



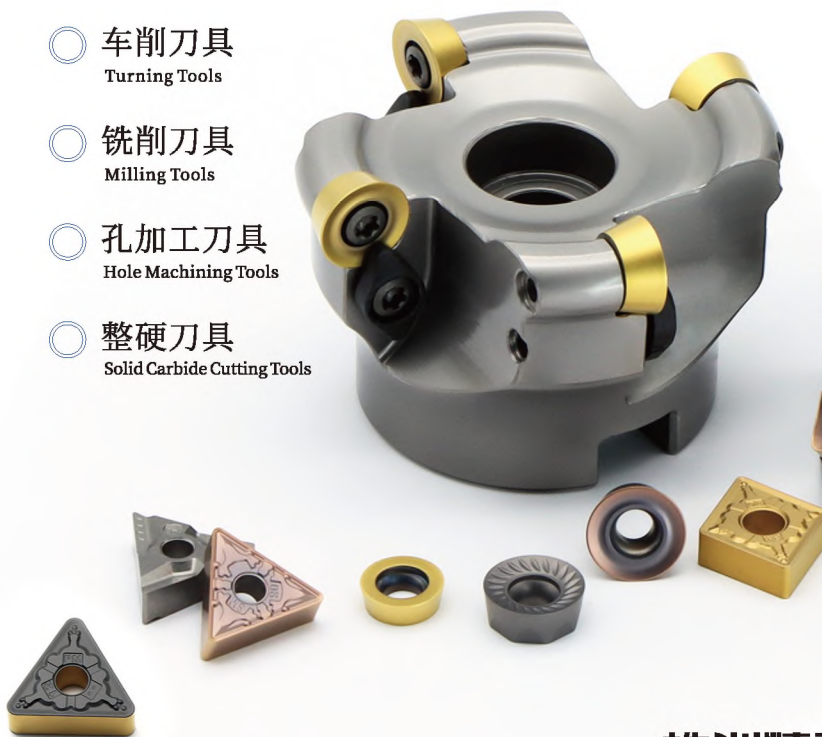
精工硬质合金
JINGGONG CEMENTED CARBIDE
— 精于业 · 工其事 —

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



株洲精工硬质合金有限公司
ZHUSHOU JINGGONG CEMENTED CARBIDE CO., LTD.



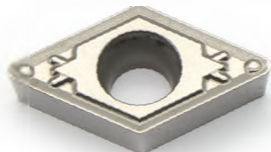
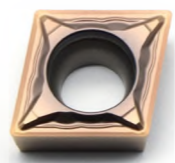
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车削

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



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
















A
车削刀片
Turning Inserts















A
车削刀片
Turning Inserts

普通车削刀片型号命名规则


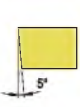







Naming Rules of Turning Inserts

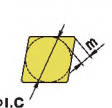
A
Turning Inserts
车削刀片

刀片形状/代号 Blade shape/code				
A  85°	B  82°	C  80°	D  55°	E  75°
H  120°	K  55°	L  90°	M  86°	O  135°
P  108°	R  360°	S  90°	T  60°	T  75°
V  35°	W  80°	Z 其他		
形状代号 Blade shape/code				

公制 Metric system							
代号	有无孔	有无断屑槽	刀片剖面	代号	有无孔	有无断屑槽	刀片剖面
B	有	无		N	无	无	
H	有	单面		R	无	单面	
C	有	无		F	无	双面	
J	有	双面		A	有	无	
W	有	无		M	有	单面	
T	有	单面		G	有	双面	
Q	有	无		X	—	—	特殊
U	有	双面					
断屑槽及夹固形式 Chip breaking groove and clamping form							



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 ϕ .C 公差(MM)	厚度S ₁ 公差 (mm)	(参考)M级精度详细情况 (按形状、大小分)						
				● 刀尖高度公差 (mm)						
A	±0.005	±0.025	±0.025	内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
F	±0.005	±0.013	±0.025	6.35	±0.08	±0.08	±0.08	±0.11	±0.16	—
C	±0.013	±0.025	±0.025	9.525	±0.08	±0.08	±0.08	±0.11	±0.16	—
H	±0.013	±0.013	±0.025	12.7	±0.13	±0.13	±0.13	±0.15	—	—
E	±0.025	±0.025	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	—	—
G	±0.025	±0.025	±0.13	19.05	±0.15	±0.15	±0.15	±0.18	—	—
J	±0.005	±0.05~±0.13	±0.025	25.4	—	±0.18	—	—	—	—
K	±0.013	±0.05~±0.13	±0.025	● 内切圆 ϕ .C公差(mm)						
L	±0.025	±0.05~±0.13	±0.025	内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
M	±0.08~±0.18	±0.05~±0.13	±0.13	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	—
N	±0.08~±0.18	±0.05~±0.13	±0.025	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
U	±0.08~±0.18	±0.08~±0.25	±0.13	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				

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



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

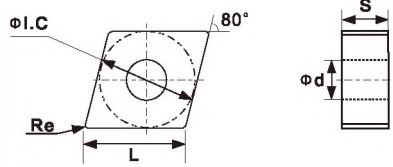
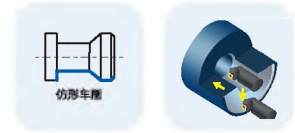


普通车削刀片
General Turning Inserts

普通车削刀片

General Turning Inserts

CNMA/CNMG



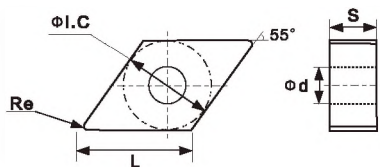
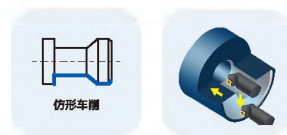
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade												
		φI.C	L	S	φd	Re	P				M	K	H	金陶					
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35		
	CNMA120404	12.70	12.90	4.76	5.16	0.4													
	CNMA120408	12.70	12.90	4.76	5.16	0.8													
	CNMA120412	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					●	●							

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通车削刀片

General Turning Inserts

DNMA/DNMG



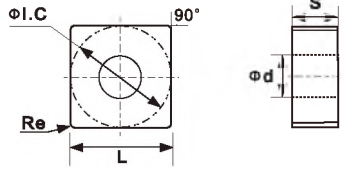
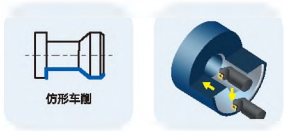
A
车削刀片
Turning Inserts

刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		φI.C	L	S	φd	Re	P				M	K	H	金陶				
							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-VF	12.70	15.50	6.35	5.16	0.4					●	●						
	DNMG150604R-VF	12.70	15.50	6.35	5.16	0.4					●	●						
	DNMG150608L-VF	12.70	15.50	6.35	5.16	0.8					●	●						
	DNMG150608R-VF	12.70	15.50	6.35	5.16	0.8					●	●						

● 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



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
		φI.C	L	S	φd	Re	P				M		K	H	金陶		
							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					●	●					

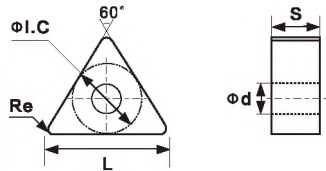
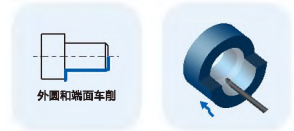
● 主推荐牌号 ○ 一般牌号 ○ 可生产牌号

A
车削刀片
Turning Inserts

普通车削刀片

General Turning Inserts

TNMA/TNMG



A
车削刀片
Turning Inserts

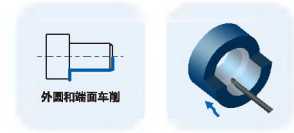
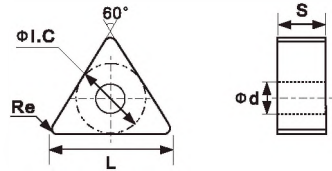
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		$\phi I.C$	L	S	ϕd	R_e	P					M	K	H	金陶			
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	TNMA160404	9.525	16.50	4.76	3.81	0.4										●		
	TNMA160408	9.525	16.50	4.76	3.81	0.8										●		
	TNMA220408	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

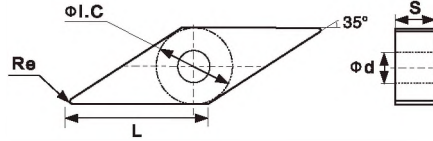
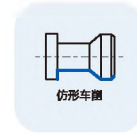


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		ϕI.C	L	S	ϕd	Re	P		M	K	H	金陶				
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05F	JTN20
	TNMG160404R-VF	9.525	16.50	4.76	3.81	0.4									●	●
	TNMG160404L-VF	9.525	16.50	4.76	3.81	0.4									●	●
	TNMG160404R-JP	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			●							
	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



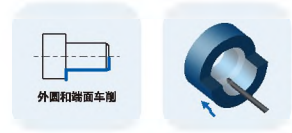
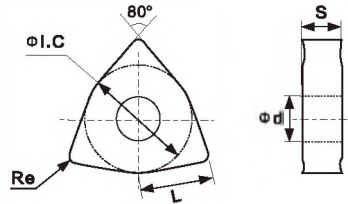
A
车削刀片
Turning Inserts

刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
		φI.C	L	S	φd	Re	P				M	K	H	金陶			
							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



A
车削刀片
Turning Inserts

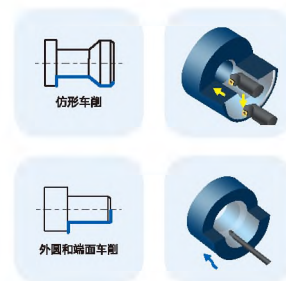
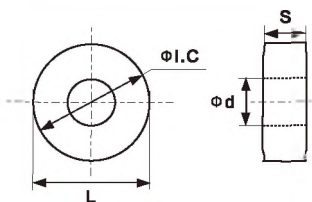
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade													
		φI.C	L	S	φd	Re	P					M	K	H	金陶					
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35			
	WNMA080404	12.70	8.70	4.76	5.16	0.4														
	WNMA080408	12.70	8.70	4.76	5.16	0.8														
	WNMA080412	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					●	●								
	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-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

RNMG/RCMX



A
车削刀片
Turning Inserts

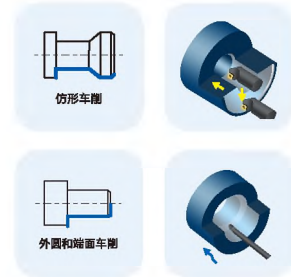
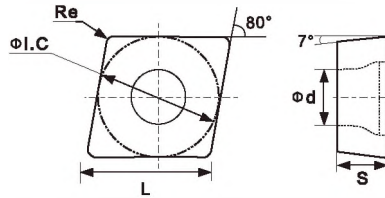
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
		φI.C	L	S	φd	P				M	K	H	金陶				
						JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	RNMG120400	12.70	12.70	4.76	5.16		○	●									
	RCMX160600-PR8	16.00	16.00	6.35	5.50		○	●									
	RCMX200600-PR8	20.00	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

CCMT



A
车削刀片
Turning Inserts

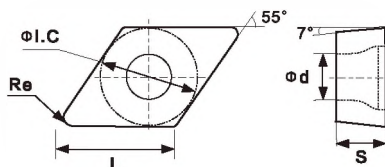
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		φI.C	L	S	φd	Re	P					M	K	H	金陶			
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	CCMT060204-HS2	6.35	6.40	2.38	2.8	0.4											●	●
	CCMT060208-HS2	6.35	6.40	2.38	2.8	0.8											●	●
	CCMT09T304-HS2	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											●	
	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



A
车削刀片
Turning Inserts

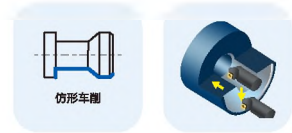
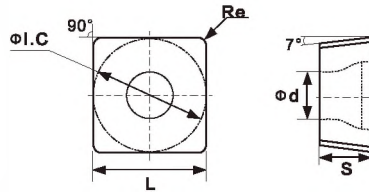
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
		φI.C	L	S	φd	Re	P				M	K	H	金陶			
							JGP15S	JGP15T	JGP25S	JGP25T	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	DCMT070204-HS2	6.35	7.80	2.38	2.8	0.4										●	●
	DCMT070208-HS2	6.35	7.80	2.38	2.8	0.8										●	●
	DCMT11T304-HS2	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



A
车削刀片
Turning Inserts

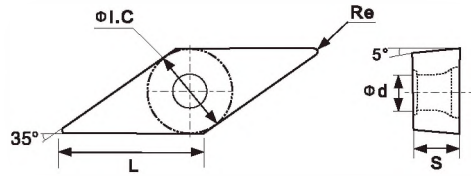
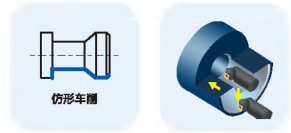
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		φI.C	L	S	φd	Re	P				M	K	H	金陶				
							JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	SCMT09T304-HS2	9.525	9.525	3.97	4.4	0.4											●	●
	SCMT09T308-HS2	9.525	9.525	3.97	4.4	0.8											●	●
	SCMT120404-HS2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

● 主推牌号 ● 一般牌号 ○ 可生产牌号

普通车削刀片

General Turning Inserts

VBMT/VCMT



A
车削刀片
Turning Inserts

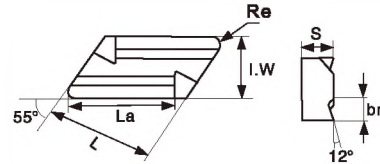
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade										
		phi I.C	L	S	phi d	Re	P			M	K	H	金陶				
							JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35
	VBMT110304-HS2	6.35	11.00	3.18	2.8	0.4										●	●
	VBMT110308-HS2	6.35	11.00	3.18	2.8	0.8										●	●
	VBMT160404-HS2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

● 主推荐牌号 ○ 一般牌号 ○ 可生产牌号

普通车削刀片

General Turning Inserts

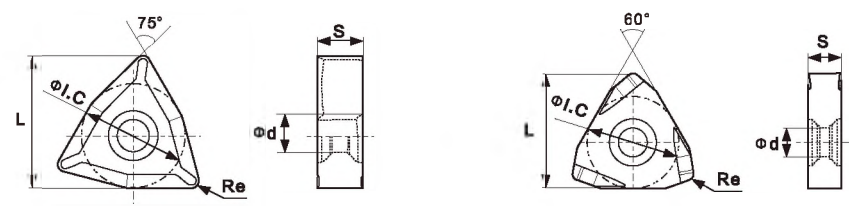
KNUX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)						牌号 Grade										
		La	L	I.W	S	br	Re	P			M		K	H	金陶			
								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		●	●								

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

TNMX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		phi.I.C	L	S	phi.d	Re	P			M		K	H	金陶				
							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

钢件车削

Turning Inserts for Steel

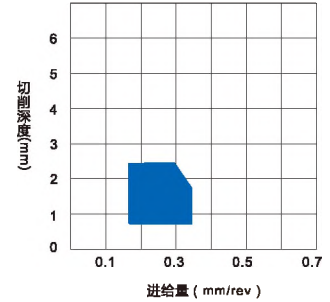
槽型特点

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。

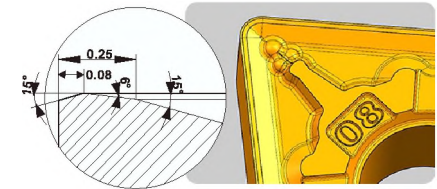
Chip-breaker for cutting carbon steel, alloy steel, soft steel, stainless steel and cast iron;
The combination of flat edge and large front angle can ensure edge strength and cutting sharpness.



-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.



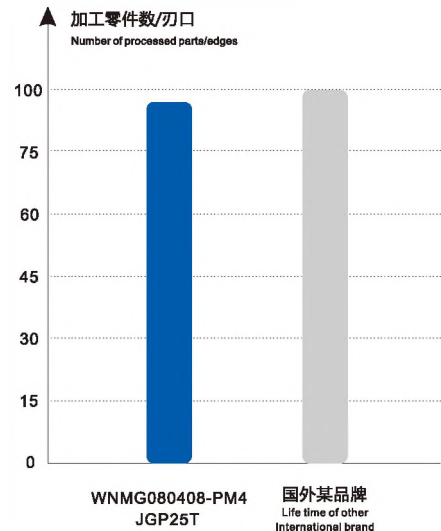
案例分析

Case Analysis

- ▶ **被加工材料** Processed material 轮毂单元 Hub Unit /65Mn
- ▶ **线速度** Linear velocity $V_c=110\text{m/min}$
- ▶ **进给量** Feeding Rate $f=0.23\text{mm/r}$
- ▶ **切削深度** Cutting Depth $a_p=1.0\text{-}1.5\text{mm}$

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

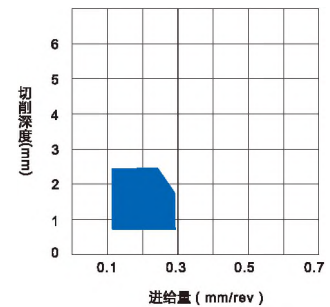
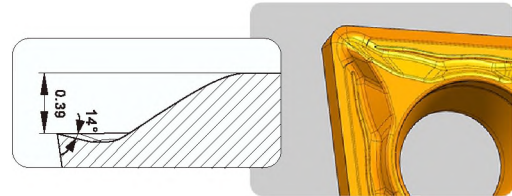
槽型特点

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.

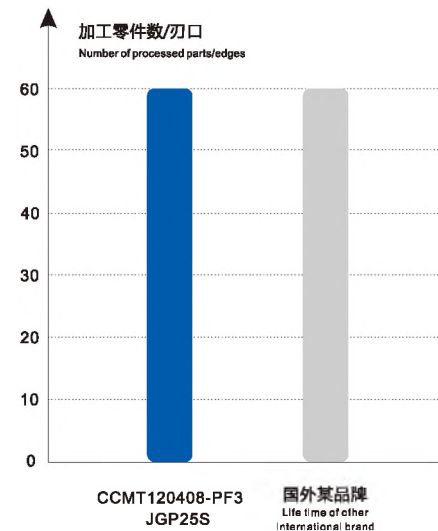


案例分析

Case Analysis

- ▶ 被加工材料 Processed material 齿轮内孔/30Cr
- ▶ 线速度 Linear velocity $V_c=120\text{m/min}$
- ▶ 进给量 Feeding Rate $f=0.18\text{mm/r}$
- ▶ 切削深度 Cutting Depth $a_p=2.0\text{mm}$

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

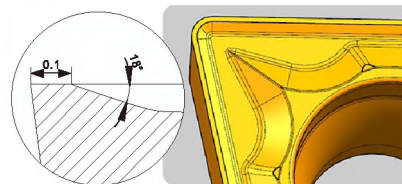
槽型特点

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。

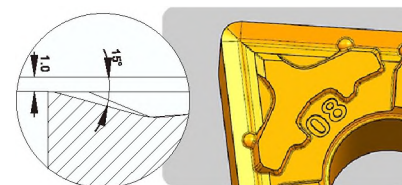
Medium Cutting Chip-breakers, Use Large chip-holding groove. Reduce cutting resistance even at large depth of cutting, Reduce high frequency vibration and cutting blocking.



-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.



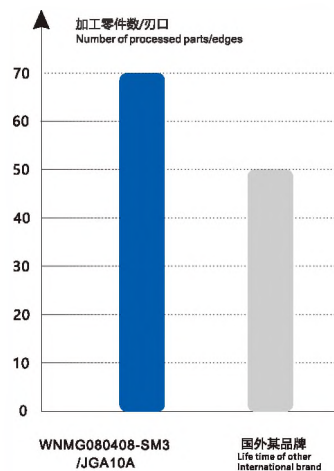
案例分析

Case Analysis

案例 A

- ▶ 被加工材料 40Cr (减速机轴类加工)
Processed material
- ▶ 工件直径 $D = \Phi 35\text{mm}$
Diameter of workpiece
- ▶ 转速 $n = 3800\text{r/min}$
Rotating speed
- ▶ 进给量 $f = 0.06\text{mm/r}$
Feeding Rate
- ▶ 切削深度 $a_p = 0.8\text{mm}$
Cutting Depth

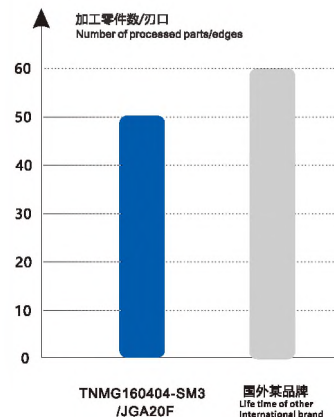
切削性能 Cutting Performance	
精工寿命 Life time of ZZJG brand inserts	70件/刃
国外某品牌 Life time of other International brand	50件/刃



案例 B

- ▶ 被加工材料 304不锈钢
Processed material
- ▶ 工件直径 $D = \Phi 40\text{mm}$
Diameter of workpiece
- ▶ 转速 $n = 1500\text{r/min}$
Rotating speed
- ▶ 进给量 $f = 0.08\text{mm/r}$
Feeding Rate
- ▶ 切削深度 $a_p = 0.6\text{mm}$
Cutting Depth

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

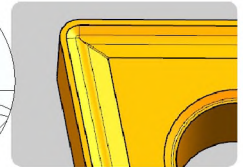
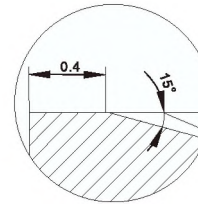
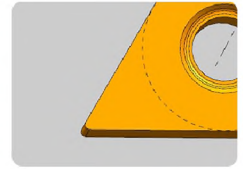
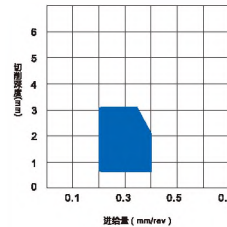
Turning Inserts for Cast Iron

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.



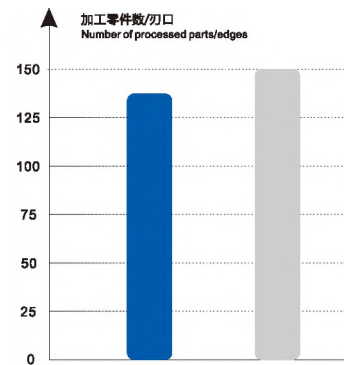
加工铸铁时的非正常失效与解决方案：

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

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



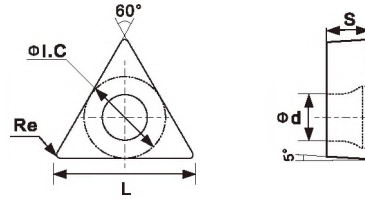
◆ **-性能为国外某品牌的90%左右，性价比优势明显。**

Performance is about 90% of a foreign brand, with obvious cost-effective advantage.

镗孔精车刀片

Boring Inserts for precision turning

TBGT/TPGT/TCGT



A
车削刀片
Turning Inserts

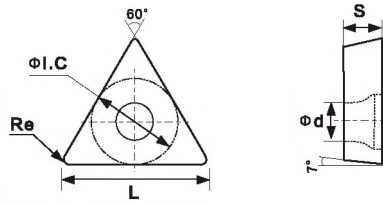
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		$\phi I.C$	L	S	ϕd	Re	P				M	K	H	金陶				
							JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	TBGT060102L-W	3.97	6.876	1.59	2.2	0.2											●	●
	TBGT060104L-W	3.97	6.876	1.59	2.2	0.4											●	●
	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											●	●
	TCGT110202L-W	6.35	11.0	2.38	2.8	0.2											●	●
	TCGT110204L-W	6.35	11.0	2.38	2.8	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

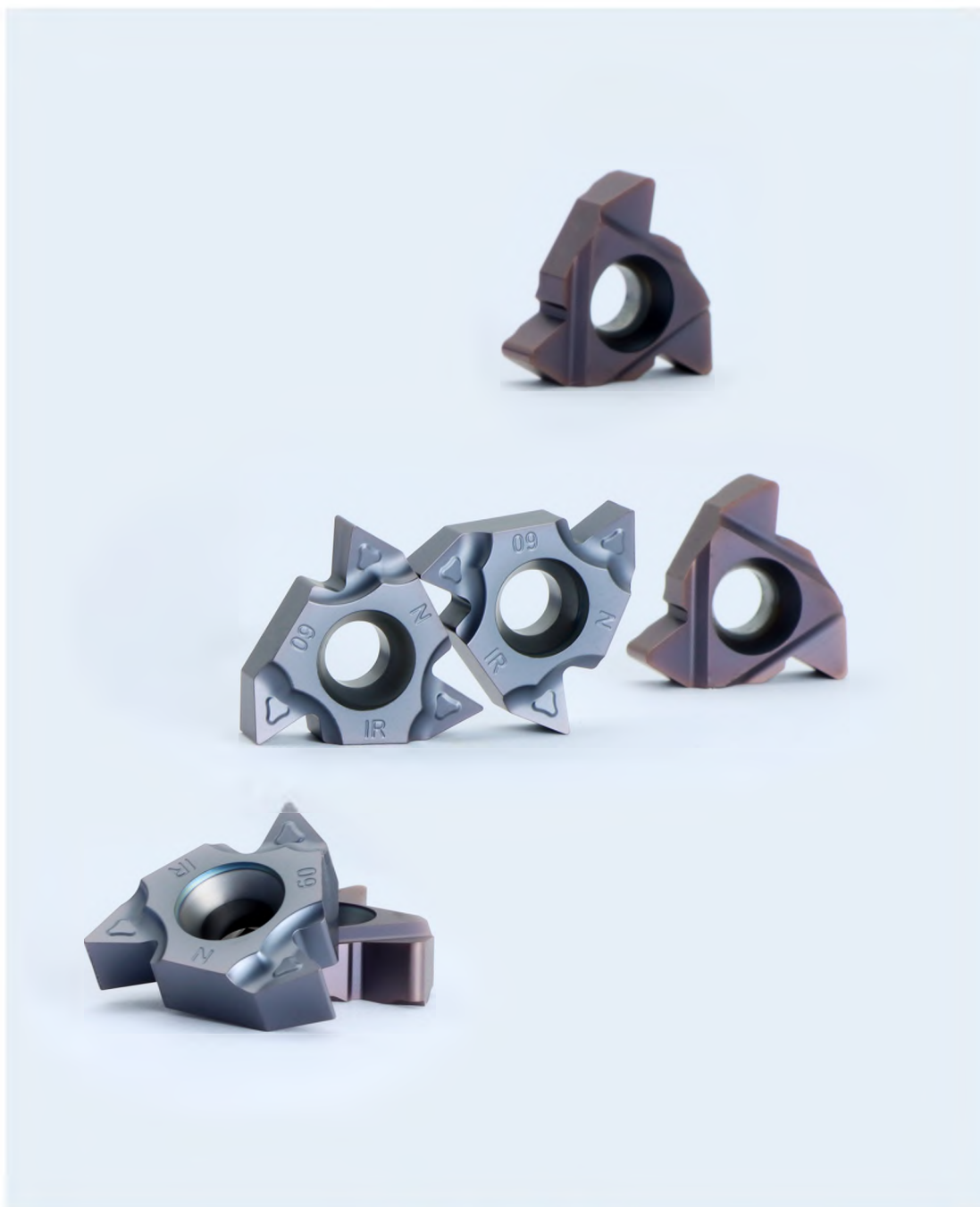
TCMT



A
车削刀片
Turning Inserts

刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade											
		φI.C	L	S	φd	Re	P					M	K	H	金陶			
							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		●						○	●			

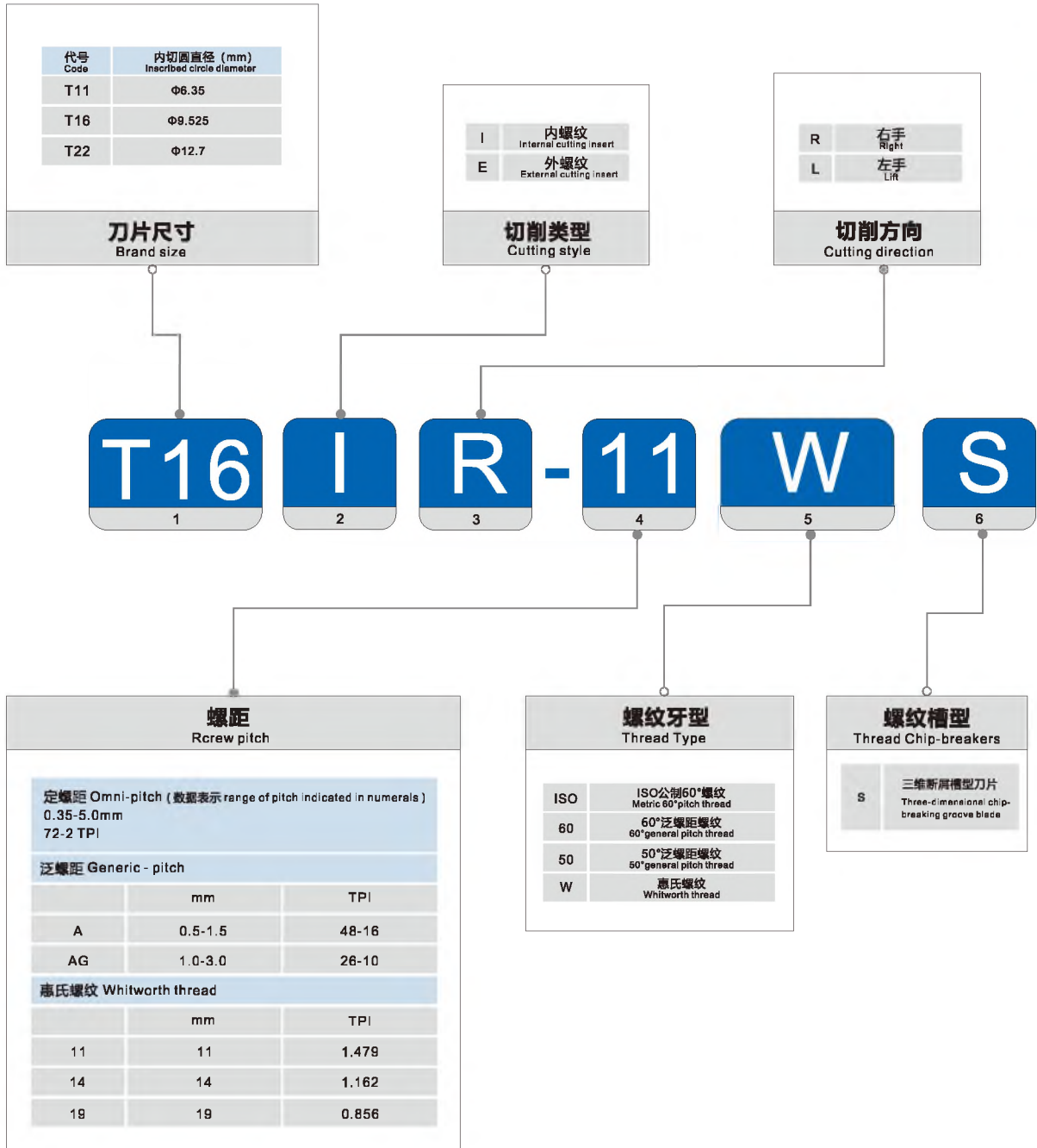
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螺纹车削
Threading Inserts

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

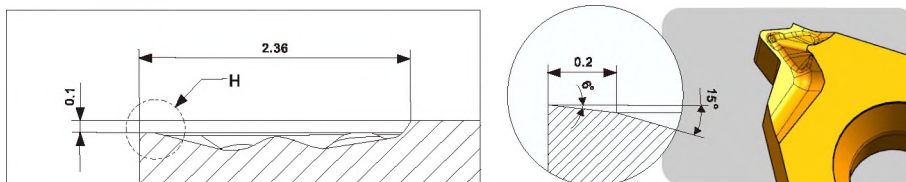
Characteristics of Chip-breakers

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** 45#钢
Processed material 45#steel
- ▶ **加工方式** 车削外圆加工
Processing methods External Turning Processing
- ▶ **使用刀片** T16IR1.5ISO/JGA20F
Use of inserts
- ▶ **加工参数** $V_c=128\text{m/min}$, $f=0.22\text{mm/r}$
Processing parameters

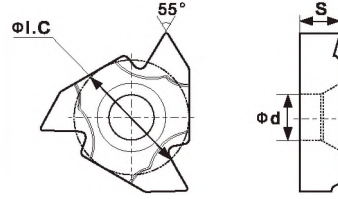
在同等加工条件下，我司 T16IR 刀片切削轻快，断屑能力相当。性价比优势明显。


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

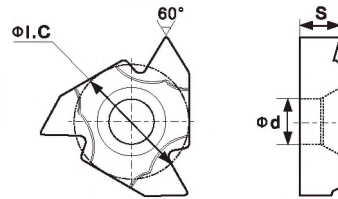
精工寿命 Life time of ZZJG brand inserts	160件/刃
国外某品牌 Life time of other International brand	160件/刃


螺纹车削 Threading Inserts



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
		螺距 牙数	φI.C	S	φd	P					M	K	H	金陶			
						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					●	○						

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刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade											
		螺距 牙数	φI.C	S	φd	P					M	K	H	金陶			
						JGP15S	JGP25S	JGP25T	JGP40S	JGA20F	JGA10A	JGM20R	JGK10R	JGA05A	JTN20	JTN35	
	T16IR-1.5ISO	1.5	9.525	3.52	4.00					●	○						
	T16IR-2.0ISO	2.0	9.525	3.52	4.00					●	○						
	T16ER-1.5ISO	1.5	9.525	3.52	4.00					●	○						
	T16ER-2.0ISO	2.0	9.525	3.52	4.00					●	○						

● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

A
车削刀片
Turning Inserts

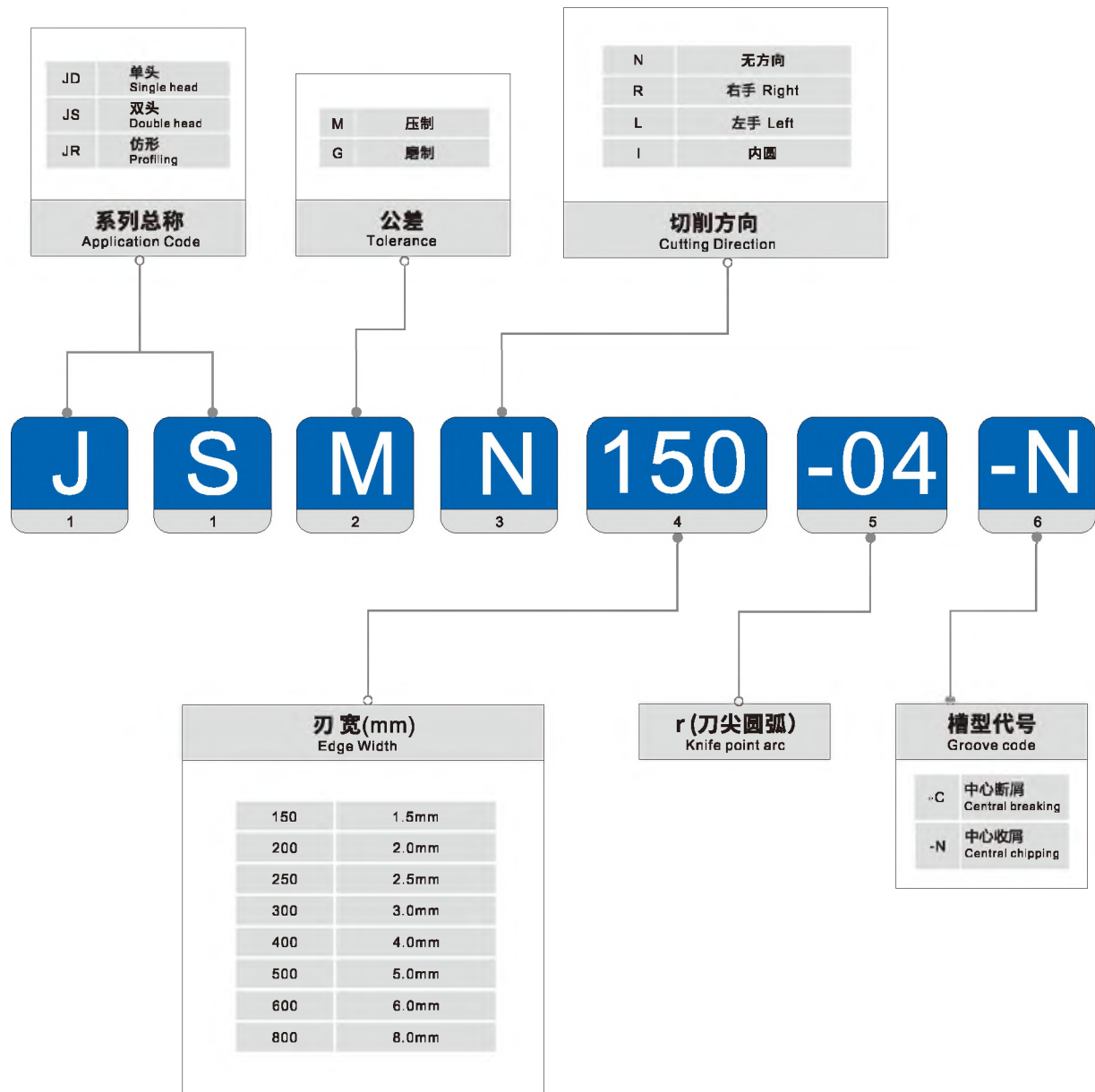
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切断切槽车削系列
Parting and Grooving Inserts

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.

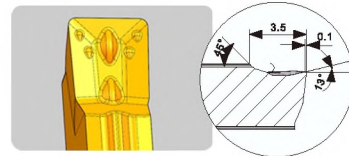
槽型特点

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。

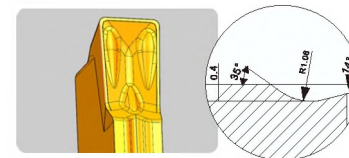
To meet different needs of cutting, grooving, turning and etc, the cutting process becomes easier, the chip-breaking effect is good, and the ideal machining surface quality is achieved.



-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.



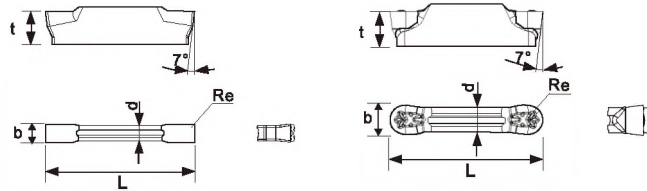
加工方式

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										
		b	Re	L	d	t	P					M	K	H	金陶		
							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			●		●						

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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** 42CrMo
Processed material
- ▶ **加工方式** 连续切削外圆槽
Processing methods Continuous External Turning
- ▶ **使用刀片** JSMN 250-02-N/JGA10A
Use of inserts
- ▶ **加工参数** $V_c=110\text{m/min}$, $f=0.16\text{mm/r}$
Processing parameters

-在同等加工条件下，我司N槽型排屑好，切削轻快，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** 45#钢
Processed material 45#steel
- ▶ **加工方式** 车削外圆加工
Processing methods External Turning Processing
- ▶ **使用刀片** JSMN 300-04-C/JGA20F
Use of inserts
- ▶ **加工参数** $V_c=128\text{m/min}$, $f=0.22\text{mm/r}$
Processing parameters

-在同等加工条件下，我司JSMN刀片切削轻快，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槽型切削轻快，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		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	
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	✓				
		切削条件不合适 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			↑	↓	
发热 Heat	切削热的影响 Cutting heat effect	振动、发颤 Vibration and tremble		✓	↑↓	↓	
		积屑瘤 built-up edge			↑	↑	
尺寸精度差 Poor dimensional accuracy	加工中尺寸波动 Dimension fluctuation in machining	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	✓				
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	刀片精度不合适 The blade accuracy is not suitable				↑	
		工件、刀具位置偏移 Work tool offset				↑	
		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	在断续切削大进给时发生 Occurs when intermittent cutting in large feeding	✓			↓	
		材料、切削条件不合适 Tool material is not suitable for cutting condition		✓		↓	
		刀具寿命 Life time of tools				↓	
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					
毛刺、塌边 Burr, Collapse	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				↓	
	钢、铝，产生毛刺 Steel and aluminum, 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	✓				
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	✓		↓	↑	
		切削条件不合适 Cutting condition is not suitable				↓	
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	✓			↓	
		切削条件不合适 Cutting condition is not suitable				↓	

切削条件 Cutting Condition		刀具形状 Shape of tool						机床装夹 Machine tool clamping			
切深 cutting depth	切削液 Cutting fluid	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	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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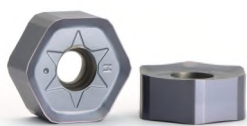
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铣削

Milling Tools

铣削刀片牌号一览表 Recommended Grade Table for Milling Inserts	65
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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 Cermets	硬质合金 Cemented carbide	超硬材料 Workpiece materials
		CVD	PVD			
P 钢件 Steel	P01		JGA05A			
	P10		JGA20F JGA20H JGA10A	JTN20		
	P20			JTN35		
	P30					
	P40					
M 不锈钢 Stainless Steel	M01					
	M10		JGA10A			
	M20	JGM30R		JTN20		
	M30			JTN35		
	M40					
K 铸铁 Cast Iron	K01	JGK10E				
	K10					
	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		JGA10A JGA20F			
	S20					
	S30					
H 高硬度材料 High Strength Material	H01		JGA05A			
	H10					
	H20					
	H30					



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方肩AP系列



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面铣SN、WN、XN系列

我们重点
新增开发几个系列铣削产品，
完善优化产品结构和工艺，
进一步提升了铣削刀片的产品性能。
We focus on the development
of several new series of milling products,
Optimization of product structure and process,
and further improvement of performance
of the milling inserts.

大进给
SD、SO系列

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仿形RC、RP系列



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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				
A 85°	B 82°	C 80°	D 55°	E 75°
H 120°	K 55°	L 90°	M 86°	O 135°
P 100°	R 380°	S 90°	T 60°	T 75°
V 35°	W 80°	Z 其他		
形状代号 Blade shape/code				

公制 Metric system							
代号	有无孔	有无断屑槽	刀片剖面	代号	有无孔	有无断屑槽	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							



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	刀片高度m 公差 (mm)	内切圆 ϕ .C 公差(MM)	厚度S ₁ 公差 (mm)	(参考)M级精度详细情况 (按形状、大小分)							
● 刀片高度公差 (mm)											
	内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形				
A	±0.005	±0.025	±0.025	6.35	±0.08	±0.08	±0.08	±0.11	±0.16	—	
F	±0.005	±0.013	±0.025	9.525	±0.08	±0.08	±0.08	±0.11	±0.16	—	
C	±0.013	±0.025	±0.025	12.7	±0.13	±0.13	±0.13	±0.15	—	—	
H	±0.013	±0.013	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	—	—	
E	±0.025	±0.025	±0.025	19.05	±0.15	±0.15	±0.15	±0.18	—	—	
G	±0.025	±0.025	±0.13	25.4	—	±0.18	—	—	—	—	
J	±0.005	±0.05-±0.13	±0.025	● 内切圆 ϕ .C公差(mm)							
K	±0.013	±0.05-±0.13	±0.025		内切圆	正三角形	正方形	80°菱形	55°菱形	35°菱形	圆形
L	±0.025	±0.05-±0.13	±0.025	6.35	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05	—
M	±0.08-±0.18	±0.05-±0.13	±0.13	9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
N	±0.08-±0.18	±0.05-±0.13	±0.025	12.7	±0.08	±0.08	±0.08	±0.08	±0.08	—	±0.08
U	±0.08-±0.18	±0.08-±0.25	±0.13	15.875	±0.10	±0.10	±0.10	±0.10	±0.10	—	±0.10
				19.05	±0.10	±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			
	0-5°	0-0.10	
	1-10°	1-0.15	
	2-15°	2-0.20	
	3-20°	3-0.25	
	4-25°	4-0.30	
	5-30°	5-0.35	
		6-0.40	
		7-0.45	

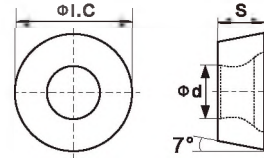
断屑槽型代号 Code of chip breaker type	
NR8	半精加工
GM	半精加工
CM3	半精加工
GM3	快进给

切削方向 Cutting direction	
R	右
L	左
N	双向

B
铣削刀片
Milling inserts

普通铣削刀片
General Milling Inserts

RCKT/RCMX



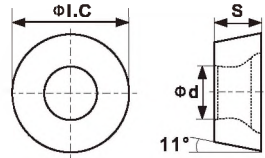
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade								
		φI.C	S	φd	P			M		K		金陶	
					JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JGP15S	JTN20	JTN35
	RCKT10T3MO-DS3	10	3.97	4.4									●
	RCKT1204MO-DS3	12	4.76	4.0									●
	RCKT1606MO-BR8	16	6.35	5.5		●	●	○					

● 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

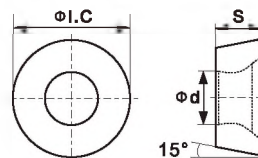


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade								
		φI.C	S	φd	P			M		K		金陶	
					JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	RPMW08T2MOT	8	2.8	3.3		●	●	○					
	RPMW1003MO	10	3.18	4.5		●	●	○					
	RPMW10T3MO	10	3.97	4.6		●	●	○					
	RPMW1204MO	12	4.76	4.4		●	●	○					
	RPMT08T2MOE-SL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

普通铣削刀片
General Milling Inserts

RDMW/RDMT

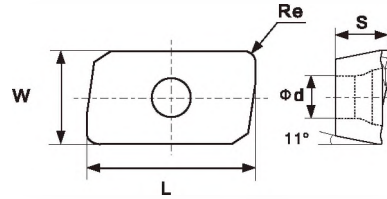


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade								
		φI.C	S	φd	P			M		K		金陶	
					JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	RDMW1204MO-NR8	12	4.76	4.4		●	●						
	RDMW1605MO-NR8	16	5.56	5.5		●	●						
	RDMW1204MO	12	4.76	4.4		●	○						
	RDMW1604MO	16	4.76	5.0		●	○						
	RDMW1605MO	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		●	○						

● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

普通铣削刀片
General Milling Inserts

APMT

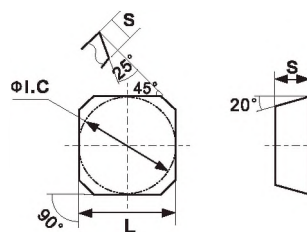



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		L	S	W	φd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	APMT1135PDER-FR	11.32	3.5	6.19	2.85	0.8		○	●				●			
	APMT160408PDER-FR	17.21	4.76	9.29	4.48	0.8		○	●				●			
	APMT1135PDER-HM2	11.22	3.5	6.20	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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普通铣削刀片 General Milling Inserts

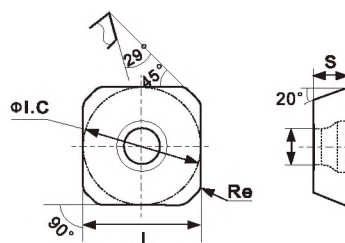
SEEN/SPKN




刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)			牌号 Grade							
		φI.C	L	S	P M K					金陶		
					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			●				○	●

● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

SEET

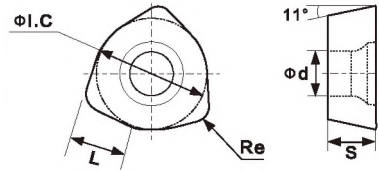


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	L	S	φd	Re	P M K					金陶				
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	SEET12T3-BS3	13.4	13.4	3.97	4.1	1.532			●							

● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

普通铣削刀片 General Milling Inserts

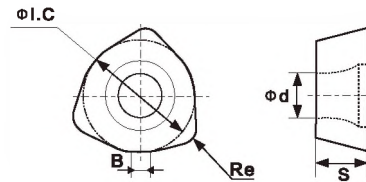
WPGT



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

● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

WDMW



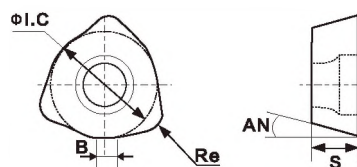
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade									
		phi I.C	S	B	Re	P			M		K		金陶		
						JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	WDMW06T320ZTR	10.00	3.97	1.20	2.00			●		○					
	WDMW080520ZTR	13.00	5.50	1.50	2.00			●		○					
	WDMW10X620ZTR	13.00	6.00	1.20	2.00			●		○					

● 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

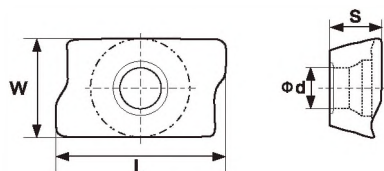
JDMW



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade								
		φI.C	S	B	Re	P			M		K		金陶	
						JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	JDMW09T320SR	9.53	3.97	1.80	2.00			●		○				
	JDMW120420SR	13.00	5.50	1.50	2.00			●		○				
	JDMW140520SR	13.00	6.00	1.20	2.00			●		○				

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APKT



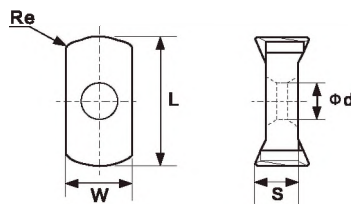
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)				牌号 Grade								
		W	S	L	φd	P			M		K		金陶	
						JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	APKT1705PER-TT	10.68	5.56	18.54	4.46		●							

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通铣削刀片

General Milling Inserts

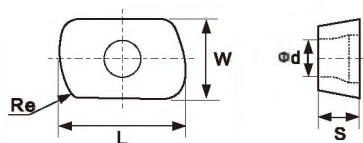
LNMU/LOGU



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade								
		L	S	W	φd	Re	P			M		K	金陶		
							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	●	●			○				

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

EPMT/EPNW

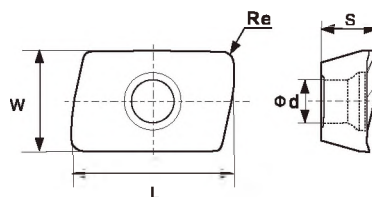



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade								
		L	S	W	φd	Re	P			M		K	金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	EPMT0603SN-R8	10.00	3.18	6.35	2.8	8.0	○	●	●						
	EPNW0603TN-RL	10.00	3.18	6.35	2.8	8.0	○	●	●						

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通铣削刀片 General Milling Inserts

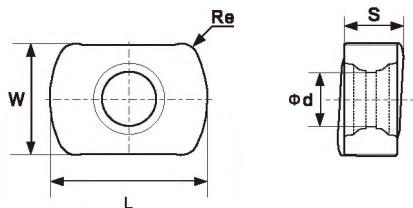
XOMX




刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		L	S	W	φd	Re	P			M		K		金陶		
							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

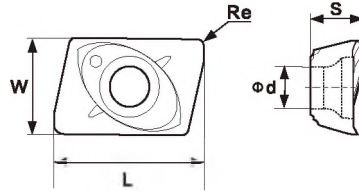



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		L	S	W	φd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	BLMP0603R-TT	9.0	3.73	6.39	3.1	1.0		●	●	○						
	BLMP0904R-TT	11.95	4.39	9.15	4.1	1.35		●	●	○						

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通铣削刀片 General Milling Inserts

JDMT

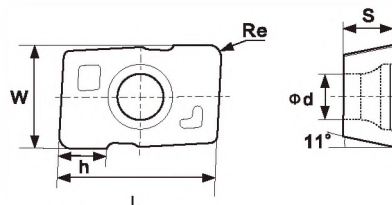


刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		L	S	W	φd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	JDMT070204R-RL	7.1	2.45	4.25	1.9	0.40	●	●	○							
	JDMT070208R-RL	7.1	2.45	4.25	1.9	0.80	●	●	○							

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通铣削刀片 General Milling Inserts

MPHW



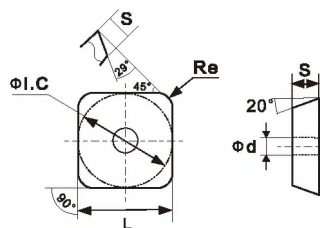
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		L	S	W	ϕd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	MPHW060308ZEL-RL	10.0	3.18	6.57	2.9	0.8	●	●	○							

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

普通铣削刀片

General Milling Inserts

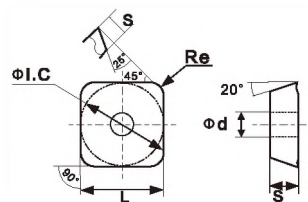
SEMT/SEKT



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	S	L	φd	Re	P			M		K		金陶		
							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									
		φI.C	S	L	φd	Re	P			M		K		金陶		
							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			●			○				

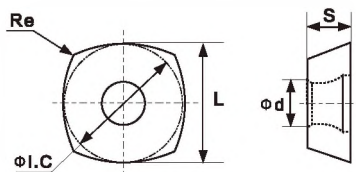
● 主推荐牌号 ● 一般牌号 ○ 可生产牌号


B
铣削刀片
Milling Inserts

快进给铣削刀片

Fast Feeding Milling Inserts

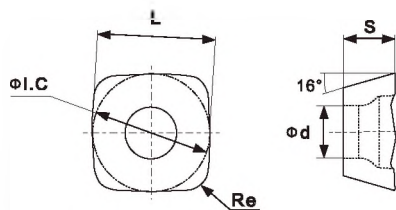
SDMT




刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	S	L	φd	Re	P			M		K		金陶		
							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

SOMT



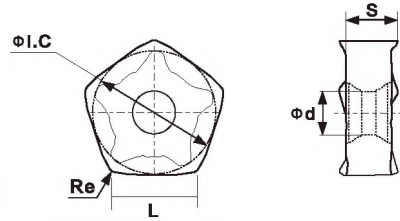
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		φI.C	S	L	φd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	SOMT100420ER-GM3	10.39	4.59	10.39	4.6	2.0		●	●			○	●			
	SOMT140520ER-GM3	14.16	5.56	14.16	5.8	2.0		●	●			○	●			

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

面铣刀片

Face Milling Inserts

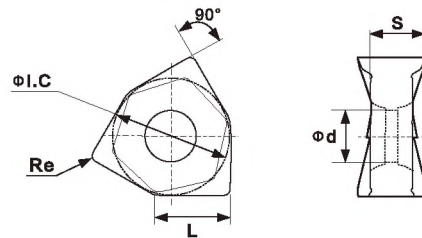
PNMU



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade								
		φI.C	S	L	φd	Re	P			M		K		金陶	
							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

WNMU



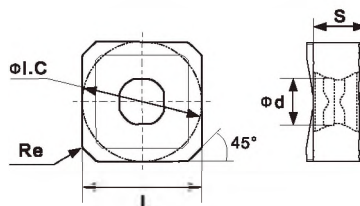
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade								
		φI.C	S	L	φd	Re	P			M		K		金陶	
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35	
	WNMU080608EN-GM3	14.02	6.55	8.87	6.20	0.8			●		○	●			

● 主推荐牌号 ● 一般牌号 ○ 可生产牌号

面铣刀片

Face Milling Inserts

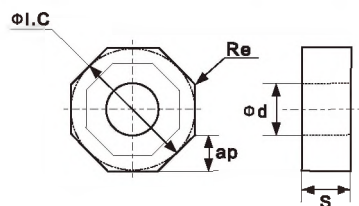
SNMX/SNGX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		phi.I.C	S	L	phi.d	Re	P			M		K		金陶		
							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

ONMU



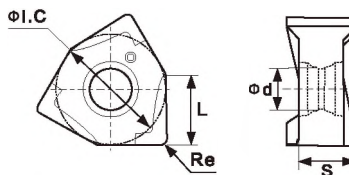
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		phi.I.C	S	ap	BS	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	ONMU050505-TN	13.0	5.5	3.5	5.0	0.5			●		○					


● 主推荐牌号 ○ 一般牌号 ○ 可生产牌号

面铣刀片

Face Milling Inserts

XNEX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
		φI.C	S	L	φd	Re	P			K		金陶		
							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			●			○		

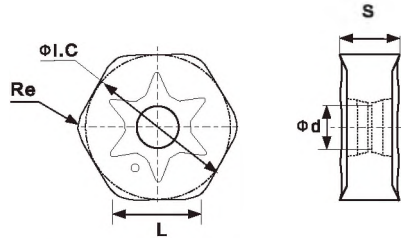
● 主推荐牌号 ● 一般牌号 ○ 可生产牌号




负型六边形铣削刀片

Negative Heptagonal Milling Inserts

HNGX



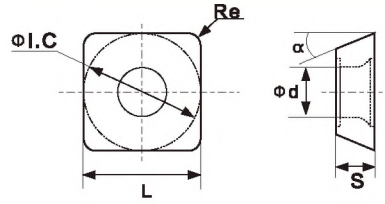
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
		φI.C	S	L	φd	Re	P M K			金陶				
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	HNGX0906ANSN-PLT	16.5	6.35	9.1	4.9	1.0			●		●	○		

● 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								
		φI.C	S	L	φd	Re	P			K			金陶		
							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

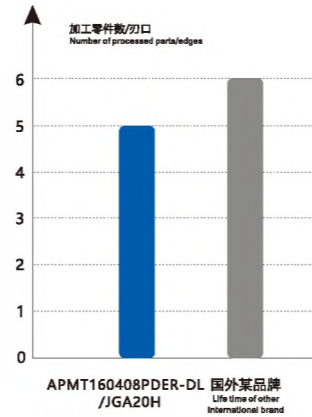
APMT160408PDER-DL/JGA20H

▶ 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 life of our branded products is over 80% of that of foreign competitors' products, with obvious cost-effective advantage.

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

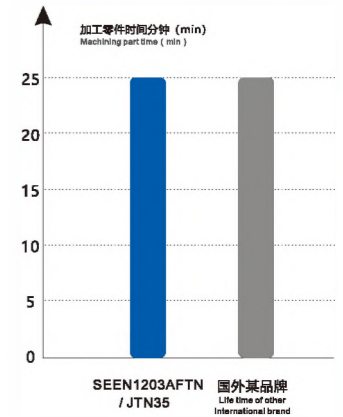
SEEN1203AFTN / JTN35

▶ 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

发动机缸体/HT250

▶ 加工方式
Processing methods

面铣
Face milling

▶ 使用刀片
Use of inserts

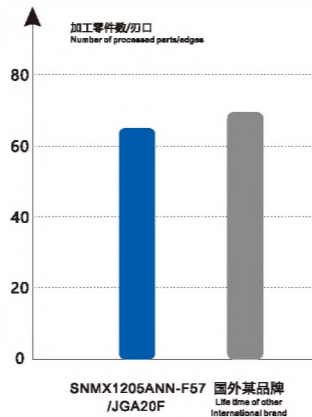
SNMX1205ANN-F57/JGA20F

▶ 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，切削轻快。

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

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

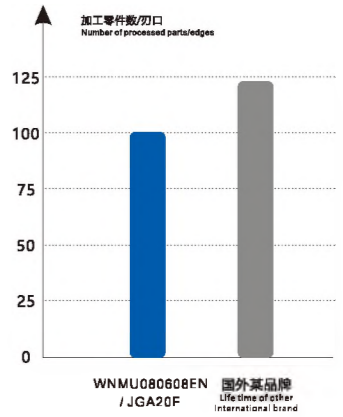
WNMU080608EN / JGA20F

▶ 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
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						
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 Burs	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			↓	↓	↓	✓
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						

切削液 Cutting fluid	刀具形状 Shape of tool							机床装夹 Machine tool clamping			
	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
✓											
	↑		↓								
✓											
	↑	↓	↓								
		↓	↑			✓	✓	✓	✓	✓	✓
✓											
	↑		↓								
✓											
	↑		↓								
✓			↓			✓	✓				
	↑	↑	↓			✓					
	↑	↓	↓	↑		✓		✓			
	↑	↑		↓		✓	✓	✓	✓	✓	✓
	↑	↑	↓					✓	✓	✓	✓
✓				↓							
	↑			↓	✓						



孔加工

Hole Machining Inserts



P98页



P96页



P96页



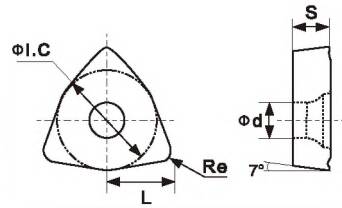
P95页

浅孔钻刀片 93
Shallow hole drilling inserts

深孔钻刀片 95
Deep-hole drilling Inserts

浅孔钻刀片
Shallow hole drilling Inserts

WCMX/WCMT



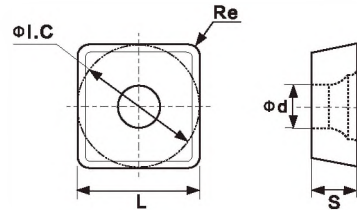
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		φI.C	S	L	φd	Re	P			M		K	金陶			
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	WCMX030208-ZY	5.56	2.38	3.80	2.80	0.8		○			●					
	WCMX040208-ZY	6.35	2.38	4.30	3.10	0.8		○			●					
	WCMT050308-ZY	7.94	3.18	5.50	3.40	0.8		○			●					
	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								
		$\phi I.C$	S	L	ϕd	Re	P M K			金陶					
							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		○	●						

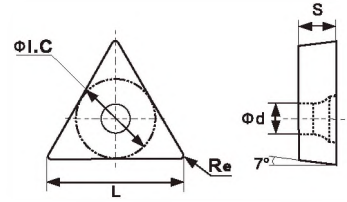
● 主推荐牌号 ○ 一般牌号 ○ 可生产牌号



C
孔加工刀片
Hole Machining Inserts

深孔钻刀片

Deep-hole drilling Inserts

TPMT



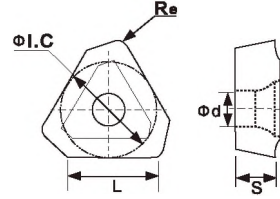
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade							
		$\phi I.C$	S	L	ϕd	Re	P			M		K	金陶	
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35
	TPMT16T312R-22	9.525	3.97	16.50	3.4	1.2				●	○			
	TPMT220612R-22	12.70	6.35	22.00	4.4	1.2				●	○			
	TPMT16T312R-23	9.525	3.97	16.50	3.4	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

深孔钻刀片

Deep-hole drilling Inserts

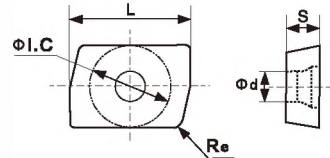
TPMX



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	S	L	φd	Re	P			M		K	金陶			
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	TPMX140308R-G	8.45	3.52	8.30	2.8	0.8			●	○						
	TPMX170408R-G	10.30	4.04	9.60	3.9	0.8			●	○						
	TPMX240512R-G	14.20	5.50	13.90	4.4	1.2			●	○						
	TPMX280716R-G	17.00	7.60	16.10	5.5	1.6			●	○						

● 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									
		φI.C	L	S	φd	Re	P			M		K	金陶			
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	R424.9-13T308-22	10.00	14.60	3.96	3.4	0.8				●	○					
	R424.9-180608-22	11.50	20.40	6.35	4.5	0.8				●	○					
	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				●	○					

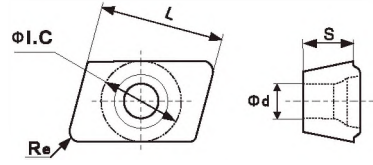
● 主推荐牌号 ○ 一般牌号 ◯ 可生产牌号

C
孔加工刀片
Hole Machining Inserts

深孔钻刀片

Deep-hole drilling Inserts

R800



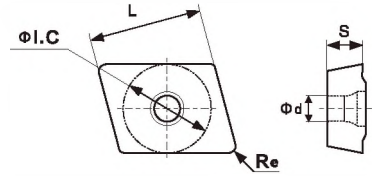
刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	L	S	φd	Re	P			M		K		金陶		
							JGA05A	JGA10A	JGA20F	JGA20H	JGM30R	JGK10R	JTN20	JTN35		
	800-09T308H-PG	9.00	9.62	3.97	2.80	0.40				●						
	800-11T308H-PG	9.00	12.7	3.97	2.80	0.40				●						
	800-050308M-IL	5.55	8.00	3.18	2.50	0.80					●					
	800-06T308M-CL	6.34	9.83	4.00	2.80	0.80					●					
	800-060308H-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

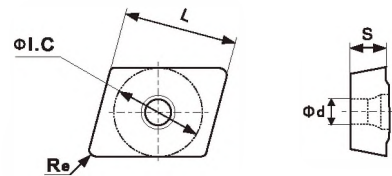
Deep-hole drilling Inserts


R800.24



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	L	S	φd	Re	P			M		K		金陶		
							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



刀片外形 Inserts Shape	型号 Type	基本尺寸 Dimension(mm)					牌号 Grade									
		φI.C	L	S	φd	Re	P			M		K		金陶		
							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

通用信息 技 术

General Technical Information



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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:

- 首先要了解您所需要加工的材料状况, 机床型号及状态。
- 选择适合的刀片形状, 切削主偏角及刀片压紧方式。
- 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。
- 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:

- 首先要了解您所需加工的材料状况, 机床型号及状态。
- 根据加工方式(外圆、内孔、端面槽)确定切刀的基本类型。
- 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。
- 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:

- 首先要了解您所需加工的材料状况、机床型号及状态。
- 根据螺纹的制式、类型、加工方式初步确定刀具的类型。
- 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。
- 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:

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

Selection Method of Parting and Grooving tools:

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

Selection Method of Threading Tools:

- Understand the processed material condition, machine model and condition.
- Select the tool type according to thread's type, processing methods, etc.
- Select details of tool bars as L/R, dimension, etc, according to above conditions,
- 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. Select 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.

牌号对照表

Grade Comparison Table

类别	使用分类 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	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
	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	T8030	CA6525		TT3500	AC630M
	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

牌号对照表

Grade Comparison Table

类别	使用分类 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	
											分类
铣削 Milling	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	
	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						
	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

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 protective labor 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适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 be 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險。 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溅导致伤害。 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.
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.	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. 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

在使用株洲精工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、硬质合金切削刀具材料基本特征

硬质合金刀具是由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、使用硬质合金刀具的注意事项

- 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 Jingong 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 and 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.