Cutting condition is not suitable				↓	↓	
		切削刃几何形状不合适 Cutting edge geometry is not appropriate		√				
	热冲击破损 Thermal shock damage	切削条件不合适 Cutting condition is not suitable			↓	↓	↓	
		切削刃几何形状不合适 Cutting edge geometry is not appropriate						
	积屑瘤粘结 Built-up Edge Bonding	切削条件不合适 Cutting condition is not suitable			↑	↑		
		切削刃几何形状不合适 Cutting edge geometry is not appropriate						
加工精度 Machining Precision	表面粗糙度大 Surface roughness	刀具磨损铣刀振摆大 Tool wear, milling vibration	√		↑	↓	↓	
	产生毛刺 Burrs	切削条件不合适 Cutting condition is not suitable			↓	↓	↓	√
		切削刃几何形状不合适 Cutting edge geometry is not appropriate						
	产生塌边 Collapse	切削条件不合适 Cutting condition is not suitable				↓	↓	
		切削刃几何形状不合适 Cutting edge geometry is not appropriate						
	平面度平行度恶化 Flatness and parallelism deterioration	切削刃几何形状不合适 Cutting edge geometry is not appropriate				↓	↓	
	振动大 Vibration	切削条件工艺不合适 Cutting condition is not suitable			↓	↓	↓	√
其他 Others	切屑缠绕堵塞 Cutting Wound Blocking	切削条件不合适 Cutting condition is not suitable			↑	↑↓		√
		切削刃几何形状不合适 Cutting condition is not suitable						

刀具形状 Shape of tool									机床装夹 Machine tool clamping		
切削液 Cutting fluid	前角 front angle	主偏角 cutting edge angle	切削刃强度 cutting edge strength	齿数 number of teeth	增大容屑空间 increase chip-hold space	检查副切削刃几何形状 Check geometry of auxiliary cutting edge	检查端面跳动 checking end-face runout	提高刀具刚性 improve blade rigidity	工件刀柄装夹 Workpiece holder clamping	刀柄悬伸 Tool holder overhanging	动力、机床间隙 Power machine clearance
√											
	↑		↓								
√											
	↑	↓	↓								
		↓	↑			√	√	√	√	√	√
√											
	↑		↓								
√											
	↑		↓								
√			↓			√	√				
	↑	↑	↓			√					
	↑	↓	↓	↑		√		√			
	↑	↑		↓		√	√	√	√	√	√
	↑	↑	↓					√	√	√	√
√				↓							
	↑			↓	√						

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P101页

P101页

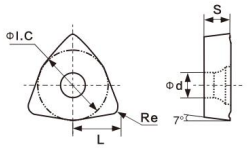
孔加工
Hole Machining Inserts

浅孔钻刀片 99
Shallow hole drilling Inserts

深孔钻刀片 101
Deep-hole drilling Inserts

浅孔钻刀片
Shallow hole drilling Inserts

WCMX/WCMT

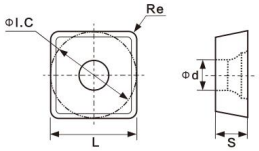


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	WCMX030208-ZY	5.56	2.38	3.80	2.80	0.8		◐		●				
	WCMX040208-ZY	6.35	2.38	4.30	3.10	0.8		◐		●				
	WCMT050308-ZY	7.94	3.18	5.50	3.40	0.8		◐		●				
	WCMT06T308-ZY	9.525	3.97	6.50	3.80	0.8		◐		●				
	WCMT080412-ZY	12.70	4.76	8.70	4.40	1.2		◐		●				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

浅孔钻刀片
Shallow hole drilling Inserts

SPMG



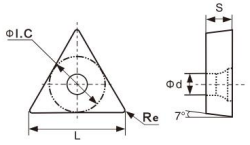
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	SPMG050204-TT	5.00	2.38	5.00	2.25	0.4		○	●					
	SPMG060204-TT	6.00	2.38	6.00	2.61	0.4		○	●					
	SPMG07T308-TT	7.94	3.97	7.94	2.85	0.8		○	●					
	SPMG090408-TT	9.80	4.30	9.80	4.05	0.8		○	●					
	SPMG110408-TT	11.50	4.80	11.50	4.45	0.8		○	●					
	SPMG140512-TT	14.30	5.20	14.30	5.75	1.2		○	●					

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

C 孔加工刀片 Hole Machining Inserts

深孔钻刀片
Deep-hole drilling Inserts

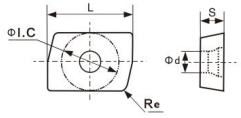
TPMT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	TPMT16T312R-23	9.525	3.97	16.50	3.4	1.2				●	○			
	TPMT220612R-23	12.70	6.35	22.00	4.4	1.2				●	○			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

R424.9

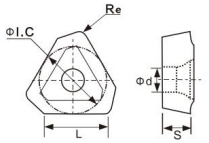


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30	JGK10R	JTN20	JTN35
	R424.9-13T308-23	10.00	14.60	3.96	3.4	0.8								
	R424.9-180608-23	11.50	20.40	6.35	4.5	0.8				●	○			

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

深孔钻刀片
Deep-hole drilling Inserts

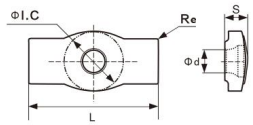
TPMX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	S	L	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	TPMX1403-RG	8.45	3.52	8.30	2.8	0.8			●	◐				
	TPMX140308-LG	8.45	3.52	8.30	2.8	0.8			●	◐				
	TPMX1704-RG	10.30	4.04	9.60	3.9	0.8			●	◐				
	TPMX170408-LG	10.30	4.04	9.60	3.9	0.8			●	◐				
	TPMX240512-LG	14.20	5.50	13.90	4.4	1.2			●	◐				
	TPMX2405-RG	14.20	5.50	13.90	4.4	1.2			●	◐				
	TPMX280716-LG	17.00	7.60	16.10	5.5	1.6			●	◐				
	TPMX2807-RG	17.00	7.60	16.10	5.5	1.6			●	◐				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

800



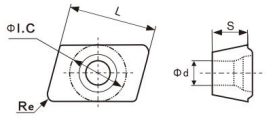
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M	K		金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30	JGK10R	JTN20	JTN35
	800-06A	7. 70	17.975	2.99	2.80	0.20				●				
	800-07A	9. 20	19.975	3.49	3.50	0.25				●				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

C 孔加工刀片 Hole Machining Inserts

深孔钻刀片
Deep-hole drilling Inserts

800

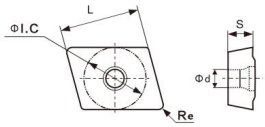


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M		K	金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	800-08T308H-PG	9.00	8.40	3.97	2.80	0.40				●				
	800-09T308H-PG	9.00	9.62	3.97	2.80	0.40				●				
	800-11T308H-PG	9.00	12.7	3.97	2.80	0.40				●				
	800-050308M-IL	5.55	8.00	3.18	2.50	0.80				●				
	800-06T308M-CL	6.34	9.83	4.00	2.80	0.80				●				
	800-08T308M-CG	9. 85	7. 94	3.97	2.80	0.80				●				
										●				
	800-08T308M-IG	9. 85	7. 92	3.97	2.80	0.80				●				
	800-060308H-PL	6.42	8.00	3.18	2.50	0.25				●				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

深孔钻刀片
Deep-hole drilling Inserts

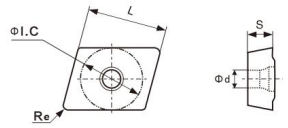
R800.24



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M		K	金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	R800.24-06T308M-CG	9.87	6.35	3.97	2.80	0.80				●				
	R800.24-08T308M-CG	9.87	7.94	3.97	2.80	0.80				●				
	R800.24-10T308M-CG	9.87	9.53	3.97	2.80	0.80				●				
	R800.24-12T308M-CG	9.87	12.70	3.97	2.80	0.80				●				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

R800.24

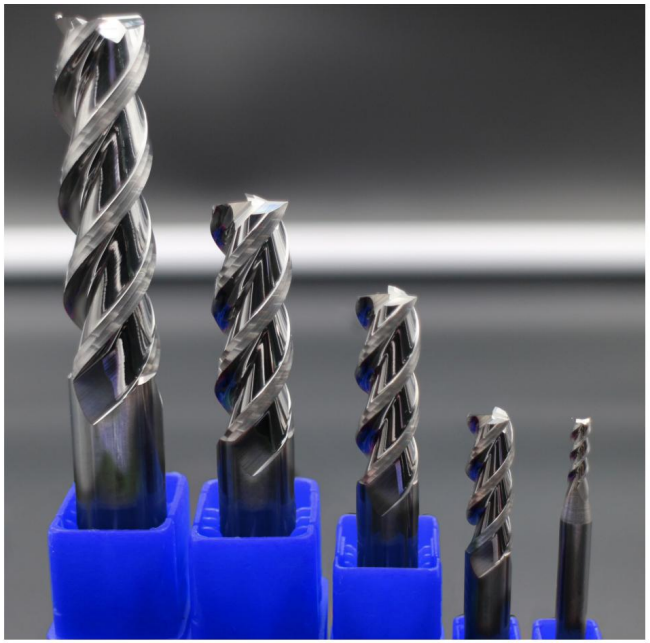


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
							P			M		K	金陶	
		ΦI.C	L	S	Φd	Re	JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	R800.24-06T308M-IG	9.87	6.35	3.97	2.80	0.80				●				
	R800.24-08T308M-IG	9.87	7.94	3.97	2.80	0.80				●				
	R800.24-12T308M-IG	9.87	12.70	3.97	2.80	0.80				●				

● 主推荐牌号 ◐ 一般牌号 ○ 可生产牌号

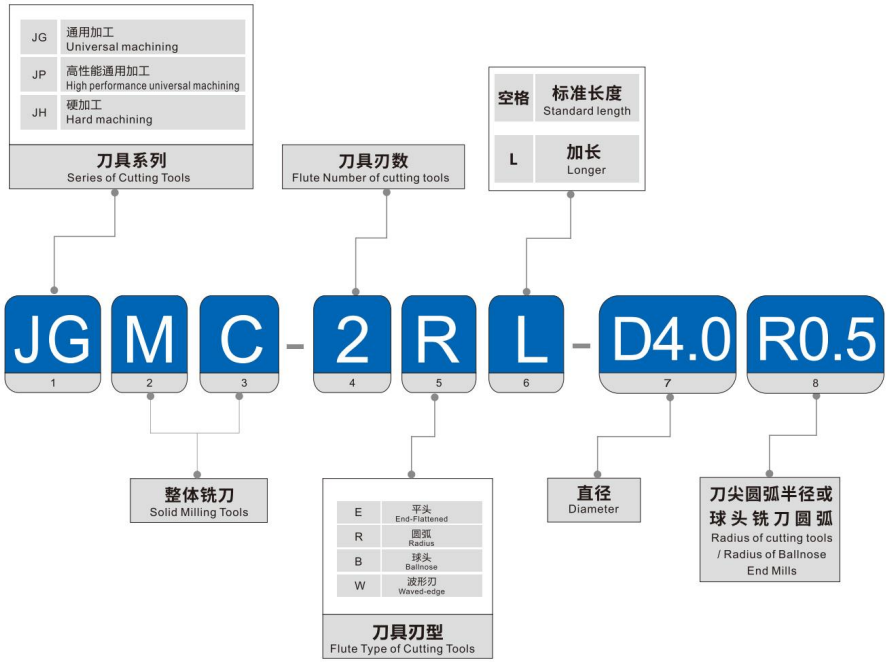
整硬刀具
Solid Carbide Cutting Tools

铣刀命名规则 108
Naming Rules for Solid Milling Tools
整体硬质合金铣刀系列 109
Solid Carbide Milling Tool Series



整硬刀具
Solid Carbide Cutting Tools

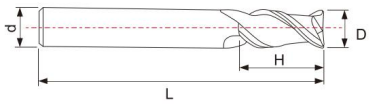
铣刀命名规则
Naming Rules of Carbide End Mills

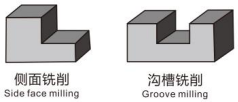


二刃直柄平头立铣刀

Two flutes straight shank square endmills

JGMC-2E





订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-2E-D1.0	1.0	/	3	50	4	2	●
JGMC-2E-D1.5	1.5	/	4	50	4	2	●
JGMC-2E-D2.0	2.0	/	6	50	4	2	●
JGMC-2E-D2.5	2.5	/	8	50	4	2	●
JGMC-2E-D3.0	3.0	/	8	50	4	2	●
JGMC-2E-D3.5	3.5	/	10	50	6	2	●
JGMC-2E-D4.0	4.0	/	11	50	4	2	●
JGMC-2E-D4.5	4.5	/	11	50	6	2	●
JGMC-2E-D5.0	5.0	/	13	50	6	2	●
JGMC-2E-D5.5	5.5	/	16	50	6	2	●
JGMC-2E-D6.0	6.0	/	16	50	6	2	●
JGMC-2E-D7.0	7.0	/	20	60	8	2	●
JGMC-2E-D8.0	8.0	/	20	60	8	2	●
JGMC-2E-D9.0	9.0	/	22	75	10	2	●
JGMC-2E-D10.0	10.0	/	25	75	10	2	●
JGMC-2E-D11.0	11.0	/	26	75	12	2	●
JGMC-2E-D12.0	12.0	/	30	75	12	2	●
JGMC-2E-D14.0	14.0	/	32	75	14	2	●
JGMC-2E-D16.0	16.0	/	45	100	16	2	●
JGMC-2E-D18.0	18.0	/	45	100	18	2	●
JGMC-2E-D20.0	20.0	/	45	100	20	2	●

● 推荐型号　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

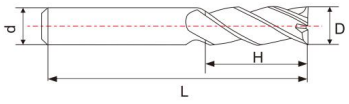
Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

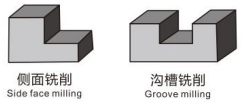
被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
■	■	■	□			□	■				

四刃直柄平头立铣刀

Four flutes straight shank square endmills

JGMC-4E





订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-4E-D1.0	1.0	/	3	50	6	4	●
JGMC-4E-D1.5	1.5	/	4	50	6	4	●
JGMC-4E-D2.0	2.0	/	6	50	6	4	●
JGMC-4E-D2.5	2.5	/	8	50	6	4	●
JGMC-4E-D3.0	3.0	/	8	50	6	4	●
JGMC-4E-D3.5	3.5	/	10	50	6	4	●
JGMC-4E-D4.0	4.0	/	11	50	6	4	●
JGMC-4E-D4.5	4.5	/	11	50	6	4	●
JGMC-4E-D5.0	5.0	/	13	50	6	4	●
JGMC-4E-D5.5	5.5	/	16	50	6	4	●
JGMC-4E-D6.0	6.0	/	16	50	6	4	●
JGMC-4E-D7.0	7.0	/	20	60	8	4	●
JGMC-4E-D8.0	8.0	/	20	60	8	4	●
JGMC-4E-D10.0	10.0	/	25	75	10	4	●
JGMC-4E-D12.0	12.0	/	30	75	12	4	●
JGMC-4E-D14.0	14.0	/	32	75	14	4	●
JGMC-4E-D16.0	16.0	/	45	100	16	4	●
JGMC-4E-D18.0	18.0	/	45	100	18	4	●
JGMC-4E-D20.0	20.0	/	45	100	20	4	●

● 推荐型号　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

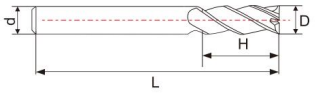
Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

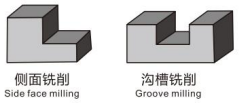
被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
■	■	■	□			□	■				

四刃直柄长刃平头立铣刀

Four flutes straight shank long flush endmills

JGMC-4EL





订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-4EL-D3.0	3.0	/	12	75	6	4	●
JGMC-4EL-D4.0	4.0	/	15	75	6	4	●
JGMC-4EL-D5.0	5.0	/	20	75	6	4	●
JGMC-4EL-D6.0	6.0	/	20	75	6	4	●
JGMC-4EL-D8.0	8.0	/	25	100	8	4	●
JGMC-4EL-D10.0	10.0	/	30	100	10	4	●
JGMC-4EL-D12.0	12.0	/	35	100	12	4	●
JGMC-4EL-D14.0	14.0	/	40	100	14	4	●
JGMC-4EL-D16.0	16.0	/	50	150	16	4	●
JGMC-4EL-D20.0	20.0	/	55	150	20	4	●

● 推荐型号　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

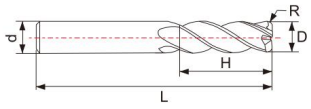
Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

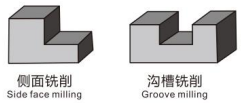
被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
■	■	■	□			□	■				

四刃直柄圆弧立铣刀

Four flutes straight shank round endmills

JGMC-4R





订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-4R-D3.0R0.2	3.0	0.2	8	50	6	4	●
JGMC-4R-D4.0R0.3	4.0	0.3	10	50	6	4	●
JGMC-4R-D4.0R0.5	4.0	0.5	10	50	6	4	●
JGMC-4R-D5.0R0.5	5.0	0.5	13	50	6	4	●
JGMC-4R-D5.0R1.0	5.0	1.0	13	50	6	4	●
JGMC-4R-D6.0R0.5	6.0	0.5	16	50	6	4	●
JGMC-4R-D6.0R1.0	6.0	1.0	16	50	6	4	●
JGMC-4R-D8.0R0.5	8.0	0.5	20	60	8	4	●
JGMC-4R-D8.0R1.0	8.0	1.0	20	60	8	4	●
JGMC-4R-D10.0R0.5	10.0	0.5	25	75	10	4	●
JGMC-4R-D10.0R1.0	10.0	1.0	25	75	10	4	●
JGMC-4R-D10.0R2.0	10.0	2.0	25	75	10	4	●
JGMC-4R-D10.0R3.0	10.0	3.0	25	75	10	4	●
JGMC-4R-D12.0R0.5	12.0	0.5	30	75	12	4	●
JGMC-4R-D12.0R1.0	12.0	1.0	30	75	12	4	●
JGMC-4R-D12.0R2.0	12.0	2.0	30	75	12	4	●
JGMC-4R-D12.0R3.0	12.0	3.0	30	75	12	4	●

● 推荐型号　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

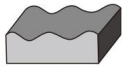
Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
■	■	■	□			□	■				

二刃直柄球头立铣刀

Two flutes straight shank ball endmills

JGMC-2B



曲面加工
Surface machining

订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-2B-D1.0R0.5	1.0	0.5	6	50	4	2	●
JGMC-2B-D1.5R0.75	1.5	0.75	6	50	4	2	●
JGMC-2B-D2.0R1.0	2.0	1.0	6	50	4	2	●
JGMC-2B-D2.5R1.25	2.5	1.25	6	50	4	2	●
JGMC-2B-D3.0R1.5	3.0	1.5	6	50	4	2	●
JGMC-2B-D3.5R1.75	3.5	1.75	6	50	6	2	●
JGMC-2B-D4.0R2.0	4.0	2.0	6	50	4	2	●
JGMC-2B-D5.0R2.5	5.0	2.5	6	50	6	2	●
JGMC-2B-D5.5R2.75	5.5	2.75	6	50	6	2	●
JGMC-2B-D6.0R3.0	6.0	3.0	6	50	6	2	●
JGMC-2B-D7.0R3.5	7.0	3.5	8	60	8	2	●
JGMC-2B-D8.0R4.0	8.0	4.0	8	60	10	2	●
JGMC-2B-D9.0R4.5	9.0	4.5	10	75	10	2	●
JGMC-2B-D10.0R5.0	10.0	5.0	10	75	12	2	●
JGMC-2B-D12.0R6.0	12.0	6.0	12	75	12	2	●
JGMC-2B-D14.0R7.0	14.0	7.0	14	75	14	2	●
JGMC-2B-D16.0R8.0	16.0	8.0	16	100	16	2	●
JGMC-2B-D20.0R10.0	20.0	10.0	20	100	18	2	●

● 常备库存　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

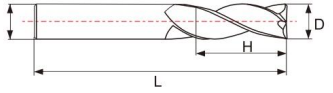
Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
■	■	■	□			□	■				

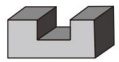
铝加工立铣刀

Endmills for Alluminum

JGMC-AL-3E



侧面铣削
Side face milling



沟槽铣削
Groove milling

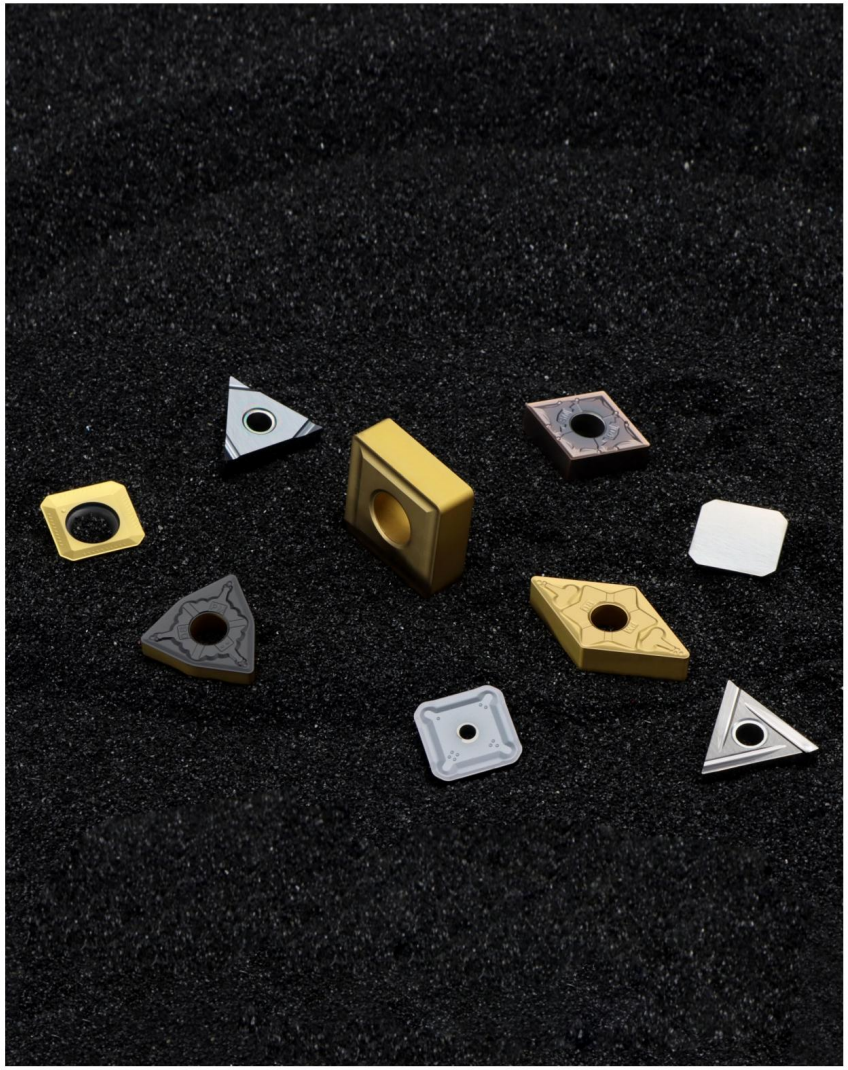
订货号 Specifications	刃径D(mm) Tool Diameter	R角/半径R Angle/ Radius	刃长H(mm) Flute Length	全长L(mm) Overall Length	柄径d(mm) Shank Diameter	刃数 Number of teeth	库存 Stock
JGMC-3E-D1.0	1.0	/	3	50	4	3	●
JGMC-3E-D1.5	1.5	/	4	50	4	3	●
JGMC-3E-D2.0	2.0	/	6	50	4	3	●
JGMC-3E-D2.5	2.5	/	7	50	4	3	●
JGMC-3E-D3.0	3.0	/	9	50	4	3	●
JGMC-3E-D4.0	4.0	/	12	50	6	3	●
JGMC-3E-D5.0	5.0	/	15	50	4	3	●
JGMC-3E-D6.0	6.0	/	18	60	6	3	●
JGMC-3E-D8.0	8.0	/	20	60	6	3	●

● 推荐型号　◐ 按订单生产

被加工材料适用表（■ 非常适合　□ 适合）

Applicable Table of Processed Materials(■Perfect Suitable ▫ Suitable)

被加工材料 Processed Material											
碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel、Hardened steel				不锈钢 Stainless steel	铸铁 cast iron 球墨铸铁 ductile iron	铜合金 Copper Alloy	铝合金 Aluminium Alloy	钛合金 Titanium Alloy	耐热合金 Heat-resisting Alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
									■		



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E

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刀具规格选用办法
Selection Method of Cutting Tools

普通车削刀具规格选用办法:

a. 首先要了解您所需要加工的材料状况，机床型号及状态。
b. 选择适合的刀片形状，切削主偏角及刀片压紧方式。
c. 依据以上因素及您的机床型号来确定刀杆的左右方向及尺寸等明细。
d. 最后确定与以上各因素相应的刀片规格、槽型、牌号。

切断切槽刀具规格选用办法:

a. 首先要了解您所需加工的材料状况，机床型号及状态.
b. 根据加工方式（外圆、内孔、端面槽）确定切刀的基本类型。
c. 依据以上因素及您的机床型号来确定刀杆的左右方向及尺寸等明细。
d. 最后确定与以上各因素相应的刀片规格、定位方式、槽型、牌号等明细。

螺纹切削刀具规格选用办法:

a. 首先要了解您所需加工的材料状况、机床型号及状态。
b. 根据螺纹的制式、类型、加工方式初步确定刀具的类型。
c. 依据以上因素及您的机床型号来确定刀杆的左右方向及尺寸等明细。
d. 最后确定与以上各因素相应的刀片规格、槽型、牌号。

Selection Method of General Turning Tools:

a. Understand the processed material condition, machine model and condition.
b. Select the suitable insert shape, setting angle and clamping designation.
c. Select details of tool bars as L/R, dimension,etc, according to above conditions
d. Select the type, chip breaker and grade of inserts, corresponding to all conditions.

Selection Method of Parting and Grooving tools:

a. Understand the processed material condition, machine model and condition.
b. Select the basic type according to processing methods(external,internal,face grooving
c. Select details of tool bars as L/R, dimension etc, according to above conditions,
d. Select the type,clamping designation,chip-breaker and grade of inserts, corresponding to all conditions.

Selection Method of Threading Tools:

a. Understand the processed material condition, machine model and condition.
b. Select the tool type according to thread's type, processing methods,etc.
c. Select details of tool bars as L/R, dImension,etc, according to above conditions,
d. Select the type, chip-breaker and grade of inserts,corresponding to all conditions.

刀具规格选用办法
Selection Method of Cutting Tools

铣削刀具规格选用办法:

a. 首先要了解您所需加工的材料状况，机床型号及状态。
b. 根据加工方式来确定铣削刀具的基本类型 (平面铣削、方肩铣、仿形铣、铣槽、倒角铣等)。
c. 根据加工精度及加工面形状与尺寸等因素确定采用整体铣刀或可转位铣刀。
d. 依据以上因素及您的机床型号来确定刀具的接口、尺寸等明细。
e. 最后确定与以上各因素相应的刀片规格、槽型、牌号。

孔加工刀具规格选用办法:

a. 首先要了解您所需加工的材料状况、机床型号及状态。
b. 根据加工工艺来确定孔加工刀具的基本类型(钻削、镗削、铰削、螺纹加工等方式)。
c. 根据加工精度及加工孔的尺寸等因素确定采用整体刀具或可转位孔加工刀具。
d. 依据以上因素及您的机床型号来确定刀具的接口、尺寸等明细。
e. 最后确定与以上各因素相应的刀片规格、槽型、牌号。

Selection Method of Milling Tools :

a. Understand the processed material condition, machine model and condition.
b. Select the basic type of milling tools according to the processing method (plane milling, square shoulder milling, profile milling, milling grooves, chamfer milling, etc.).
c. Select solid milling tools or indexable milling inserts according to machining accuracy and machining surface shape and size and etc.
d. Select interface, size and other details of milling tools according to machine model and above conditions.
e. Select the type,chip-breaker and grade of Inserts,corresponding to all conditions.

Selection Method for Hole Processing Tools:

a. Understand the processed material condition, machine model and condition.
b. Select the basic types of hole processing tools (drilling, boring, reaming, thread processing, etc. according to machining process.
c. Selct solid cutting tools or indexable hole processing tools according to the machining accuracy and dimension of the machining holes.
d. Select interface, size and other details of milling tools according to machine model and above conditions.
e. Select the type,chip-breaker and grade of Inserts, corresponding to all conditions.

E 通用信息技术

牌号对照表 Grade Comparison Table

类别	使用分类牌号 分类	牌号	SANDVIK 山特维克	KENNAMETAL 肯纳金属	ISCAR 伊斯卡	MiTSUBiSHi 三菱	TUNGALOY 泰珂洛	KYOCERA 京瓷	KORLOY 可乐伊	TaeguTec 特固克	SUMITOMO 住友电气工业
车削 Turning	P	JGA05A		KC5010			AH710	PR915			
		JGA10A	GC1525 GC1025	KU10T KC5025	IC250 IC507	VP10MF	AH710	PR1005 PR915	PC230		
		JGA20F	GC1020 GC1125	KC7015 KC7020	IC928 IC1008	VP15TF	GH330 GH730	PR930 PR1025	PC230		
		JGP25T	GC4225 GC4215	KCP25 KC9125	IC9250 IC9054	UE6010 UE6020	T9015 T9025	CA5515 CA5025 CA9025	NC3020	TT1500	AC2000 AC3000
		JGP25S	GC4225 GC4235	KCP30 KCP40	IC8350 IC9350	UH6400 UE6035	T9025 T9035	CA5525 CA5535	NC330	TT3500 TT5100	AC830P AC3000
		JGP40T	GC4235 GC4035	KC9140 KC9040	IC9350 IC656	UH6400 US735	T9005	CA5535		TT450	AC630M
	M	JGA10A	GC1025	KC5010 KC5510	IC507 IC907	VP10MF	GH330	PR915 PR1225	PC9030		AC510N
		JGA20F	GC1020	KC5025 KC735	IC250 IC354	VP15TF	GH770	PR930 PR1125	PC9030		AC520U AC530U
		JGM30R	GC2135 GC235	KCM25 KC9240	IC656 IC9025	US735	T6030	CA6525		TT3500	AC630M
	K	JGK10R	GC3205 GC3215	KCK05 KCK15	IC9150 IC9015 IC418	UC5105 UC5115	T5010	CA4010 CA4515	N305K	TT1300	AC410K AC700G
		JGK20R	GC3215	KCK20 KC9315	IC4010	UE6110 UC5115	T5020	CA4010 CA4115	N315K	TT1500	AC700G

类别	使用分类代号 分类	代号	SANDVIK 山特维克	KENNAMETAL 肯纳金属	ISCAR 伊斯卡	MiTSUBiSHi 三菱	TUNGALOY 泰珂洛	KYOCERA 京瓷	KORLOY 可乐伊	TaeguTec 特固克	SUMITOMO 住友电气工业
铣削 Milling	P	JGA05A	GC1010		IC250						ACP100
		JGA10A	GC1025	KC715M	IC903 IC950	VP15TF		PR730 PR830 PR1025	PC230	TT7030	ACZ310 ACP100
		JGA20H	GC1025	KC522M	IC950 IC900	VP15TF		PR630 PR1225	PC3530	TT7070 TT9030	ACZ330 ACP200
		JGA20F	GC1010 GC2030	KC525M	IC908 IC910	VP15TF VP30RT	GH330 AH330	PR660 PR830	PC130	TT8020	ACZ300 ACZ350
		JGP25T	GC4230	TN7525	IC520M	FH7030					AC230
		JGP25S	GC4240 GC4040	TN7535 KC935M	IC4050	FH7020 FH7030	T3030		NCM335	TT7300	AC230
	M	JGA10A	GC1025 GC2030	KC715M KC730	IC903	VP15TF VP20RT	GH330	PR630 PR660 PR730			ACP200
		JGA05A	GC1030	KC522M	IC900 IC928	VP15TF	AH120	PR830 PR1225			ACZ310 EH20Z ACP300
		JGM30R		TN7525	IC4050	FH7030					
	K	JGK10R	GC3220 K20D	TN5515 TN5520	IC9080 IC4100	MC5020 F5010	T1015	IC9080 IC4100	NCM310		ACK200 AC211
		JGK20R	GC3040	KC915M KC930M	IC520M IC5100	MC5020 F5020	T1015		NCM320		ACK200

硬度对照表（黑色金属硬度及强度近似换算值）

Hardness Comparison Table（Approximate Conversion on Hardness & Strength of Ferrous Metals)

硬度 Hardness				抗弯强度 TRS	硬度 Hardness				抗弯强度 TRS
洛氏		维氏	布氏		洛氏		维氏	布氏	
HRC	HRA	HV	HB	(N/mm²)	HRC	HRA	HV	HB	(N/mm²)
70.0	86.6	1037	—	—	43.0	72.1	411	401	1360
69.5	86.3	1017	—	—	42.5	71.8	405	396	1340
69.0	86.1	997	—	—	42.0	71.6	399	391	1320
68.5	85.8	978	—	—	41.5	71.3	393	385	1300
68.0	85.5	959	—	—	41.0	71.1	388	380	1280
67.5	85.2	941	—	—	40.5	70.8	382	375	1260
67.0	85.0	923	—	—	40.0	70.5	377	370	1245
66.5	84.7	906	—	—	39.5	70.3	372	365	1225
66.0	84.4	889	—	—	39.0	70.0	367	360	1210
65.5	84.1	872	—	—	38.5	—	362	355	1190
65.0	83.9	856	—	—	38.0	—	357	350	1175
64.5	83.6	840	—	—	37.5	—	352	345	1160
64.0	83.3	825	—	—	37.0	—	347	341	1140
63.5	83.1	810	—	—	36.5	—	342	336	1125
63.0	82.8	795	—	—	36.0	—	338	332	1110
62.5	82.5	780	—	—	35.5	—	333	327	1095
62.0	82.2	766	—	—	35.0	—	329	323	1080
61.5	82.0	752	—	—	34.5	—	324	318	1065
61.0	81.7	739	—	—	34.0	—	320	314	1050
60.5	81.4	726	—	—	33.5	—	316	310	1035
60.0	81.2	713	—	2555	33.0	—	312	306	1020
59.5	80.9	700	—	2500	32.5	—	308	302	1010
59.0	80.6	688	—	2450	32.0	—	304	298	298
58.5	80.3	676	—	2395	31.5	—	300	294	294
58.0	80.1	664	—	2345	31.0	—	296	291	291
57.5	79.8	653	—	2295	30.5	—	292	287	287
57.0	79.5	642	—	2250	30.0	—	289	283	283
56.5	79.3	631	—	2205	29.5	—	285	280	280
56.0	79.0	620	—	2160	29.0	—	281	276	276
55.5	78.7	609	—	2115	28.5	—	278	273	273
55.0	78.5	599	—	2075	28.0	—	274	269	269
54.5	78.2	589	—	2035	27.5	—	271	266	266
54.0	77.9	579	—	1995	27.0	—	268	263	263
53.5	77.7	570	—	1955	26.5	—	264	260	260
53.0	77.4	561	—	1920	26.0	—	261	257	257
52.5	77.1	551	—	1885	25.5	—	258	254	254
52.0	76.9	543	—	1850	25.0	—	255	251	251
51.5	76.9	534	—	1815	24.5	—	252	248	248
51.0	76.3	525	501	1780	24.0	—	249	245	820
50.5	76.1	517	494	1750	23.5	—	246	242	810
50.0	75.8	509	488	1720	23.0	—	243	240	800
49.5	75.5	501	481	1690	22.5	—	240	237	790
49.0	75.3	493	474	1660	22.0	—	237	234	785
48.5	75.0	485	468	1630	21.5	—	234	232	775
48.0	74.7	478	461	1605	21.0	—	231	229	765
47.5	74.5	470	455	1575	20.5	—	229	227	760
47.0	74.2	463	449	1550	20.0	—	226	225	750
46.5	73.9	456	442	1525	19.5	—	223	222	745
46.0	73.7	449	436	1500	19.0	—	221	220	735
45.5	73.4	443	430	1475	18.5	—	218	218	730
45.0	73.2	436	424	1450	18.0	—	216	216	725
44.5	72.9	429	418	1430	17.5	—	214	214	715
44.0	72.6	423	413	1405	17.0	—	211	211	710
43.5	72.4	417	407	1385					

注：此表所列各个钢系的换算值，对含碳量由低到高的钢种基本适用。The conversion values for all steels listed in this table are basically applicable to steels with low to high carbon content.

此表所列的抗拉强度值，适用于换算精度要求不高的一般钢种，1N/mm²=1Mpa。The tensile strength values listed in this table are suitable for general steels with low conversion accuracy.

此表摘自GB1172-74。This table is taken from GB1172-74.

安全使用切削工具的注意事项

Precautions for safe use of Cutting Tools

危险性 Hazard	防护措施 Protective Measures
直接接触切削刀具锋利的刀刃可能对人体造成伤害。 Direct contact with the sharp edge of the cutting tool may cause injury to human body.	当您在机床上安装或拆卸切削刀具时，请使用手套等防护劳保用品。 When you install or remove cutting tools on the machine tool, please use protectivelabor protection appliances such as gloves.
不恰当使用刀具可能导致其破损，附件飞出，引起损害。 Improper use of the tool may cause its breakage and accessories flying out,resulting in the damage.	使用前阅读样本和安全标准。 Read samples and safety standards before use. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
过度磨损和剧烈冲击使切削抵抗力剧增，可能导致刀具破裂而飞溅，对操作者造成伤害。 Excessive wear and severe impact increase the cutting resistance, which may lead to tool fracture and splashing, causing injury to the operator.	及时更换过度磨损的刀具。 Replace excessively worn tools in time. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
切削过程中的切屑可能对人造成烫伤和划伤。 Chips during cutting may cause burns and scratches to people.	及时使用钳子等工具清除切屑。 Timely use pliers and other tools to remove chips. 请使用防护眼镜和防护服以及防护手套。 Please use safety glasses, protective clothing and protective gloves.
切削过程中产生的火花和高温切屑有引发火灾和爆炸的危险。 The sparks and high temperature chips produced in the cutting process are dangerous and may cause fire and explosion.	清除在切削区域的易燃易爆物品。 Remove flammable and explosive materials in the cutting area. 请做好灭火器材准备。 Please prepare fire-fighting equipment.
高速运行的机床由于夹具等的平衡性差而引起剧烈振动，导致刀具破损。 The high-speed running machine tools vibrate violently because of the poor balance of the fixture and so on, resulting in the tool damage.	在切削前，检查设备是否有松动或者异常声音。 Before cutting, check whether the equipment is loose or abnormal. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
被加工件上的毛刺等缺陷非常锋利，很容易划伤人体。 The defects such as burrs on the machined parts are very sharp and easy to scratch the human body.	请不要触摸被加工件上的毛刺。 Please do not touch the burrs on the machined part. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
没有夹紧被加工件就直接进行加工会造成刀具破损和被加工件的飞溅。 If the workpiece is machined directly without clamping, the tool will be damaged and the workpiece will splash.	必须把被加工件牢牢夹住。 The machined part must be firmly clamped. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
在刀片或刀片附件没有夹紧固妥当的情况下进行切削，有刀具脱落飞出造成伤害的危险。 When the blade or its accessories are not clamped properly, there is a risk of injury caused by the falling off of the tool.	加工前确认刀片以及其他附件已经使用恰当的工具紧固妥当。 Before machining, please make sure that the blades and other accessories have been fastened properly with appropriate tools.
用螺销或压板等辅助工具过分紧固时，刀片或者刀具有破碎飞溅的危险。 When the auxiliary tools such as screw pins or pressing plates are used for over-tightening, the blade or knife may in the risk of breaking and flying.	请不要使用套管等辅助工具过分紧固。 Do not overtighten with auxiliary tools such as sleeves.
刀片或附件在高速切削时，有可能因惯性离心力的作用下脱落飞出。 In high speed cutting, the blade or accessories may fall off and fly out under the action of inertial centrifugal force.	请在推荐范围内使用刀具。 Please use the tool within the recommended range. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
由于铣削刀具的边锋利，直接用手触摸有被划伤的危险。 Because the edge of milling tool is sharp, it is dangerous to be scratched by touching directly with hands.	为了您的安全，在必须接触刀片的情况下带好防护手套。 For your safety, please wear protective gloves when you have to touch the blade.
旋转切削中，衣服、手套等很容易被绞到高速运行的设备中，造成人员伤亡。 In rotary cutting process, clothes, gloves and so on are easily twisted into high-speed running equipment, resulting in casualties.	当您在进行旋转切削中，请不要带手套加工。 When you are doing rotary cutting, please do not wear gloves. 时刻注意不要让衣服等接触运行中的机床部件。 Always be careful not to let clothes and other running machine parts in contact each other.
偏心旋转或平衡不良的工具在旋转加工时会产生晃动振动而引起破损飞散导致伤害。 The tool with eccentric rotation or poor balance will have shaking vibration in rotation processing, which will cause damage and flying, resulting in injury.	请在容许转速范围内使用刀具。 Please use the tool within the allowable speed range. 定期检查机械的平衡性能。 Check the mechanical balance performance of the machine regularly.
在高速切削时，高速飞出的切屑有可能造成伤害。 In high speed cutting, chips flying out at high speed may cause injury.	使用安全罩、保护屏、外罩等。 Use safety cover, protective screen, outer cover, etc. 请使用防护眼镜和防护服。 Please use safety glasses and protective clothing. 减小刀具振动和在合适的运行速度下加工。 Reduce the vibration of the tool and machine at a suitable operating speed.
用极小的刀具进行钻削时，容易造成刀具折断飞溅和无法取出的可能。 When drilling with a very small tool, it is easy to cause the tool to break and fly and cannot be removed.	请使用防护眼镜和防护服。 Please use safety glasses and protective clothing.
在规定用途外使用，会导致机床和刀具的加速损坏，并引起其他危险。 If it is used outside for the specified purpose, it will cause accelerated damage to the machine tools and cutting tools, and cause other hazards.	请按照说明规定使用。 Please follow the instructions.

硬质合金产品安全标准
Safety standard for cemented carbide products

1、安全责任

在使用 株洲凯盈硬质合金有限公司 生产的产品前，请对操作者进行必要的安全培训，并请您仔细阅读产品包装上的“注意”和“警告”内容，对于没有按要求使用所造成的不良后果，本公司不负任何法律责任。

2、硬质合金材料基本特征

硬质合金是由W、C、Co、Ti、Ta、Nb等元素及其化合物经过烧结成型，并且进行一系列的后续加工而形成的加工工具。硬质合金有着很好的化学稳定性和很高的强度，是加工大部分金属和大量高强度非金属的理想工具。

3、使用硬质合金产品的注意事项

- 硬质合金是硬而脆的材料，在过大的作用力或者某些特定的局部应力作用下脆裂破损，并带有锋利的刃口。
- 大部分硬质合金以钨、钴为主要成分，密度很大，在运送和储存应作重物处理，小心轻放。
- 硬质合金产品应存放在干燥，无腐蚀性气氛的环境中。
- 硬质合金产品在使用过程中，如产生切屑，脆片等，请在加工前准备必要的劳保用品。

1. Security Responsibility

Before the use of the cemented carbide products manufactured by Zhuzhou King Cemented Carbide Co., Ltd., please make the necessary training for the operator, and read carefully the "caution" and "warning" contents on the product packaging. For the adverse consequences caused by failure to use the products, the company does not bear any legal responsibility.

2. Basic Characteristics of cemented carbide materials

Cemented carbide is made up of the elements such as W, C, Co, Ti, Ta, Nb and etc, and other compounds,and was formed through the process of sintering and a series of subsequent processing. Cemented carbide has good chemical stability and high strength, and is an ideal tool for the processing of most metals and a large number of high strength non-metals.

3. Precautions for using cemented carbide

- Cemented carbide is a kind of hard a nd brittle material, which can be cracked and damaged under the action of a large force and some particular local stress, and with a sharp edge.
- Most of cemented carbide has tungsten and cobalt as the main components, and the density is very large.In transportation and storage, please be careful and regard the product as heavy cargo.
- Cemented carbide products should be stored in a dry, non-corrosive atmosphere environment.
- In the use of the cemented carbide products, if some cuttings and chips were produced, please prepare some necessary PPE before processing.