GESAC®

2015 - 2016

切削刀具主样本

MASTER CATALOGUE



XTC

厦门金鹭特种合金有限公司

Xiamen Golden Egret Special Alloy Co.,Ltd.

公司简介
About GESAC

厦门金鹭特种合金有限公司，成立于 1989 年，是一家国家级高新技术企业，是国有上市公司厦门钨业的核心成员。主要从事钨粉、碳化钨粉、硬质合金、切削刀具等钨系列产品的生产和销售；是世界最大的钨粉、碳化钨粉供应商和出口商；是高品质硬质合金及其精密切削工具的制造商。

公司拥有一支自强不息的、高素质员工团队，拥有国际一流的工艺技术、生产设备和检测仪器；其生产的“金鹭”牌系列产品以优良的品质和完善的服务，享誉国内外；客户遍布全球四十多个工业发达国家和地区。

公司建立了国家级技术中心，独立承担并完成了多项“国家科技攻关计划”项目、“国家火炬计划”项目、“国家重点新产品”开发项目及省市重点研究课题，被评为“国家重点高新技术企业”、“先进技术企业”、“出口型企业”。

公司坚持以诚信为本的理念，致力于不断创新、发展成为“设备一流”、“技术一流”、“管理一流”、“质量一流”、“服务一流”的现代化企业。

Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC) was founded in 1989, and is one of the core subsidiaries of the listed state–owned corporation XTC group. GESAC specializes in the manufacture and sale of various types of tungsten powder, cemented carbide and carbide cutting tools. Up to now, GESAC has become the largest manufacturer and exporter of tungsten powder and tungsten carbide powder in the world. GESAC is also one of the world's largest manufacturers of premium cemented carbide rods and blanks and high performance cutting tools.

GESAC continuously pursues excellence through creative talents, advanced technologies, high–level manufacturing equipments and quality testing facilities. Driven by high quality products and superior service, our brand "Golden Egret" has become one of the leading brand in the market, enjoying famous reputation in more than 40 countries and regions.

A national level R&D center was established in 2008. GESAC took the complete responsibility for numerous national and provincial R&D projects and was awarded as "National Standard High–Tech Enterprise", "Enterprise with Advanced Technology" and "Export–Oriented Enterprise".

Based on sincerity and loyalty to our customers and partners, we are striving for continuous innovations to be a modernized enterprise with first–level equipments, advanced technologies, progressive administration, superb quality and excellent service.





同安工厂
Tong'an Plant in 2009



集美工厂
Jimei Plant in 1998



五缘湾研发中心
Wuyuanwan R&D Center in 2008





湖里工厂
Huli Plant in 1989



海沧工厂
Haicang Plant in 2006



● 金鹭工厂分布 GESAC Facilities

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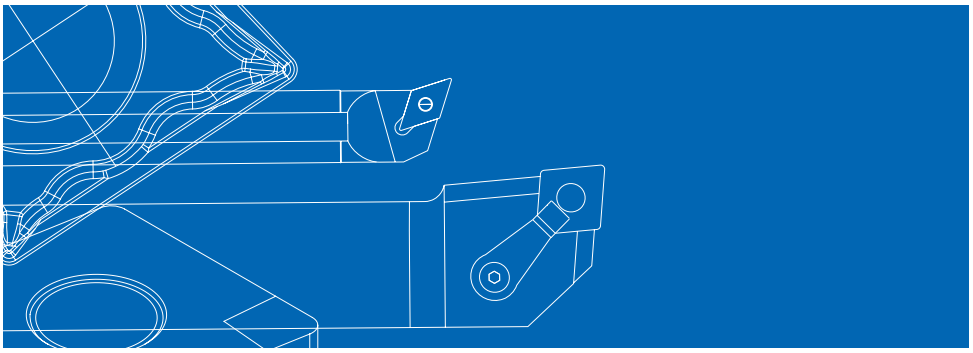
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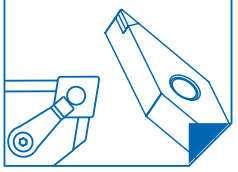


GENERAL TURNING

普通车削刀具



车削 Turning



普通车削刀具 General Turning

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切断与切槽刀具 Parting & Grooving

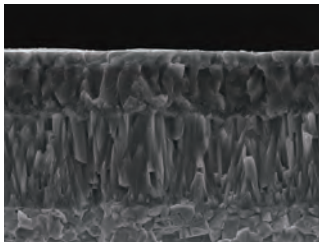
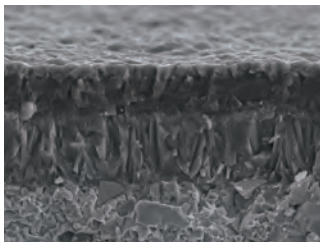
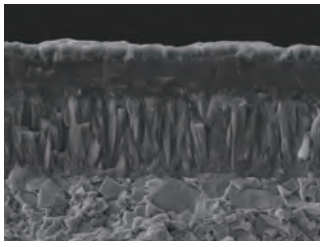
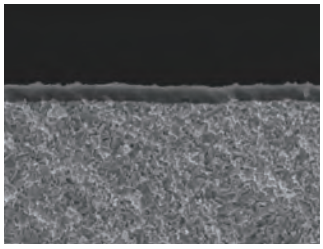
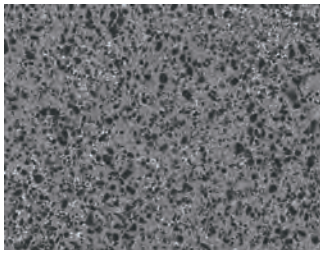
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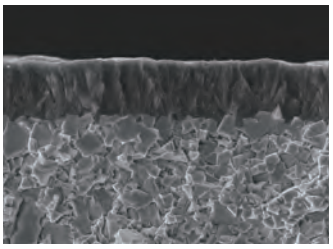
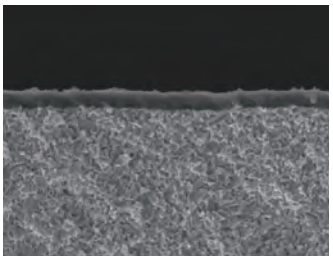
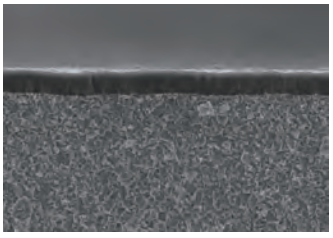
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车削刀片牌号简介
Turning Insert Grades

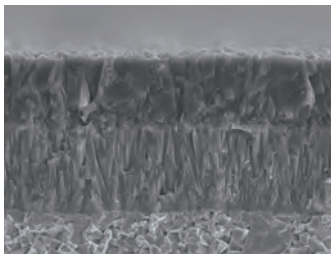
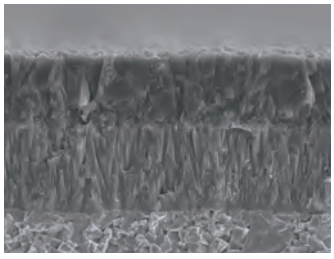
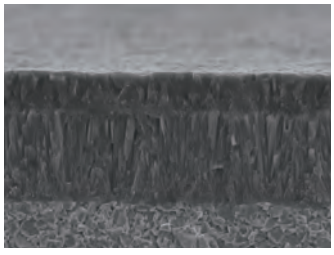
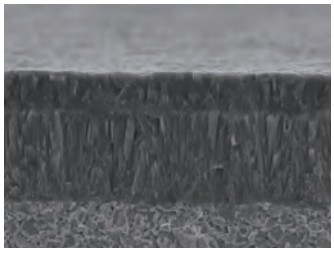
(一) 加工P类材料牌号
Grades for P Applications

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GP1115	精、半精加工 Finishing and Semi–finishing		超精细MT–TiCN，Al_2O_3和表面光滑的TiN涂层结构与良好耐磨性的梯度硬质合金基体结合，具有良好的抗磨损性能，适合于钢、合金钢的精、半精加工 • Super fine MT–TiCN, Al_2O_3 and TiN coating on graded carbide substrate, smooth surface and superior wear resistance. • Application: Suitable for finishing to semi–finishing of steels and alloy steels in continuous conditions.
GP1225	半精、 轻微粗加工 Semi–finishing to Light Roughing		超精细MT–TiCN，Al_2O_3和表面光滑的TiN涂层结构与良好韧性的表面梯度合金基体结合，在具有良好抗磨损性能的同时，韧性大大提高，适合于一般工况下钢、合金钢的半精到轻微粗加工 • Super fine MT–TiCN, Al_2O_3 and TiN coating on tough graded carbide substrate smooth surface and superior wear resistance and improved toughness. • Application: Suitable for semi–finishing to medium roughing of steels and alloy steels in general conditions.
GP1135	粗加工 Roughing		精细MT–TiCN、Al_2O_3与表面光滑的TiN涂层结构与良好抗崩刃性的表面梯度合金基体相结合，适合于不稳定状态下，钢、合金钢的粗加工 • Super fine MT–TiCN, Al_2O_3 and TiN coating on high toughness graded carbide substrate, smooth surface and superior fracture resistance. • Application: Suitable for roughing of steelsand alloy steels under interrupted conditions.
GP3125	半精加工 Semi–finishing		亚微细晶粒的硬质合金基体与纳米结构的TiAlN涂层结合，耐热性好，适用于通用材料的加工，主推低合金钢 • Nano–structure TiAlN coating on submicro–grain carbide. • Application:Suitable for general machining of most workpiece materials.
NEW GP91TF	精、半精加工 Finishing and semi–finishing		无涂层金属陶瓷车削牌号，高耐磨性及韧性兼备，推荐用于钢、不锈钢、铸铁的精到半精加工 • Cermet grade with high wear resistance and good roughness. • Application:Suitable for turning of steels, cast irons and stainless steels in continuous conditions.

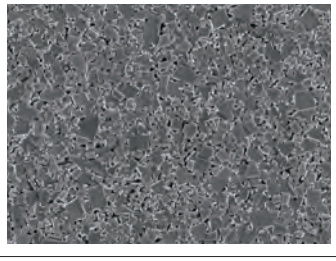
(二) 加工M–S类材料牌号
Grades for M–S Applications

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GM1125	半精加工 Semi–finishing and Roughing		良好韧性的硬质合金基体和TiCN、TiN涂层相结合，耐磨性优异，特殊表面处理技术有效降低切削阻力并抑制积屑瘤的产生，能够延长刀具寿命，适合于不锈钢的精加工及半精加工 • TiCN and TiN coating on good toughness carbide substrate, with good wear resistance , superior adhesion resistance and longer tool life. • Application: Suitable for finishing to semi–finishing of stainless steels in continuous and light interrupted conditions.
GM3125	半精、 轻微粗加工 Finishing and Semi–finishing		纳米结构TiAlN涂层与亚微细晶粒的耐磨硬质合金基体相结合，优异的抗积屑瘤特性和抗崩刃性，适合于不锈钢的半精到粗加工 • TiAlN coating on super submicro–grain carbide substrate with superior resistance to thermal shock, mechanical shock and good wear resistance. • Application: Suitable for semi–finishing to roughing of stainless steels in light interrupted conditions.
GS3115	精、半精加工 Finishing and Semi–finishing		全新PVD TiAlN涂层与微细晶基体附着强度高，耐磨性优异，适用于不锈钢、耐热优质合金等材料精到半精加工 • New TiAlN coating with good adhesion on submicron substrate, superior wear resistance and heat resistance. • Application: Suitable for finishing to semi–finishing of stainless steels and high temperature resistance alloys.

(三) 加工K类材料牌号
Grades for K Applications

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GK1115	精、半精加工 Finishing and Semi–finishing		高耐磨性细晶粒基体与MT–TiCN+厚的Al_2O_3涂层相结合，经过特殊的涂层后处理技术，表面光滑，在加工球墨铸铁和灰铸铁时，表现出良好的耐磨性和抗崩刃性 • MT–TiCN and thick Al_2O_3 coated on micro–grain carbide substrate, superior wear resistance. Smooth coating surface after special post–processing and shows superior wear resistance and fracture resistance. • Application: Suitable for finishing and semi–finishing of nodular irons and gray irons in continuous and light interrupted conditions.
NEW GK1120	精、半精加工 Finishing and Semi–finishing		高耐磨性细晶粒基体与MT–TiCN+厚的Al_2O_3涂层相结合，经过特殊的涂层后处理技术，大幅提高刃口强度，保证了切削的稳定性，特别适用于球墨铸铁的精加工及半精加工工况 • MT–TiCN and thick Al_2O_3 coated on micro–grain carbide substrate.Special post–processing with excellent edge strength and ensure the stability of cutting. • Application: Suitable for continuous and light interrupted cutting action of nodular cast iron.
GK1125	半精、粗加工 Semi–finishing and Roughing		韧性细晶粒基体与厚的MT–TiCN+ Al_2O_3涂层相结合，在保证刀片良好耐磨性的同时，大幅提高韧性，推荐用于韧性要求高的恶劣工况 • Thick MT–TiCN+Al_2O_3 coated on toughness micro–grain carbide substrate, keeping superior wear resistance and greatly improved toughness. • Application:Suitable for bad machining conditions which require high toughness.
NEW GK1130	半精、粗加工 Semi–finishing and Roughing		韧性细晶粒基体与厚的MT–TiCN+ Al_2O_3涂层相结合，经过特殊的涂层后处理技术，在保证刀片良好韧性的同时，大幅提高刃口强度，特别适用于球磨铸铁的断续粗加工等恶劣工况 • Thick MT–TiCN+Al_2O_3 coated on toughness micro–grain carbide substrate, keeping greatly improved toughness and excellent edge strength. • Application: Suitable for interrupted rough cutting action of nodular cast iron.

(四) 加工N类材料牌号
Grades for N Applications

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GN9125	半精、粗加工 Semi–finishing and Roughing		无涂层细晶粒硬质合金牌号，良好的耐磨性能与韧性兼备，适合于铜、铝合金等有色金属的精、半精加工 • Micro–grain carbide substrate with high hardness and superior wear resistance. • Application:Suitable for finishing to semi–finishing of coppers and aluminum alloys in light interrupted conditions.

车削牌号应用一览表
Application Summary of Turning Grades

工件材质 Workpiece	ISO	涂层硬质合金 Coated		硬质合金 Uncoated	金属陶瓷 Cermet
		CVD	PVD		
P 钢 Steel	01	GP1115			GP91TF
	10	GP1125	GP3125		
	20	GP1225			
	30	GP1135			
	40				
	50				
M 不锈钢 Stainless Steel	01		GS3115		GP91TF
	10		GM3115		
	20	GM1125	GM3125		
	30				
	40				
	50				
K 铸铁 Cast Iron	01				GP91TF
	10	GK1115 GK1120			
	20	GK1125			
	30	GK1130			
	40				
N 有色金属 Nonferrous Metal	01			GN9115	
	10				
	20			GN9125	
	30			GN9135	
	40				
S 难加工材料 HRSA	01				
	10		GS3115		
	20				
	30				
	40				
H 高硬度材料 High Hardness Material	01				
	10				
	20				
	30				

车削刀片加工工况汇总
Summary for the Working Conditions of Turning Inserts

工件材质 Workpiece	槽型 Geometry	加工工况 Working Conditions		
		●	◔	✣
		稳定切削 Continuous	一般切削 Light Interrupted	不稳定切削 Interrupted
P	GF	GP1115	GP1115/GP1225	GP1225
	QF	GP1115/GP91TF	GP1115/GP1225	GP1225
	GM	GP1115/GP91TF	GP1115/GP1225	GP1225
	QM	GP1115/GP91TF	GP1115/GP1225	GP1225
	SV	GP91TF	GP1115/GP1225	GP1225
	QR	GP1115	GP1225	GP1135
	QH	GP1115	GP1225	GP1135
	GP	GP1115/GP91TF	GP1115/GP1225/GP3125	GP1225/GP3125
M	SF	GS3115		
	SM	GM1125	GM3115/GM3125	GM3125
	GP	GM1125/GP91TF	GM3125	GM3125
K	UK	GK1115/GK1120	GK1115/GK1120/GK1125/GK1130	GK1125/GK1130
	HK	GK1115/GK1120	GK1115/GK1120/GK1125/GK1130	GK1125/GK1130
	无	GK1115/GK1120	GK1115/GK1120/GK1125/GK1130	GK1125/GK1130
	GP	GK1115/GP91TF	GK1115/GK1125	GK1125
N	AL	GN9115	GN9125/GN9135	GN9125/GN9135

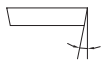
ISO车削刀片型号表示规则

ISO Turning Indexable Inserts Identification System

代号 Symbol	形状 Shape	刀尖角（度） Comer Angle	图形 Figure
H	正六边形 Hexagon	120°	
O	正八边形 Octagon	135°	
P	正五边形 Pentagon	108°	
S	正方形 Square	90°	
T	正三角形 Triangle	60°	
C	菱形 Rhombic	80°	
D		55°	
E		75°	
F		50°	
M		86°	
V		35°	
W	六边形 Trigon	80°	
L	长方形 Rectangle	90°	
A	平行四边形 Parellelogram	85°	
B		82°	
K		55°	
R	圆形 Round	——	

①形状代号 Shape Symbol

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



②后角代号 Relief Angle Symbol

代号 Symbol	公差 Tolerance (mm)			公差 Tolerance(inch)		
	刀尖高 Corner Height(m)	厚度 Thickness(s)	内切圆 I.C.Size(Ød)	刀尖高 Corner Height(m)	厚度 Thickness(s)	内切圆 I.C.Size(Ød)
A	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.001
F	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005
C	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.001
H	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005
E	±0.025	±0.025	±0.025	±0.001	±0.001	±0.001
G	±0.025	±0.13	±0.025	±0.001	±0.005	±0.001
J	±0.005	±0.025	±0.05~±0.13	±0.0002	±0.001	±0.002~±0.005
K	±0.013	±0.025	±0.05~±0.13	±0.0005	±0.001	±0.002~±0.005
L	±0.025	±0.025	±0.05~±0.13	±0.001	±0.001	±0.002~±0.005
M	±0.08~±0.18	±0.13	±0.05~±0.13	±0.003~±0.007	±0.005	±0.002~±0.005
N	±0.08~±0.18	±0.025	±0.05~±0.13	±0.003~±0.007	±0.001	±0.002~±0.005
U	±0.13~±0.38	±0.13	±0.08~±0.25	±0.005~±0.015	±0.005	±0.003~±0.01

③精度代号 Tolerance Symbol

①	②	③	④	⑤
T	N	M	G	22
T	N	M	G	22

①	②	③	④	⑤

④断屑槽・孔代号 Chipbreaker /Hole Symbol

代号 Symbol	有无孔 Hole	孔的形状 Hole Shape	断屑槽 Chipbreaker	形状 Shape
N	无 Without	—	无 Without	
R			单面 Single-sided	
F			双面 Double-sided	
A	有 With	圆柱孔 With Hole	无 Without	
M			单面 Single-sided	
G			双面 Double-sided	
W		部分圆柱孔单面40° ~60° With hole and one countersink 40° ~60°	无 Without	
T			单面 Single-sided	
Q		部分圆柱孔双面40° ~60° With hole and two countersinks 40° ~60°	无 Without	
U			双面 Double-sided	
B		部分圆柱孔单面70° ~90° With hole and one countersink 70° ~90°	无 Without	
H			单面 Single-sided	
C		部分圆柱孔双面70° ~90° With hole and two countersinks 70° ~90°	无 Without	
J			双面 Double-sided	
X	—	—	—	

⑤ISO切削刃长度代号 Cutting Edge Length Symbol(ISO)(mm)

R		S		C		W		T		D		V		K		内切圆 I.C.Size (mm)
代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	
		03	3.97	03	4.0			06	6.9	4	4.8					3.97
		04	4.76	04	4.8			08	8.2	5	5.8					4.76
05	5	——	——	——	——	——	——	——	——	——	——	——	——	——	——	5
		05	5.56	05	5.6	03	3.8	09	9.6	6	6.8					5.56
06	6	——	——	——	——	——	——	——	——	——	——	——	——	——	——	6
		06	6.35	06	6.5	04	4.3	11	11	7	7.8	11	11.2			6.35
		07	7.94	08	8.1	05	5.4	13	13.8	9	9.7					7.94
08	8	——	——	——	——	——	——	——	——	——	——	——	——	——	——	8
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10	——	——	——	——	——	——	——	——	——	——	——	——	——	——	10
12	12	——	——	——	——	——	——	——	——	——	——	——	——	——	——	12
12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1			12.7
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4					15.875
16	16	——	——	——	——	——	——	——	——	——	——	——	——	——	——	16
19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3					19.05
20	20	——	——	——	——	——	——	——	——	——	——	——	——	——	——	20
		22	22.225	22	22.6			38	38.5	27	27.1					22.225
25	25	——	——	——	——	——	——	——	——	——	——	——	——	——	——	25
25	25.4	25	25.4	25	25.8			44	44	31	31					25.4
31	31.75	31	31.75	32	32.2			55	55	38	38.8					31.75
31	32	——	——	——	——	——	——	——	——	——	——	——	——	——	——	32

适用刀片形状：H,O,P,S,T,C,E,M,W,R Insert Shape:H,O,P,S,T,C,E,M,W,R									
标准内切圆 I.C.Size (mm)	内切圆(Ød)的公差 Tolerance of I.C.Size(Ød) (mm)		刀尖高(m)的公差 Tolerance of Corner Height(m)(mm)		标准内切圆 I.C.Size (inch)	内切圆(Ød)的公差 Tolerance of I.C.Size(Ød) (mm)		刀尖高(m)的公差 Tolerance of Corner Height(m)(mm)	
	J,K,L, M,N(级)	U (级)	M,N(级)	U (级)		ClassJ,K, L,M,N	Class U	ClassJ,K, L,M,N	Class U
6.35	±0.05	±0.08	±0.08	±0.13	0.250	±0.002	±0.003	±0.003	±0.005
9.525					0.375				
12.7	±0.08	±0.13	±0.13	±0.2	0.500	±0.003	±0.005	±0.005	±0.008
15.875	±0.1	±0.18	±0.15	±0.27	0.625	±0.004	±0.007	±0.006	±0.011
19.05					0.750				
25.4	±0.13	±0.25	±0.18	±0.38	1.000	±0.005	±0.010	±0.007	±0.015
31.75	±0.15	±0.25	±0.2	±0.38	1.250	±0.006	±0.010	±0.008	±0.015
32					1.260				

适用刀片形状：D Insert Shape：D					
内切圆Ød Inscribed Circle Size		内切圆的公差 Tolerance of I.C.Size		刀尖高的公差 Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.11	±0.004
9.525	0.375	±0.05	±0.002	±0.11	±0.004
12.7	0.500	±0.08	±0.003	±0.15	±0.006
15.875	0.625	±0.10	±0.004	±0.18	±0.007
19.05	0.750	±0.10	±0.004	±0.18	±0.007

适用刀片形状：V Insert Shape：V					
内切圆Ød Inscribed Circle Size		内切圆的公差 Tolerance of I.C.Size		刀尖高的公差 Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.15	±0.006
9.525	0.375	±0.05	±0.002	±0.15	±0.006
12.7	0.500	±0.08	±0.003	±0.20	±0.008
15.875	0.625	±0.10	±0.004	±0.27	±0.011
19.05	0.750	±0.10	±0.004	±0.27	±0.011

代号 Symbol	厚度 Thickness(mm)
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52
⑥厚度代号 Thickness Symbol	

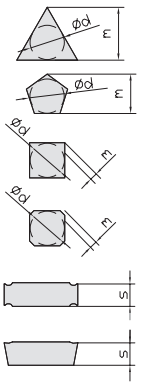
⑥	⑦	⑧
04	08	– GM
04	08	– GM

⑥	⑦	⑧

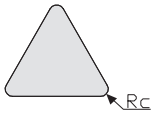
内切圆
Inscribed Circle Size(Ød)

厚度
Thickness(s)

刀尖高
Corner Height(m)



⑦刀尖代号
Corner Symbol



代号 Symbol	刀尖圆弧半径 Corner–Rc(mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

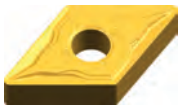
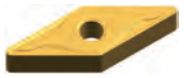
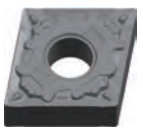
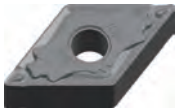
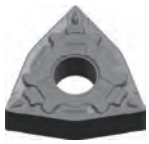
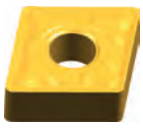
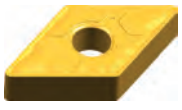
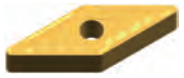
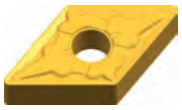
⑧断屑槽型代号
Chipbreaker Symbol

表示刀片加工切削特点和断屑槽型
Indicates the cutting properties and chipbreaker

车削用刀片一览表
Features of Turning Inserts

车削用刀片（负型）
Turning Inserts（Negative）

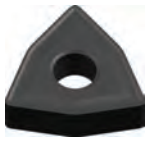
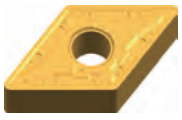
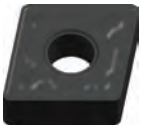
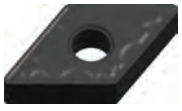
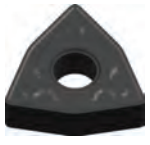
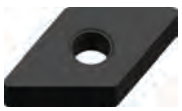
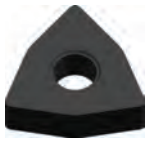
槽型 Geometry	特点 Features	
GF	GF槽型普通钢、合金钢精加工用 双面断屑槽 刀尖锋利和切削刃强劲 小切深时切屑处理性能良好 GF for finishing of general steel and alloy steel; Double–sided chipbreaker; Sharp tool nose and strong cutting edge; Good chip control under small cutting depth.	
QF	QF槽型普通钢、合金钢精加工用 双面断屑槽 变前角设计，满足不同切深的切削刃锋利性和强度要求 曲线形切削刃设计，刀刃锋利，加工表面光洁度高，切屑控制稳定 QF for finishing of general steel and alloy steel; Double–sided chipbreaker; Variable range angle provides enough edge strength at different depth of cut; Curved edge,sharp cutting edge, good chip control and fine surface finish due to curved edge.	
SF	SF槽型不锈钢、高温合金精加工用 双面断屑槽 锋利切削刃，切削阻力低，不会引起工件变形，尤其适合加工薄壁零件和细长轴 SF for stainless steel and heat resistance super alloy（HRSA）; Double–sided chipbreaker; Sharp edge due to results in low cutting forces particularly for thin wall structures and extended shafts.	
GM	GM槽型普通钢、合金钢半精加工用 双面断屑槽 扁平棱边刃形，切削刃强度高 GM for semi–finishing of general steel and alloy steel; Double–sided chipbreaker; Strong flat cutting edge.	
QM	QM槽型普通钢、合金钢半精加工用 大槽宽、大槽深设计，增大了容屑槽，使排屑顺畅，减小排屑阻力 变刃宽设计，保证刀尖锋利的同时提高强度 阶梯与波浪式凸台设计，拓宽了断屑范围 QM for semi–finishing of general steel and alloy steel; Smooth chip discharge due to wide chip pocket; Good balance of sharpness and strength due to variable land; Gradient and waved hump wide applicable geometry range.	
SV	SV槽型普通钢、合金钢半精加工用 开口式槽，容屑空间大可实现不稳定切削 锋利刃宽设计，加工表面质量高 切屑深度范围宽，可实现大切深加工 SV for semi–finishing of general steel and alloy steel; Through–out groove and wide chip groove make cutting available in unstable working conditions; Long chip groove allows high depth of cuts.	

	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	90° 正方形 90° Square	60° 正三角形 60° Triangle	35° 菱形 35° Rhombic	80° 六边形 80° Trigon
						
	CNMG–GF	DNMG–GF	SNMG–GF	TNMG–GF	VNMG–GF	WNMG–GF
	Page14	Page18	Page21	Page26	Page28	Page29
						
	CNMG–QF	DNMG–QF	SNMG–QF	TNMG–QF	VNMG–QF	WNMG–QF
	Page14	Page18	Page21	Page25	Page28	Page29
						
	CNMG–SF	DNMG– SF	SNMG– SF	TNMG– SF	VNMG– SF	WNMG–SF
	Page14	Page18	Page21	Page25	Page28	Page29
						
	CNMG–GM	DNMG–GM	SNMG–GM	TNMG–GM	VNMG–GM	WNMG–GM
	Page14	Page18	Page21	Page25	Page28	Page29
						
	CNMG–QM	DNMG–QM	SNMG–QM	TNMG–QM	VNMG–QM	WNMG–QM
	Page15	Page19	Page22	Page26	Page28	Page29
						
	CNMG R–SV	DNMG R–SV	SNMG R–SV	TNMG R–SV		
	Page15	Page19	Page22	Page26		

车削用刀片一览表
Features of Turning Inserts

车削用刀片（负型）
Turning Inserts（Negative）

槽型 Geometry	特点 Features	
SM	SM槽型不锈钢、软钢中切削用 双面断屑槽 切削刃锋利度高 SM for medium cutting of stainless steel and mild steel; Double–sided chipbreaker; Sharp cutting edge.	
UK	UK槽型铸铁加工用 双面断屑槽 切削刃口强度高，恶劣切削条件下加工表现优越 UK for machining cast iron; Double–sided chipbreaker; Medium cutting edge for unfavorable cutting conditions.	
QR	QR槽型碳钢、铸钢及合金钢粗加工用 双面断屑槽 变前角和变刃宽相结合满足不同切深的切削刃锋利性和强度要求 QR for rough cutting action of carbon steels,cast iron and alloy steels; Double–sided chipbreaker; Variable rake angle and land provides enough edge sharpness and strength at different depth of cut.	
HK	HK槽型铸铁、重载切削用 双面断屑槽 切削刃口强度高，大容屑槽，适合大余量，重载切削 HK for cast iron cutting and heavy cutting; Double–sided chipbreaker; Strong cutting edge and wide land for improved performance.	
QH	QH槽型碳钢、铸钢及合金钢重切削加工用 单面断屑槽 可变棱边与阶梯型断屑槽，切削阻力低 直线形切削刃与倒棱使切削锋利性与刀尖强度同时得到保证 QH for heavy cutting action of carbon steels, cast iron and alloy steels; Single–sided chipbreaker; Variable land and progressive chipbreaker space, generating lowered cutting forces; Straight edgeline with reinforcement balances strength and cutting action.	
无 None	无断屑槽 平板刀片 刀尖强度高、刀片落位稳定，最适于断续切削等不稳定切削 Without chipbreaker; Flat–top; Stable placement; Strong edge design for intermittent cutting conditions.	

	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	90° 正方形 90° Square	60° 正三角形 60° Triangle	35° 菱形 35° Rhombic	80° 六边形 80° Trigon
						
	CNMG–SM	DNMG– SM	SNMG– SM	TNMG– SM	VNMG– SM	WNMG–SM
	Page15	Page19	Page22	Page26	Page28	Page30
						
	CNMG–UK	DNMG–UK	SNMG–UK	TNMG–UK	VNMG–UK	WNMG–UK
	Page16	Page20	Page23	Page26	Page28	Page30
						
	CNMG–QR	DNMG–QR	SNMG–QR	TNMG–QR		WNMG–QR
	Page16	Page20	Page23	Page27		Page30
						
	CNMG–HK	DNMG–HK	SNMG–HK	TNMG– HK	VNMG– HK	WNMG– HK
	Page16	Page20	Page23	Page27	Page28	Page30
						
	CNMM–QH		SNMM–QH			
	Page17		Page24			
						
	CNMA	DNMA	SNMA	TNMA		WNMA
	Page17	Page20	Page24	Page27		Page30

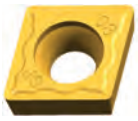
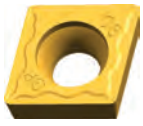
车削用刀片一览表
Features of Turning Inserts

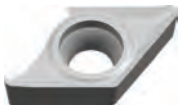
车削用刀片（正型）
Turning Inserts（Positive）

槽型 Geometry	特点 Features	
GP （5°后角） （5°Clearance Angle）	GP槽型普通钢、合金钢、不锈钢、铸铁轻切削用 扁平棱边与双前角组合，同时确保刀尖强度与切削锋利度 半岛形断屑槽，1mm以下的切屑也能稳妥控制切屑 GP for light cutting of general steel, alloy steel, stainless steel and cast iron; Strong tool nose due to flat cutting edge and sharp cutting edge due to double rake angle; Steady chip control when the depth of cut is less than 1mm due to peninsula–shaped chip breaker.	
GP （7°后角） （7°Clearance Angle）	GP槽型普通钢、合金钢、不锈钢、铸铁轻切削用 扁平棱边与双前角组合，同时确保刀尖强度与切削锋利度 半岛形断屑槽，1mm以下的切屑也能稳妥控制切屑 GP for light cutting of general steel, alloy steel, stainless steel and cast iron; Strong tool nose due to flat cutting edge and sharp cutting edge due to double rake angle; Steady chip control when the depth of cut is less than 1mm due to peninsula–shaped chip breaker.	
GP （11°后角） （11°Clearance Angle）	GP槽型普通钢、合金钢、不锈钢、铸铁轻切削用 扁平棱边与双前角组合，同时确保刀尖强度与切削锋利度 半岛形断屑槽，1mm以下的切屑也能稳妥控制切屑 11° 后角，刀尖更锋利 GP for light cutting of general steel, alloy steel, stainless steel and cast iron; Strong tool nose due to flat cutting edge and sharp cutting edge due to double rake angle; Steady chip control when the depth of cut is less than 1mm due to peninsula–shaped chip breaker; Sharp tool nose due to 11° clearance angle.	

铝材车削刀片
（Turning Inserts for aluminum materials）

槽型 Geometry	特点 Features	
AL	AL槽型铝合金切削用 大前角，刀尖锋利度高 AL for aluminum alloy cutting; Sharp tool nose due to large rake angle.	

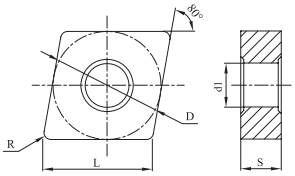
	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	90° 正方形 90° Square	60° 正三角形 60° Triangle	35° 菱形 35° Rhombic	80° 六边形 80° Trigon
						
					VBMT–GP	
					Page37	
						
	CCMT–GP	DCMT–GP	SCMT–GP	TCMT–GP	VCMT–GP	WCMT–GP
	Page31	Page33	Page34	Page35	Page37	Page38
						
	CPMT–GP CPGT–GP			TPGT–GP		
	Page32			Page36		

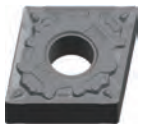
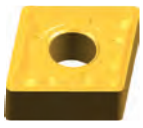
	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	90° 正方形 90° Square	60° 正三角形 60° Triangle	35° 菱形35° Rhombic	80° 六边形 80° Trigon
						
	CCGX–AL	DCGX–AL	SCGX–AL	TCGX–AL	VCGX–AL	
	Page39	Page39	Page40	Page41	Page42	

车削刀片(负型)
Turning Inserts (Negative)

CNMG

菱形80° 有孔
Rhombic 80° with Hole



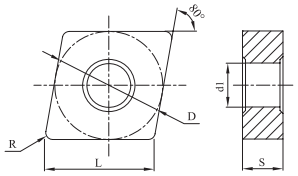
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CNMG090308-GF	9.7	9.525	3.18	3.81	0.8	○	○	○														
	CNMG120404-GF	12.9	12.7	4.76	5.16	0.4	●	○	○														
	CNMG120408-GF	12.9	12.7	4.76	5.16	0.8	○	○	○														
	CNMG120412-GF	12.9	12.7	4.76	5.16	1.2	○	○	○														
	CNMG090304-QF	9.7	9.525	3.18	3.81	0.4	○		○														○
	CNMG090308-QF	9.7	9.525	3.18	3.81	0.8	○		○														○
	CNMG120404-QF	12.9	12.7	4.76	5.16	0.4	●		●														●
	CNMG120408-QF	12.9	12.7	4.76	5.16	0.8	●		●														●
	CNMG120404-SF	12.9	12.7	4.76	5.16	0.4									●								
	CNMG120408-SF	12.9	12.7	4.76	5.16	0.8									●								
	CNMG090308-GM	9.7	9.525	3.18	3.81	0.8	○	○	○														○
	CNMG120404-GM	12.9	12.7	4.76	5.16	0.4	●	●	●														○
	CNMG120408-GM	12.9	12.7	4.76	5.16	0.8	●	●	●							○							○
	CNMG120412-GM	12.9	12.7	4.76	5.16	1.2	○	●	●														○
	CNMG120416-GM	12.9	12.7	4.76	5.16	1.6	○	○	●														
	CNMG160608-GM	16.1	15.875	6.35	6.35	0.8	○	○	●														
	CNMG160612-GM	16.1	15.875	6.35	6.35	1.2	○	●	●														
	CNMG160616-GM	16.1	15.875	6.35	6.35	1.6	○	○	○														
	CNMG190608-GM	19.3	19.05	6.35	7.94	0.8	○	○	○														
	CNMG190612-GM	19.3	19.05	6.35	7.94	1.2	○	●	○														
	CNMG190616-GM	19.3	19.05	6.35	7.94	1.6	○	○	○														

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

CNMG

菱形80° 有孔
Rhombic 80° with Hole



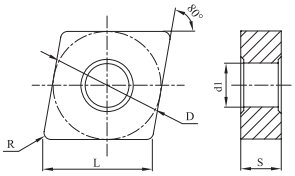
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CNMG090304-QM	9.7	9.525	3.18	3.81	0.4	○		○														○
	CNMG090308-QM	9.7	9.525	3.18	3.81	0.8	○		○														○
	CNMG120404-QM	12.9	12.7	4.76	5.16	0.4	●		●														○
	CNMG120408-QM	12.9	12.7	4.76	5.16	0.8	●	○	●			●				○							○
	CNMG120412-QM	12.9	12.7	4.76	5.16	1.2	●	○	●			○				○							
	CNMG120416-QM	12.9	12.7	4.76	5.16	1.6	○		●														
	CNMG160608-QM	16.1	15.875	6.35	6.35	0.8	○		●														
	CNMG160612-QM	16.1	15.875	6.35	6.35	1.2	●		●														
	CNMG190608-QM	19.3	19.05	6.35	7.94	0.8	○		●														
	CNMG190612-QM	19.3	19.05	6.35	7.94	1.2	○		●														
	CNMG190616-QM	19.3	19.05	6.35	7.94	1.6	○		●														
	CNMG120408R-SV	12.9	12.7	4.76	5.16	0.8		○	●														○
	CNMG120408L-SV	12.9	12.7	4.76	5.16	0.8		○	○														○
	CNMG090304-SM	9.7	9.525	3.18	3.81	0.4						○		○									
	CNMG090308-SM	9.7	9.525	3.18	3.81	0.8						○	○	○									
	CNMG09T304-SM	9.7	9.525	3.97	3.81	0.4						○		○									
	CNMG09T308-SM	9.7	9.525	3.97	3.81	0.8						○		○									
	CNMG120404-SM	12.9	12.7	4.76	5.16	0.4						●	○	●									
	CNMG120408-SM	12.9	12.7	4.76	5.16	0.8						●	●	●	○								
	CNMG120412-SM	12.9	12.7	4.76	5.16	1.2						○	○	●									
	CNMG120416-SM	12.9	12.7	4.76	5.16	1.6						○		○									
	CNMG160608-SM	16.1	15.875	6.35	6.35	0.8						○	○	○									
	CNMG160612-SM	16.1	15.875	6.35	6.35	1.2						○	○	●									
	CNMG160616-SM	16.1	15.875	6.35	6.35	1.6						○	○	●									
	CNMG190608-SM	19.3	19.05	6.35	7.94	0.8						○		●									
	CNMG190612-SM	19.3	19.05	6.35	7.94	1.2						○		●									
	CNMG190616-SM	19.3	19.05	6.35	7.94	1.6						○		●									

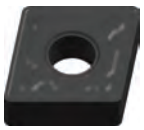
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

CNMG

菱形80° 有孔
Rhombic 80° with Hole



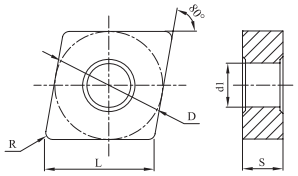
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CNMG120404-UK	12.9	12.7	4.76	5.16	0.4										●		●					
	CNMG120408-UK	12.9	12.7	4.76	5.16	0.8										●	●	●	○				
	CNMG120412-UK	12.9	12.7	4.76	5.16	1.2										●	○	●	○				
	CNMG120416-UK	12.9	12.7	4.76	5.16	1.6										○	○	○	○				
	CNMG160608-UK	16.1	15.875	6.35	6.35	0.8										●	○	●	○				
	CNMG160612-UK	16.1	15.875	6.35	6.35	1.2										●	○	●	○				
	CNMG160616-UK	16.1	15.875	6.35	6.35	1.6										○	○	●	○				
	CNMG190612-UK	19.3	19.05	6.35	7.94	1.2										○	○	○	○				
	CNMG190616-UK	19.3	19.05	6.35	7.94	1.6										○	○	○	○				
	CNMG120408-QR	12.9	12.7	4.76	5.16	0.8	●		●	●													
	CNMG120412-QR	12.9	12.7	4.76	5.16	1.2	●		●	●													
	CNMG120416-QR	12.9	12.7	4.76	5.16	1.6	○		○	○													
	CNMG160608-QR	16.1	15.875	6.35	6.35	0.8	○		○	○													
	CNMG160612-QR	16.1	15.875	6.35	6.35	1.2	●		●	●													
	CNMG160616-QR	16.1	15.875	6.35	6.35	1.6	○		○	○													
	CNMG190608-QR	19.3	19.3	6.35	7.94	0.8	○		○	○													
	CNMG190612-QR	19.3	19.3	6.35	7.94	1.2	○		●	●													
	CNMG190616-QR	19.3	19.3	6.35	7.94	1.6	○		●	●													
	CNMG190624-QR	19.3	19.3	6.35	7.94	2.4	○		○	○													
	CNMG250924-QR	25.8	25.4	9.52	9.12	2.4	●		○	○													
	CNMG120408-HK	12.9	12.7	4.76	5.16	0.8	○		○	○						●	●	●	○				
	CNMG120412-HK	12.9	12.7	4.76	5.16	1.2	○		○							●	●	●	○				
	CNMG120416-HK	12.9	12.7	4.76	5.16	1.6										○	○	○	○				
	CNMG160612-HK	16.1	15.875	6.35	6.35	1.2	●		○							●	○	○	○				
	CNMG160616-HK	16.1	15.875	6.35	6.35	1.6	○		○							○	○	○	○				
	CNMG190612-HK	19.3	19.05	6.35	7.94	1.2	○		○							○	○	●	○				
	CNMG190616-HK	19.3	19.05	6.35	7.94	1.6	○		○							○	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

CNMG

菱形80° 有孔
Rhombic 80° with Hole



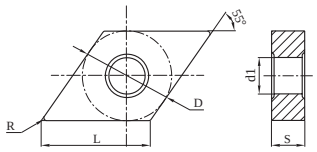
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CNMM190616-QH	19.3	19.05	6.35	7.94	1.6			●	○													
	CNMM190624-QH	19.3	19.05	6.35	7.94	2.4	○		●	●													
	CNMM250924-QH	25.8	25.4	9.52	9.12	2.4			●	●													
	CNMA120404	12.9	12.7	4.76	5.16	0.4										●		○					
	CNMA120408	12.9	12.7	4.76	5.16	0.8										●	●	●	○				
	CNMA120412	12.9	12.7	4.76	5.16	1.2										●	●	●	○				
	CNMA120416	12.9	12.7	4.76	5.16	1.6										●	○	●	○				
	CNMA160612	16.1	15.875	6.35	6.35	1.2										●	○	○	○				
	CNMA160616	16.1	15.875	6.35	6.35	1.6										●	○	○	○				
	CNMA160620	16.1	15.875	6.35	6.35	2.0										○	○	○	○				
	CNMA190612	19.3	19.05	6.35	7.94	1.2										○	○	○	○				
	CNMA190616	19.3	19.05	6.35	7.94	1.6										●	○	○	○				
	CNMA190624	19.3	19.05	6.35	7.94	2.4										○	○	○	○				

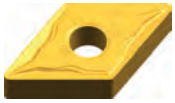
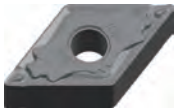
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

DNMG

菱形55° 有孔
Rhombic 55° with Hole



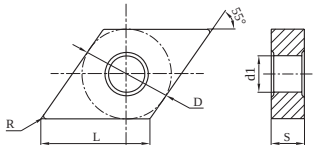
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	DNMG110404–GF	11.6	9.525	4.76	3.81	0.4	○	○	○														
	DNMG110408–GF	11.6	9.525	4.76	3.81	0.8	○	○	○														
	DNMG150404–GF	15.5	12.7	4.76	5.16	0.4	○	○	○														
	DNMG150408–GF	15.5	12.7	4.76	5.16	0.8	●	○	○														
	DNMG150604–GF	15.5	12.7	6.35	5.16	0.4	○	○	○														
	DNMG150608–GF	15.5	12.7	6.35	5.16	0.8	○	○	○														
	DNMG110404–QF	11.6	9.525	4.76	3.81	0.4	○		○														○
	DNMG110408–QF	11.6	9.525	4.76	3.81	0.8	○		○														○
	DNMG150404–QF	15.5	12.7	4.76	5.16	0.4	●		●														●
	DNMG150408–QF	15.5	12.7	4.76	5.16	0.8	●		●														○
	DNMG150604–QF	15.5	12.7	6.35	5.16	0.4	●		○														
	DNMG150608–QF	15.5	12.7	6.35	5.16	0.8	●		●														
	DNMG110404–SF	11.6	9.525	4.76	3.81	0.4									●								
	DNMG110408–SF	11.6	9.525	4.76	3.81	0.8									●								
	DNMG150404–SF	15.5	12.7	4.76	5.16	0.4									●								
	DNMG150408–SF	15.5	12.7	4.76	5.16	0.8									●								
	DNMG150604–SF	15.5	12.7	6.35	5.16	0.4									●								
	DNMG150608–SF	15.5	12.7	6.35	5.16	0.8									●								
	DNMG110404–GM	11.6	9.525	4.76	3.81	0.4	○	○	●														○
	DNMG110408–GM	11.6	9.525	4.76	3.81	0.8	○	●	●							○							○
	DNMG150404–GM	15.5	12.7	4.76	5.16	0.4	○	○	●														○
	DNMG150408–GM	15.5	12.7	4.76	5.16	0.8	●	●	●														
	DNMG150412–GM	15.5	12.7	4.76	5.16	1.2	○	○	●														○
	DNMG150604–GM	15.5	12.7	6.35	5.16	0.4	○	●	●														
	DNMG150608–GM	15.5	12.7	6.35	5.16	0.8	○	●	●							○							
	DNMG150612–GM	15.5	12.7	6.35	5.16	1.2	○	○	●														
	DNMG150616–GM	15.5	12.7	6.35	5.16	1.6	○	○	○														

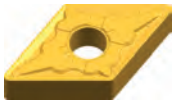
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

DNMG

菱形55° 有孔
Rhombic 55° with Hole



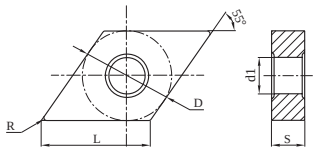
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated														硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	DNMG110404–QM	11.6	9.525	4.76	3.81	0.4	○		●														○
	DNMG110408–QM	11.6	9.525	4.76	3.81	0.8	○		●														○
	DNMG110412–QM	11.6	9.525	4.76	3.81	1.2	○		○														
	DNMG150404–QM	15.5	12.7	4.76	5.16	0.4	○		●														○
	DNMG150408–QM	15.5	12.7	4.76	5.16	0.8	●		●														○
	DNMG150412–QM	15.5	12.7	4.76	5.16	1.2	●		●														
	DNMG150604–QM	15.5	12.7	6.35	5.16	0.4	○		●			○											
	DNMG150608–QM	15.5	12.7	6.35	5.16	0.8	●		●			○											
	DNMG150612–QM	15.5	12.7	6.35	5.16	1.2	●		●			○				○							
	DNMG150604R–SV	15.5	12.7	6.35	5.16	0.4			●			○											●
	DNMG150604L–SV	15.5	12.7	6.35	5.16	0.4			○			○											○
	DNMG150608R–SV	15.5	12.7	6.35	5.16	0.8		○	●			○											○
	DNMG150608L–SV	15.5	12.7	6.35	5.16	0.8			○			○											○
	DNMG110404–SM	11.6	9.525	4.76	3.81	0.4						●		●									
	DNMG110408–SM	11.6	9.525	4.76	3.81	0.8						●	○	●									
	DNMG110412–SM	11.6	9.525	4.76	3.81	1.2						○		○									
	DNMG150404–SM	15.5	12.7	4.76	5.16	0.4						●	○	●									
	DNMG150408–SM	15.5	12.7	4.76	5.16	0.8						●	○	●									
	DNMG150412–SM	15.5	12.7	4.76	5.16	1.2						○		○									
	DNMG150604–SM	15.5	12.7	6.35	5.16	0.4						●	○	○									
	DNMG150608–SM	15.5	12.7	6.35	5.16	0.8						●	○	●									
	DNMG150612–SM	15.5	12.7	6.35	5.16	1.2						○		○									

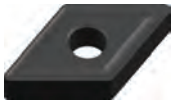
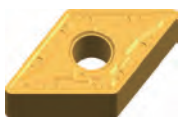
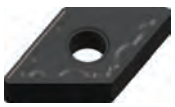
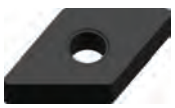
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

DNMG

菱形55° 有孔
Rhombic 55° with Hole



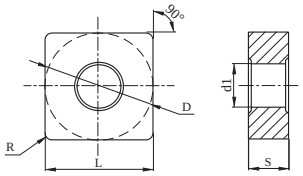
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated											硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	DNMG150404–UK	15.5	12.7	4.76	5.16	0.4										●		●					
	DNMG150408–UK	15.5	12.7	4.76	5.16	0.8										●	○	●	○				
	DNMG150412–UK	15.5	12.7	4.76	5.16	1.2										●	○	●	○				
	DNMG150604–UK	15.5	12.7	6.35	5.16	0.4										●		○					
	DNMG150608–UK	15.5	12.7	6.35	5.16	0.8										●	○	●	○				
	DNMG150612–UK	15.5	12.7	6.35	5.16	1.2										●	○	○	○				
	DNMG150616–UK	15.5	12.7	6.35	5.16	1.6										○		○					
	DNMG150408–QR	15.5	12.7	4.76	5.16	0.8	○		○														
	DNMG150412–QR	15.5	12.7	4.76	5.16	1.2	○		○														
	DNMG150416–QR	15.5	12.7	4.76	5.16	1.6			○														
	DNMG150608–QR	15.5	12.7	6.35	6.35	0.8	○		●	●													
	DNMG150612–QR	15.5	12.7	6.35	6.35	1.2	○		●	●													
	DNMG150616–QR	15.5	12.7	6.35	6.35	1.6			○	●													
	DNMG150408–HK	15.5	12.7	4.76	5.16	0.8										●	○	●	○				
	DNMG150412–HK	15.5	12.7	4.76	5.16	1.2										●	○	○	○				
	DNMG150608–HK	15.5	12.7	6.35	5.16	0.8	○		○							●	●	●	○				
	DNMG150612–HK	15.5	12.7	6.35	5.16	1.2	○		○							●	●	○	○				
	DNMA150404	15.5	12.7	4.76	5.16	0.4										●		○					
	DNMA150408	15.5	12.7	4.76	5.16	0.8										●	○	●	○				
	DNMA150412	15.5	12.7	4.76	5.16	1.2										○	○	○	○				
	DNMA150416	15.5	12.7	4.76	5.16	1.6										○	○	○	○				
	DNMA150604	15.5	12.7	6.35	5.16	0.4										●		○					
	DNMA150608	15.5	12.7	6.35	5.16	0.8										●	○	○	○				
	DNMA150612	15.5	12.7	6.35	5.16	1.2										●	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

SNMG

正方形90° 有孔
Square 90° with Hole



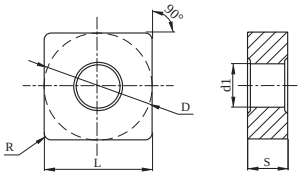
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated														硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SNMG090304–GF	9.525	9.525	3.18	3.81	0.4	○	○	○														
	SNMG090308–GF	9.525	9.525	3.18	3.81	0.8	○	○	○														
	SNMG120404–GF	12.7	12.7	4.76	5.16	0.4	○	○	○														
	SNMG120408–GF	12.7	12.7	4.76	5.16	0.8	○	○	○														
	SNMG090304–QF	9.525	9.525	3.18	3.81	0.4	○		○														○
	SNMG090308–QF	9.525	9.525	3.18	3.81	0.8	○		○														○
	SNMG120404–QF	12.7	12.7	4.76	5.16	0.4	●		●														○
	SNMG120408–QF	12.7	12.7	4.76	5.16	0.8	●		●														○
	SNMG120404–SF	12.7	12.7	4.76	5.16	0.4									●								
	SNMG120408–SF	12.7	12.7	4.76	5.16	0.8									●								
	SNMG090304–GM	9.525	9.525	3.18	3.81	0.4	○	○	○														○
	SNMG090308–GM	9.525	9.525	3.18	3.81	0.8	○	○	○														○
	SNMG120404–GM	12.7	12.7	4.76	5.16	0.4	○	○	●														○
	SNMG120408–GM	12.7	12.7	4.76	5.16	0.8	○	●	●														○
	SNMG120412–GM	12.7	12.7	4.76	5.16	1.2	○	○	●														○
	SNMG120416–GM	12.7	12.7	4.76	5.16	1.6	○	○	○														
	SNMG150608–GM	15.875	15.875	6.35	6.35	0.8	○	○	○														
	SNMG150612–GM	15.875	15.875	6.35	6.35	1.2	○	○	●														
	SNMG150616–GM	15.875	15.875	6.35	6.35	1.6	○	○	○														
	SNMG190612–GM	19.05	19.05	6.35	7.94	1.2	○	●	○														
	SNMG190616–GM	19.05	19.05	6.35	7.94	1.6	○	○	○														

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

SNMG

正方形90° 有孔
Square 90° with Hole



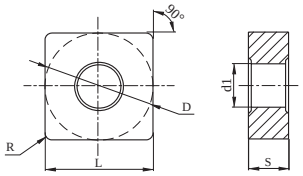
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SNMG090304–QM	9.525	9.525	3.18	3.81	0.4	○		○														○
	SNMG090308–QM	9.525	9.525	3.18	3.81	0.8	○		○														○
	SNMG120404–QM	12.7	12.7	4.76	5.16	0.4	○		●														○
	SNMG120408–QM	12.7	12.7	4.76	5.16	0.8	●		●							○							○
	SNMG120412–QM	12.7	12.7	4.76	5.16	1.2	●		●														
	SNMG120416–QM	12.7	12.7	4.76	5.16	1.6	○		○														
	SNMG150608–QM	15.875	15.875	6.35	6.35	0.8	○		○														
	SNMG150612–QM	15.875	15.875	6.35	6.35	1.2	○		●														
	SNMG190612–QM	19.05	19.05	6.35	7.94	1.2	○		○														
	SNMG120404R–SV	12.7	12.7	4.76	5.16	0.4			○														○
	SNMG120408R–SV	12.7	12.7	4.76	5.16	0.8			○														○
	SNMG120408L–SV	12.7	12.7	4.76	5.16	0.8			○														○
	SNMG090304–SM	9.525	9.525	3.18	3.81	0.4						○		○									
	SNMG090308–SM	9.525	9.525	3.18	3.81	0.8						○	○	○									
	SNMG120404–SM	12.7	12.7	4.76	5.16	0.4						●	○	●									
	SNMG120408–SM	12.7	12.7	4.76	5.16	0.8						●	○	●	○								
	SNMG120412–SM	12.7	12.7	4.76	5.16	1.2						●		○									
	SNMG120416–SM	12.7	12.7	4.76	5.16	1.6						○		○									
	SNMG150608–SM	15.875	15.875	6.35	6.35	0.8						○		○									
	SNMG150612–SM	15.875	15.875	6.35	6.35	1.2						○		○	○								
	SNMG150616–SM	15.875	15.875	6.35	6.35	1.6						○		○									
	SNMG190612–SM	19.05	19.05	6.35	7.94	1.2						○		○									
	SNMG190616–SM	19.05	19.05	6.35	7.94	1.6						●		○	○								

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

SNMG

正方形90° 有孔
Square 90° with Hole



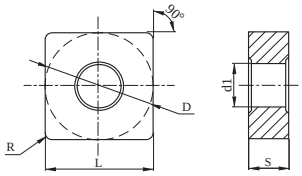
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SNMG120408–UK	12.7	12.7	4.76	5.16	0.8										●	○	●	○				
	SNMG120412–UK	12.7	12.7	4.76	5.16	1.2										●	○	○	○				
	SNMG150412–UK	15.875	15.875	4.76	6.35	1.2										○	○	○	○				
	SNMG150612–UK	15.875	15.875	6.35	6.35	1.2										○	○	○	○				
	SNMG150616–UK	15.875	15.875	6.35	6.35	1.6										○	○	○	○				
	SNMG190612–UK	19.05	19.05	6.35	7.94	1.2										○	○	○	○				
	SNMG190616–UK	19.05	19.05	6.35	7.94	1.6										○	○	○	○				
	SNMG120408–QR	12.7	12.7	4.76	5.16	0.8			●	●													
	SNMG120412–QR	12.7	12.7	4.76	5.16	1.2			●	●													
	SNMG120416–QR	12.7	12.7	4.76	5.16	1.6			○	○													
	SNMG150608–QR	15.875	15.875	6.35	6.35	0.8			○														
	SNMG150612–QR	15.875	15.875	6.35	6.35	1.2			○														
	SNMG150616–QR	15.875	15.875	6.35	6.35	1.6			○														
	SNMG190608–QR	19.05	19.05	6.35	7.94	0.8			○														
	SNMG190612–QR	19.05	19.05	6.35	7.94	1.2			●	●													
	SNMG190616–QR	19.05	19.05	6.35	7.94	1.6			●														
	SNMG190624–QR	19.05	19.05	6.35	7.94	2.4			○	○													
	SNMG250724–QR	25.4	25.4	7.94	9.21	2.4	○		○														
	SNMG250924–QR	25.4	25.4	9.52	9.21	2.4	○		○														
	SNMG120408–HK	12.7	12.7	4.76	5.16	0.8	○		○							●	●	●	○				
	SNMG120412–HK	12.7	12.7	4.76	5.16	1.2	○		○							●	●	●	○				
	SNMG120416–HK	12.7	12.7	4.76	5.16	1.6										○	○	○	○				
	SNMG150612–HK	15.875	15.875	6.35	6.35	1.2										○	○	○	○				
	SNMG150616–HK	15.875	15.875	6.35	6.35	1.6										○	○	○	○				
	SNMG190612–HK	19.05	19.05	6.35	7.94	1.2										○	○	○	○				
	SNMG190616–HK	19.05	19.05	6.35	7.94	1.6										○	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

SNMG

正方形90° 有孔
Square 90° with Hole



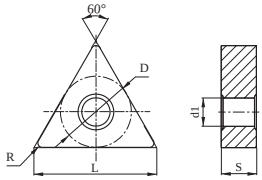
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SNMM190616-QH	19.05	19.05	6.35	7.94	1.6			●	○													
	SNMM190624-QH	19.05	19.05	6.35	7.94	2.4			●	●													
	SNMM250724-QH	25.4	25.4	7.94	9.12	2.4	○		●	○													
	SNMM250732-QH	25.4	25.4	7.94	9.12	3.2			●	○													
	SNMM250924-QH	25.4	25.4	9.52	9.12	2.4	○		●	●													
	SNMM250932-QH	25.4	25.4	9.52	9.12	3.2			●	○													
	SNMA090304	9.525	9.525	3.18	3.81	0.4										○		○					
	SNMA090308	9.525	9.525	3.18	3.81	0.8										○		○					
	SNMA090312	9.525	9.525	3.18	3.81	1.2										○		○					
	SNMA120404	12.7	12.7	4.76	5.16	0.4										○		○					
	SNMA120408	12.7	12.7	4.76	5.16	0.8										●	○	●	○				
	SNMA120412	12.7	12.7	4.76	5.16	1.2										●	●	●	○				
	SNMA120416	12.7	12.7	4.76	5.16	1.6										●	○	●	○				
	SNMA190612	19.05	19.05	6.35	7.94	1.2										○	○	○	○				
	SNMA190616	19.05	19.05	6.35	7.94	1.6										○	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

TNMG

三角形60° 有孔
Triangle 60° with Hole



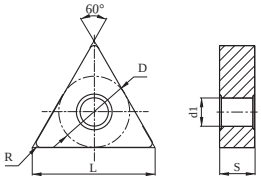
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated														硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	TNMG110304–GF	11	6.35	3.18	2.26	0.4	○	○	○														
	TNMG160304–GF	16.5	9.525	3.18	3.81	0.4	○	○	○														
	TNMG160308–GF	16.5	9.525	3.18	3.81	0.8	○	○	○														
	TNMG160404–GF	16.5	9.525	4.76	3.81	0.4	●	●	○														
	TNMG160408–GF	16.5	9.525	4.76	3.81	0.8	●	●	○														
	TNMG220404–GF	22	12.7	4.76	5.16	0.4	○	○	○														
	TNMG220408–GF	22	12.7	4.76	5.16	0.8	○	○	○														
	TNMG160404–QF	16.5	9.525	4.76	3.81	0.4	●		●														●
	TNMG160408–QF	16.5	9.525	4.76	3.81	0.8	●		●														●
	TNMG220404–QF	22	12.7	4.76	5.16	0.4	○		○														
	TNMG220408–QF	22	12.7	4.76	5.16	0.8	○		○														
	TNMG160404–SF	16.5	9.525	4.76	3.81	0.4									●								
	TNMG160408–SF	16.5	9.525	4.76	3.81	0.8									●								
	TNMG160304–GM	16.5	9.525	3.18	3.81	0.4	○	○	○														
	TNMG160308–GM	16.5	9.525	3.18	3.81	0.8	○	○	○														
	TNMG160312–GM	16.5	9.525	3.18	3.81	1.2	○	○	○														
	TNMG160404–GM	16.5	9.525	4.76	3.81	0.4	○	○	●														○
	TNMG160408–GM	16.5	9.525	4.76	3.81	0.8	●	●	●														○
	TNMG160412–GM	16.5	9.525	4.76	3.81	1.2	○	●	●														
	TNMG220404–GM	22	12.7	4.76	5.16	0.4	○	○	○														
	TNMG220408–GM	22	12.7	4.76	5.16	0.8	○	●	●														○
	TNMG220412–GM	22	12.7	4.76	5.16	1.2	○	○	○														○
	TNMG220416–GM	22	12.7	4.76	5.16	1.6	○	○	○														
	TNMG270608–GM	27.5	15.875	6.35	6.35	0.8	○	○	○														
	TNMG270612–GM	27.5	15.875	6.35	6.35	1.2	○	○	○														
	TNMG330608–GM	33	19.05	6.35	7.94	0.8	○	○	○														
	TNMG330612–GM	33	19.05	6.35	7.94	1.2	○	○	○														

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

TNMG

三角形60° 有孔
Triangle 60° with Hole



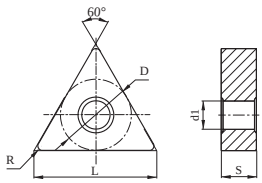
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	TNMG110304–QM	11	6.35	3.18	2.26	0.4	○		○														○
	TNMG110308–QM	11	6.35	3.18	2.26	0.8	○		○														○
	TNMG160404–QM	16.5	9.525	4.76	3.81	0.4	●		●														●
	TNMG160408–QM	16.5	9.525	4.76	3.81	0.8	●		●			●												●
	TNMG160412–QM	16.5	9.525	4.76	3.81	1.2	●		●			○												
	TNMG220408–QM	22	12.7	4.76	5.16	0.8	●		●															
	TNMG220412–QM	22	12.7	4.76	5.16	1.2	●		●															
	TNMG220416–QM	22	12.7	4.76	5.16	1.6	○		○															
	TNMG160404R–SV	16.5	9.525	4.76	3.81	0.4	○	○	●			○												●
	TNMG160404L–SV	16.5	9.525	4.76	3.81	0.4	○	○	●			○												●
	TNMG160408R–SV	16.5	9.525	4.76	3.81	0.8	○	○	●			○												●
	TNMG160408L–SV	16.5	9.525	4.76	3.81	0.8	○	○	●			○												○
	TNMG160404–SM	16.5	9.525	4.76	3.81	0.4						●	●	●	●									
	TNMG160408–SM	16.5	9.525	4.76	3.81	0.8						●	●	●	○									
	TNMG160412–SM	16.5	9.525	4.76	3.81	1.2						○	○	●										
	TNMG220404–SM	22	12.7	4.76	5.16	0.4						○	○	○										
	TNMG220408–SM	22	12.7	4.76	5.16	0.8						○		○										
	TNMG220412–SM	22	12.7	4.76	5.16	1.2						○		○										
	TNMG160404–UK	16.5	9.525	4.76	3.81	0.4										●		●						
	TNMG160408–UK	16.5	9.525	4.76	3.81	0.8										●		●						
	TNMG160412–UK	16.5	9.525	4.76	3.81	1.2										●		○						
	TNMG160416–UK	16.5	9.525	4.76	3.81	1.6										○		○						
	TNMG220408–UK	22	12.7	4.76	5.16	0.8										●	○	○	○					
	TNMG220412–UK	22	12.7	4.76	5.16	1.2										●	○	○	○					
	TNMG220416–UK	22	12.7	4.76	5.16	1.6										●	○	○	○					

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

TNMG

三角形60° 有孔
Triangle 60° with Hole



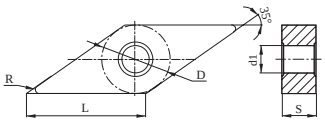
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	TNMG160408-QR	16.5	9.525	4.76	3.81	0.8			●	●													
	TNMG160412-QR	16.5	9.525	4.76	3.81	1.2			●	●													
	TNMG220408-QR	22	12.7	4.76	5.16	0.8			●														
	TNMG220412-QR	22	12.7	4.76	5.16	1.2			●	●													
	TNMG220416-QR	22	12.7	4.76	5.16	1.6			○	○													
	TNMG270608-QR	27.5	15.875	6.35	6.35	0.8			○														
	TNMG270612-QR	27.5	15.875	6.35	6.35	1.2			○														
	TNMG270616-QR	27.5	15.875	6.35	6.35	1.6			○														
	TNMG330716-QR	33	19.05	7.94	7.94	1.6			○														
	TNMG330924-QR	33	19.05	9.52	7.94	2.4			○														
	TNMG160408-HK	16.5	9.525	4.76	3.81	0.8			○														
	TNMG160412-HK	16.5	9.525	4.76	3.81	1.2	○		○							●		●						
	TNMG220408-HK	22	12.7	4.76	5.16	0.8										●	○	●	○				
	TNMG220412-HK	22	12.7	4.76	5.16	1.2										○	●	○	○				
	TNMG220416-HK	22	12.7	4.76	5.16	1.6			○							●	●	●	○				
	TNMG270612-HK	27.5	15.875	6.35	6.35	1.2										●	○	●	○				
	TNMG270616-HK	27.5	15.875	6.35	6.35	1.6										○	○	○	○				
	TNMA110304	11	6.35	3.18	2.26	0.4										○		○					
	TNMA110308	11	6.35	3.18	2.26	0.8										○		○					
	TNMA160308	16.5	9.525	3.18	3.81	0.8										○		○					
	TNMA160404	16.5	9.525	4.76	3.81	0.4										○		○					
	TNMA160408	16.5	9.525	4.76	3.81	0.8										●		○					
	TNMA160412	16.5	9.525	4.76	3.81	1.2										●		○					
	TNMA160416	16.5	9.525	4.76	3.81	1.6										●		○					
	TNMA220404	22	12.7	4.76	5.16	0.4										○		○					
	TNMA220408	22	12.7	4.76	5.16	0.8										○	○	○	○				
	TNMA220412	22	12.7	4.76	5.16	1.2										○	●	○	○				
	TNMA220416	22	12.7	4.76	5.16	1.6										●	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

VNMG

菱形35° 有孔
Rhombic 35° with Hole



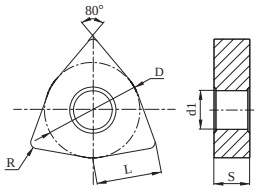
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	VNMG160404–GF	16.6	9.525	4.76	3.81	0.4	●	○	○							○							
	VNMG160408–GF	16.6	9.525	4.76	3.81	0.8	●	●	○							○							
	VNMG220404–GF	22.1	12.7	4.76	5.16	0.4	○	○	○														
	VNMG220408–GF	22.1	12.7	4.76	5.16	0.8	○	○	○														
	VNMG160404–QF	16.6	9.525	4.76	3.81	0.4	●		●														○
	VNMG160408–QF	16.6	9.525	4.76	3.81	0.8	●		●														○
	VNMG220404–QF	22.1	12.7	4.76	5.16	0.4	○		○														
	VNMG220408–QF	22.1	12.7	4.76	5.16	0.8	○		○														
	VNMG160404–SF	16.6	9.525	4.76	3.81	0.4									●								
	VNMG160408–SF	16.6	9.525	4.76	3.81	0.8									●								
	VNMG160404–GM	16.6	9.525	4.76	3.81	0.4	●	●	●														○
	VNMG160408–GM	16.6	9.525	4.76	3.81	0.8	●	●	●							○							○
	VNMG160412–GM	16.6	9.525	4.76	3.81	1.2	●	○	●														
	VNMG220408–GM	22.1	12.7	4.76	5.16	0.8	○	○	○														
	VNMG160404–QM	16.6	9.525	4.76	3.81	0.4	●		●														○
	VNMG160408–QM	16.6	9.525	4.76	3.81	0.8	●		●							○							○
	VNMG160412–QM	16.6	9.525	4.76	3.81	1.2	●		●							○							
	VNMG160404–SM	16.6	9.525	4.76	3.81	0.4						●	○	●									
	VNMG160408–SM	16.6	9.525	4.76	3.81	0.8						●	○	●									
	VNMG160404–UK	16.6	9.525	4.76	3.81	0.4										●		●					
	VNMG160408–UK	16.6	9.525	4.76	3.81	0.8										●	○	●	○				
	VNMG160412–UK	16.6	9.525	4.76	3.81	1.2										●	○	●	○				
	VNMG160408–HK	16.6	9.525	4.76	3.81	0.8										●	○	●	○				
	VNMG160412–HK	16.6	9.525	4.76	3.81	1.2										●	○	○	○				

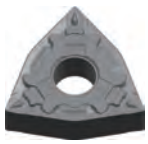
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

WNMG

六边形80° 有孔
Trigon 80° with Hole



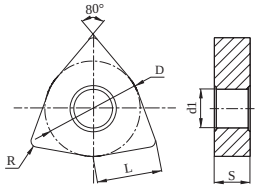
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	WNMG060404–GF	6.5	9.525	4.76	3.81	0.4	○	○	○														
	WNMG060408–GF	6.5	9.525	4.76	3.81	0.8	○	○	○														
	WNMG080404–GF	8.7	12.7	4.76	5.16	0.4	●	○	○														
	WNMG080408–GF	8.7	12.7	4.76	5.16	0.8	●	●	●														
	WNMG060404–QF	6.5	9.525	4.76	3.81	0.4	○		○														○
	WNMG060408–QF	6.5	9.525	4.76	3.81	0.8	○		○														○
	WNMG080404–QF	8.7	12.7	4.76	5.16	0.4	●		●														●
	WNMG080408–QF	8.7	12.7	4.76	5.16	0.8	●		●														●
	WNMG060404–SF	6.5	9.525	4.76	3.81	0.4									○								
	WNMG060408–SF	6.5	9.525	4.76	3.81	0.8									○								
	WNMG080404–SF	8.7	12.7	4.76	5.16	0.4									●								
	WNMG080408–SF	8.7	12.7	4.76	5.16	0.8									●								
	WNMG06T304–GM	6.5	9.525	3.97	3.81	0.4	○	○	●														
	WNMG06T308–GM	6.5	9.525	3.97	3.81	0.8	○	○	○														
	WNMG060404–GM	6.5	9.525	4.76	3.81	0.4	○	○	○														
	WNMG060408–GM	6.5	9.525	4.76	3.81	0.8	○	●	●			○											
	WNMG080404–GM	8.7	12.7	4.76	5.16	0.4	●	○	●														○
	WNMG080408–GM	8.7	12.7	4.76	5.16	0.8	●	●	●							○							○
	WNMG080412–GM	8.7	12.7	4.76	5.16	1.2	●	●	●														
	WNMG080416–GM	8.7	12.7	4.76	5.16	1.6	○	○	●														
	WNMG060404–QM	6.5	9.525	4.76	3.81	0.4	○		●														○
	WNMG060408–QM	6.5	9.525	4.76	3.81	0.8	○		●														○
	WNMG080404–QM	8.7	12.7	4.76	5.16	0.4	●		●														●
	WNMG080408–QM	8.7	12.7	4.76	5.16	0.8	●	○	●			●				○							●
	WNMG080412–QM	8.7	12.7	4.76	5.16	1.2	●	○	●			○				○							
	WNMG080416–QM	8.7	12.7	4.76	5.16	1.6	○		●														

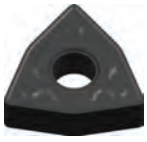
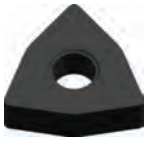
●标准库存 Stock ○需预定 Available upon Order

车削刀片(负型)
Turning Inserts (Negative)

WNMG

六边形80° 有孔
Trigon 80° with Hole



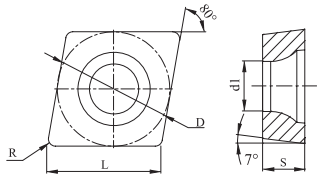
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	WNMG06T304–SM	6.5	9.525	3.97	3.81	0.4						○		○									
	WNMG06T308–SM	6.5	9.525	3.97	3.81	0.8						○		○									
	WNMG06T312–SM	6.5	9.525	3.97	3.81	1.2						○		○									
	WNMG060404–SM	6.5	9.525	4.76	3.81	0.4						●	○	●									
	WNMG060408–SM	6.5	9.525	4.76	3.81	0.8						●	●	●									
	WNMG060412–SM	6.5	9.525	4.76	3.81	1.2						○		○	○								
	WNMG080404–SM	8.7	12.7	4.76	5.16	0.4						●	●	●									
	WNMG080408–SM	8.7	12.7	4.76	5.16	0.8						●	●	●	○								
	WNMG080412–SM	8.7	12.7	4.76	5.16	1.2						●	○	●									
	WNMG080404–UK	8.7	12.7	4.76	5.16	0.4										●		●					
	WNMG080408–UK	8.7	12.7	4.76	5.16	0.8										●	○	●	○				
	WNMG080412–UK	8.7	12.7	4.76	5.16	1.2										●	○	●	○				
	WNMG080408–QR	8.7	12.7	4.76	5.16	0.8	●		●	●													
	WNMG080412–QR	8.7	12.7	4.76	5.16	1.2	●		●	●													
	WNMG080416–QR	8.7	12.7	4.76	5.16	1.6	○		○	○													
	WNMG060408–HK	6.5	9.525	4.76	3.81	0.8										○		○					
	WNMG080408–HK	8.7	12.7	4.76	5.16	0.8	○		●							●	●	●	○				
	WNMG080412–HK	8.7	12.7	4.76	5.16	1.2	○		○							●	●	●	○				
	WNMA060404	6.5	9.525	4.76	3.81	0.4										○		○					
	WNMA060408	6.5	9.525	4.76	3.81	0.8										●		○					
	WNMA080404	8.7	12.7	4.76	5.16	0.4										●		○					
	WNMA080408	8.7	12.7	4.76	5.16	0.8										●	○	●	○				
	WNMA080412	8.7	12.7	4.76	5.16	1.2										●	○	●	○				
	WNMA080416	8.7	12.7	4.76	5.16	1.6										●	○	○	○				

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

CCMT/CCGT

菱形80° 有孔
Rhombic 80° with Hole



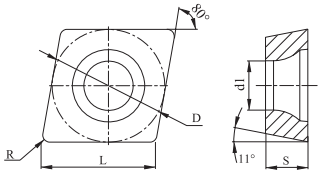
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CCMT060202-GP	6.5	6.35	2.38	2.8	0.2	○	○	○			○				○							○
	CCMT060204-GP	6.5	6.35	2.38	2.8	0.4	●	●	●			●				●		○					●
	CCMT060208-GP	6.5	6.35	2.38	2.8	0.8	○	●	●			○				●							○
	CCMT09T302-GP	9.7	9.525	3.97	4.4	0.2	○	○	●			○				○							○
	CCMT09T304-GP	9.7	9.525	3.97	4.4	0.4	●	●	●		●	●				●							●
	CCMT09T308-GP	9.7	9.525	3.97	4.4	0.8	●	●	●		○	●				●		●					○
	CCMT120404-GP	12.9	12.7	4.76	5.56	0.4	●	○	●			●				●							○
	CCMT120408-GP	12.9	12.7	4.76	5.56	0.8	●	●	●			●				●		●					○
	CCMT120412-GP	12.9	12.7	4.76	5.56	1.2	○	○	○			○				●							
	CCGT060202-GP	6.5	6.35	2.38	2.8	0.2					○												
	CCGT060204-GP	6.5	6.35	2.38	2.8	0.4					●												
	CCGT060208-GP	6.5	6.35	2.38	2.8	0.8					○			○									
	CCGT09T302-GP	9.7	9.525	3.97	4.4	0.2					○			○									
	CCGT09T304-GP	9.7	9.525	3.97	4.4	0.4					○												
	CCGT09T308-GP	9.7	9.525	3.97	4.4	0.8					○			○									
	CCGT120404-GP	12.9	12.7	4.76	5.56	0.4					○												
	CCGT120408-GP	12.9	12.7	4.76	5.56	0.8					○												

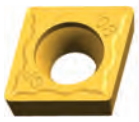
●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

CPMT/CPGT

菱形80° 有孔
Rhombic 80° with Hole



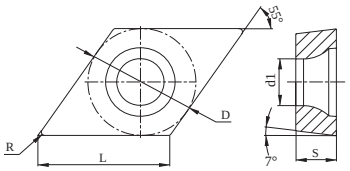
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	CPMT120412-GP	12.9	12.7	4.76	5.56	1.2	○	○	○			○				○							
	CPGT060204-GP	6.5	6.35	2.38	2.8	0.4					○			○									
	CPGT060208-GP	6.5	6.35	2.38	2.8	0.8					○												
	CPGT09T302-GP	9.7	9.525	3.97	4.4	0.2					○												
	CPGT09T304-GP	9.7	9.525	3.97	4.4	0.4					○			○									
	CPGT09T308-GP	9.7	9.525	3.97	4.4	0.8					○												
	CPGT120404-GP	12.9	12.7	4.76	5.56	0.4					○												
	CPGT120408-GP	12.9	12.7	4.76	5.56	0.8					○												

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

DCMT/DCGT

菱形55° 有孔
Rhombic 55° with Hole



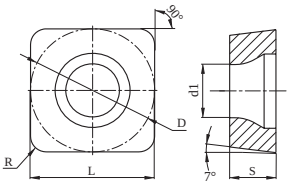
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	DCMT070202–GP	7.8	6.35	2.38	2.8	0.2	○	○	○			○				○							○
	DCMT070204–GP	7.8	6.35	2.38	2.8	0.4	○	●	●			●				●							○
	DCMT070208–GP	7.8	6.35	2.38	2.8	0.8	○	○	●			○				○							○
	DCMT11T302–GP	11.6	9.525	3.97	4.4	0.2	○	○	●			○				○							●
	DCMT11T304–GP	11.6	9.525	3.97	4.4	0.4	●	●	●		○	●				●		○					●
	DCMT11T308–GP	11.6	9.525	3.97	4.4	0.8	●	●	●		○	●				●							●
	DCMT150404–GP	15.5	12.7	4.76	5.56	0.4	○	○	○			○				○							
	DCMT150408–GP	15.5	12.7	4.76	5.56	0.8	○	○	○			○				○							
	DCMT150412–GP	15.5	12.7	4.76	5.56	1.2	○	○	○			○				○							
	DCGT070202–GP	7.8	6.35	2.38	2.8	0.2					○												
	DCGT070204–GP	7.8	6.35	2.38	2.8	0.4					○			○									
	DCGT070208–GP	7.8	6.35	2.38	2.8	0.8					○												
	DCGT11T302–GP	11.6	9.525	3.97	4.4	0.2					○												
	DCGT11T304–GP	11.6	9.525	3.97	4.4	0.4					●												
	DCGT11T308–GP	11.6	9.525	3.97	4.4	0.8					○												

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

SCMT

正方形90° 有孔
Square 90° with Hole



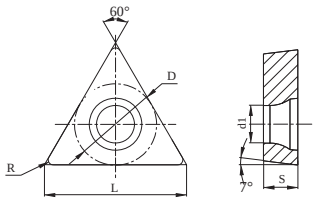
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SCMT09T304–GP	9.525	9.525	3.97	4.4	0.4	○	○	●			○				●							○
	SCMT09T308–GP	9.525	9.525	3.97	4.4	0.8	○	○	●			○				●							○
	SCMT120404–GP	12.7	12.7	4.76	5.56	0.4	○	○	●			○				○							○
	SCMT120408–GP	12.7	12.7	4.76	5.56	0.8	○	○	●			○				●							○

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

TCMT/TCGT

三角形60° 有孔
Triangle 60° with Hole



订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated													硬质合金 Uncoated			金属陶瓷 Cermet
	L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
TCMT090204–GP	9.6	5.56	2.38	2.5	0.4	○	○	●			○				●							○
TCMT110202–GP	11	6.35	2.38	2.8	0.2	○	○	○			○				○							○
TCMT110204–GP	11	6.35	2.38	2.8	0.4	●	●	●			●				●							●
TCMT110208–GP	11	6.35	2.38	2.8	0.8	○	○	●			●				●							○
TCMT16T304–GP	16.5	9.525	3.97	4.4	0.4	●	●	●		○	○				●		●					○
TCMT16T308–GP	16.5	9.525	3.97	4.4	0.8	○	●	●		○	○				●		○					○
TCMT16T312–GP	16.5	9.525	3.97	4.4	1.2		○								○							
TCMT220408–GP	22	12.7	4.76	5.56	0.8	○	○	●			○				●							
TCGT090204–GP	9.6	5.56	2.38	2.5	0.4					○												
TCGT110202–GP	11	6.35	2.38	2.8	0.2					○												
TCGT110204–GP	11	6.35	2.38	2.8	0.4					○												
TCGT110208–GP	11	6.35	2.38	2.8	0.8					○												
TCGT16T304–GP	16.5	9.525	3.97	4.4	0.4					○												
TCGT16T308–GP	16.5	9.525	3.97	4.4	0.8					●												

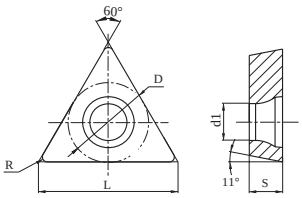


●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

TPGT

三角形60° 有孔
Triangle 60° with Hole



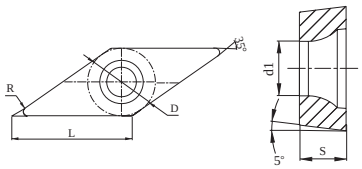
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	TPGT110204–GP	11	6.35	2.38	2.8	0.4					○												
	TPGT110208–GP	11	6.35	2.38	2.8	0.8					○												
	TPGT16T304–GP	16.5	9.525	3.97	4.4	0.4					○												
	TPGT16T308–GP	16.5	9.525	3.97	4.4	0.8					○												

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

VBMT

菱形35° 有孔
Rhombic 35° with Hole

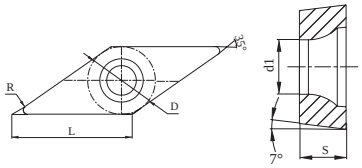


订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	VBMT160404–GP	16.6	9.525	4.76	4.4	0.4	●	○	○		●	●				○							●
	VBMT160408–GP	16.6	9.525	4.76	4.4	0.8	○	○	○		○	●				○							●

●标准库存 Stock ○需预定 Available upon Order

VCMT/VCGT

菱形35° 有孔
Rhombic35° with Hole



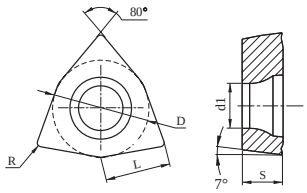
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	VCMT110304–GP	11.2	6.35	3.18	2.8	0.4	○	●	●			○				○							○
	VCMT160404–GP	16.6	9.525	4.76	4.4	0.4	●	●	●			○				●							●
	VCMT160408–GP	16.6	9.525	4.76	4.4	0.8	○	●	●			○				●							○
	VCGT110304–GP	11.2	6.35	3.18	2.8	0.4					○												
	VCGT160404–GP	16.6	9.525	4.76	4.4	0.4					○			○									
	VCGT160408–GP	16.6	9.525	4.76	4.4	0.8					○												

●标准库存 Stock ○需预定 Available upon Order

车削刀片(正型)
Turning Inserts(Positive)

WCMT

六边形80° 有孔
Trigon 80° with Hole



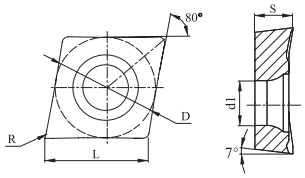
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	WCMT06T304–GP	6.5	9.525	3.97	4.4	0.4	○	○	○			○				○							○
	WCMT06T308–GP	6.5	9.525	3.97	4.4	0.8	○	○	●			○				○							○

●标准库存 Stock ○需预定 Available upon Order

铝材车削刀片
Turning Inserts for Aluminum

CCGX

菱形80° 有孔
Rhombic 80° with Hole

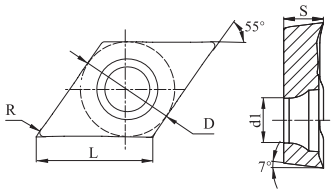


订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
	L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
CCGX060202-AL	6.5	6.35	2.38	2.8	0.2															○		
CCGX060204-AL	6.5	6.35	2.38	2.8	0.4														○	○	○	
CCGX060208-AL	6.5	6.35	2.38	2.8	0.8														○	○	○	
CCGX09T302-AL	9.7	9.525	3.97	4.4	0.2														○	○	○	
CCGX09T304-AL	9.7	9.525	3.97	4.4	0.4														○	●	○	
CCGX09T308-AL	9.7	9.525	3.97	4.4	0.8														○	●	○	
CCGX120402-AL	12.9	12.7	4.76	5.5	0.2														●	○		
CCGX120404-AL	12.9	12.7	4.76	5.5	0.4														○	●	○	
CCGX120408-AL	12.9	12.7	4.76	5.5	0.8														○	●	○	

●标准库存 Stock ○需预定 Available upon Order

DCGX

菱形55° 有孔
Rhombic 55° with Hole



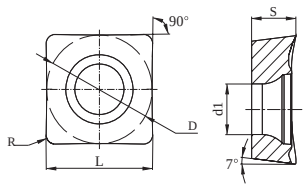
订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
	L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
DCGX070202-AL	7.8	6.35	2.38	2.8	0.2															○		
DCGX070204-AL	7.8	6.35	2.38	2.8	0.4														○	●	○	
DCGX070208-AL	7.8	6.35	2.38	2.8	0.8														○	○	○	
DCGX11T302-AL	11.6	9.525	3.97	4.4	0.2														○	●	○	
DCGX11T304-AL	11.6	9.525	3.97	4.4	0.4														○	●	○	
DCGX11T308-AL	11.6	9.525	3.97	4.4	0.8														○	○	○	

●标准库存 Stock ○需预定 Available upon Order

铝材车削刀片
Turning Inserts for Aluminum

SCGX

正方形90° 有孔
Square 90° with Hole



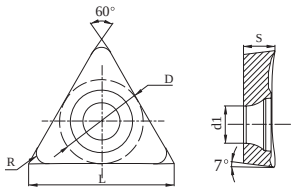
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	SCGX09T304–AL	9.525	9.525	3.97	4.4	0.4														○	●	○	
	SCGX09T308–AL	9.525	9.525	3.97	4.4	0.8														○	●	○	
	SCGX120404–AL	12.7	12.7	4.76	5.5	0.4														○	●	○	
	SCGX120408–AL	12.7	12.7	4.76	5.5	0.8														○	●	○	

●标准库存 Stock ○需预定 Available upon Order

铝材车削刀片
Turning Inserts for Aluminum

TCGX

三角形60° 有孔
Triangle 60° with Hole



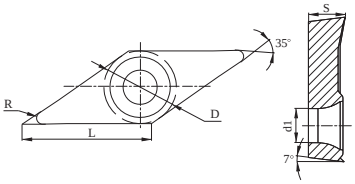
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	TCGX090204–AL	9.6	5.56	2.38	2.5	0.4														○	●	○	
	TCGX110202–AL	11	6.35	2.38	2.8	0.2														○	○		
	TCGX110204–AL	11	6.35	2.38	2.8	0.4														○	○	○	
	TCGX110208–AL	11	6.35	2.38	2.8	0.8														○	●	○	
	TCGX16T302–AL	16.5	9.525	3.97	4.4	0.2														○	○		
	TCGX16T304–AL	16.5	9.525	3.97	4.4	0.4														○	●	○	
	TCGX16T308–AL	16.5	9.525	3.97	4.4	0.8														○	●	○	

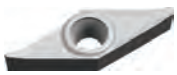
●标准库存 Stock ○需预定 Available upon Order

铝材车削刀片
Turning Inserts for Aluminum

VCGX

菱形35° 有孔
Rhombic 35° with Hole



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated												硬质合金 Uncoated			金属陶瓷 Cermet
		L	D	S	d1	R	GP1115	GP1125	GP1225	GP1135	GP3125	GM1125	GM3115	GM3125	GS3115	GK1115	GK1120	GK1125	GK1130	GN9115	GN9125	GN9135	GP91TF
	VCGX110302–AL	11.2	6.35	3.18	2.8	0.2															○		
	VCGX110304–AL	11.2	6.35	3.18	2.8	0.4														○	●	○	
	VCGX110308–AL	11.2	6.35	3.18	2.8	0.8														○	●	○	
	VCGX160402–AL	16.6	9.525	4.76	4.4	0.2														○	○		
	VCGX160404–AL	16.6	9.525	4.76	4.4	0.4														○	●	○	
	VCGX160408–AL	16.6	9.525	4.76	4.4	0.8														○	●	○	
	VCGX160412–AL	16.6	9.525	4.76	4.4	1.2														○	●	○	
	VCGX220512–AL	22.1	12.7	5.56	5.6	1.2														○	●	○	
	VCGX220516–AL	22.1	12.7	5.56	5.6	1.6														○	●	○	
	VCGX220530–AL	22.1	12.7	5.56	5.6	3.0														○	●	○	

●标准库存 Stock ○需预定 Available upon Order

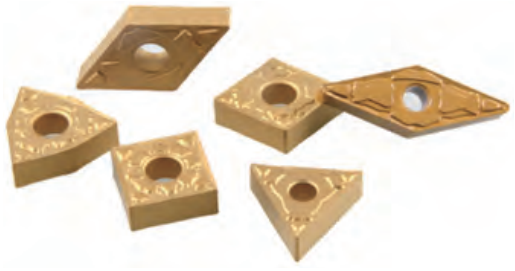
钢材车削刀片
Turning Inserts of Steels

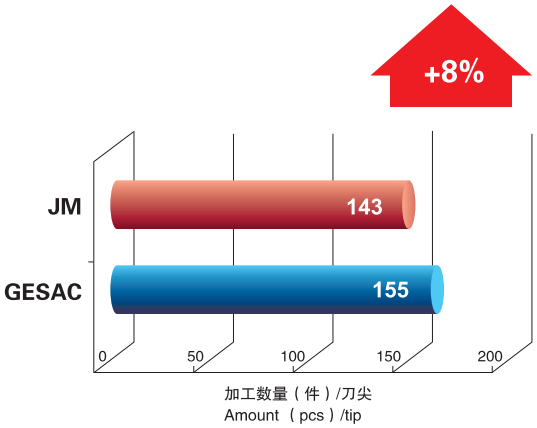
QF槽型+GP1115 牌号
QF Geometry and GP1115 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	QCM8（HB160–200）
加工方式 Processing Way	端面、外圆精车湿切 Longitudinal and Face Finishing, Wet
切削参数 Cutting Parameters	Vc=155m/min, f=0.12mm/r, ap=0.4mm
使用刀片 Inserts	TNMG160404–QF–GP1115





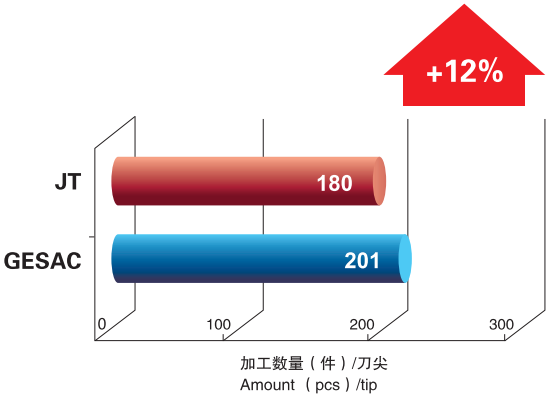


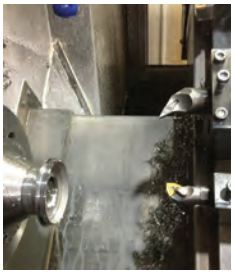


Case 2

工件材质 Workpiece Material	Cr15（HB160–180）
加工方式 Processing Way	端面、外圆精车、湿切 Longitudinal and Face Finishing, Wet
切削参数 Cutting Parameters	Vc=285m/min, fz=0.2mm/r, ap =0.55mm
使用刀片 Inserts	CNMG120404–QF–GP1115







钢材车削刀片
Turning Inserts of Steels

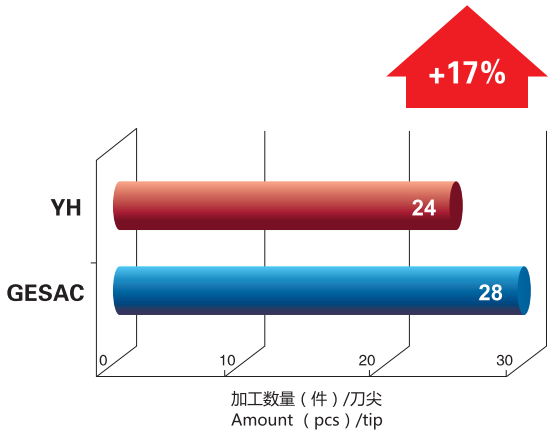
QM槽型+GP1225 牌号
QM Geometry and GP1225 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	55#（HB180–220）
加工方式 Processing Way	端面、外圆粗加工、湿切 Longitudinal and Face Roughing, Wet
切削参数 Cutting Parameters	Vc=100m/min, f=0.3mm/r, ap=1.5mm
使用刀片 Inserts	WNMG0804012–QM–GP1225



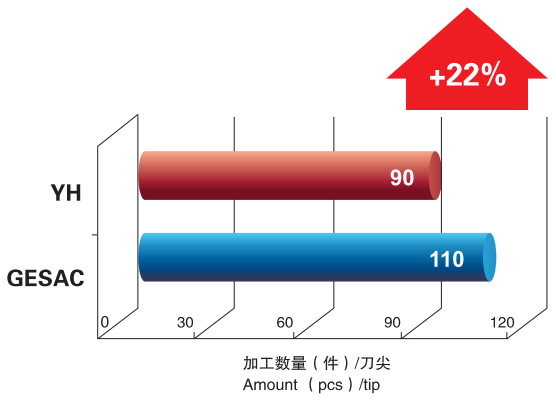




Case 2

工件材质 Workpiece Material	S55C (HB180–220)
加工方式 Processing Way	外圆、端面半精车、湿切 Longitudinal and Face Semi–finishing,Wet
切削参数 Cutting Parameters	Vc=500m/min, f=0.2mm/r, ap=1mm
使用刀片 Inserts	WNMG080408–QM–GP1225







钢材车削刀片
Turning Inserts of Steels

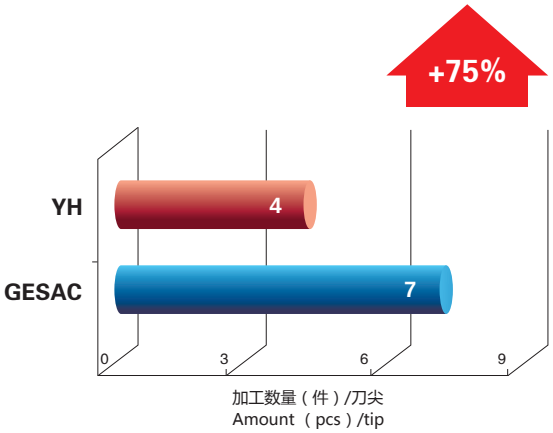
QR槽型+GP1225 牌号
QR Geometry and GP1225 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	40Cr（HB174–229）
加工方式 Processing Way	端面、外圆粗加工、湿切 Longitudinal and Face Roughing, Wet
切削参数 Cutting Parameters	Vc=271m/min, f=0.25mm/r, ap=2mm
使用刀片 Inserts	CNMG120408–QR–GP1225



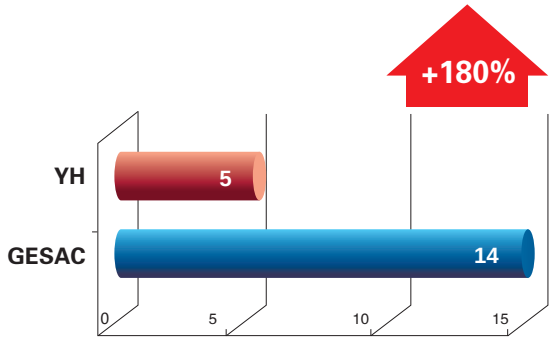




Case 2

工件材质 Workpiece Material	20CrMnTi（HB159–201）
加工方式 Processing Way	端面、外圆粗加工、湿切 Longitudinal and Face Roughing, Wet
切削参数 Cutting Parameters	Vc=200m/min, f=0.2mm/r, ap=5mm
使用刀片 Inserts	WNMG080408–QR–GP1225







钢材车削刀片
Turning Inserts of Steels

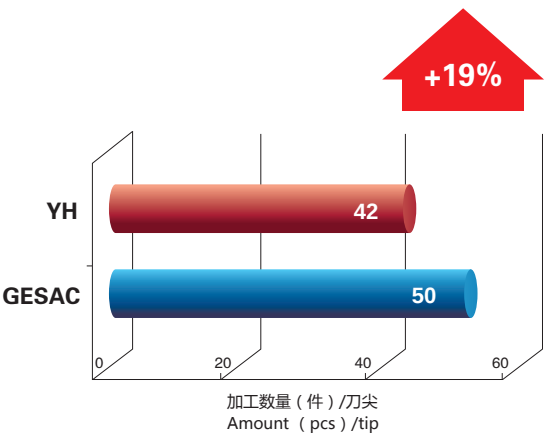
QH槽型+GP1225 牌号
QH Geometry and GP1225 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	Cr13（HB200–220）
加工方式 Processing Way	外圆重载车削加工、干切 Ongitudinal Heavy Cutting, Wet
切削参数 Cutting Parameters	Vc =114 m/min, f = 0.6 mm/r, ap = 7 mm
使用刀片 Inserts	SNMM250924–QH–GP1225



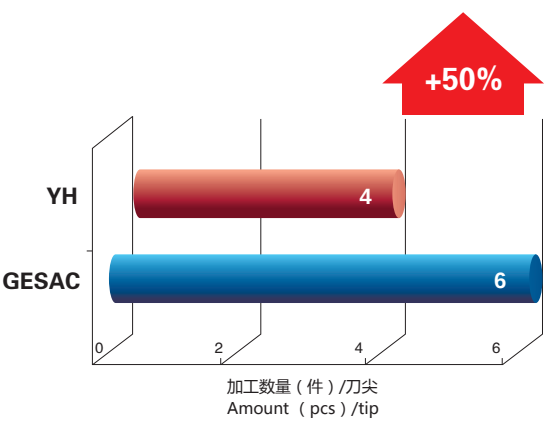


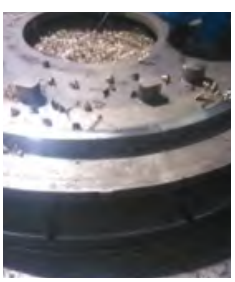


Case 2

工件材质 Workpiece Material	35CrMo（HB230–260)
加工方式 Processing Way	外圆重载车削加工、干切 Ongitudinal Heavy Cutting, Wet
切削参数 Cutting Parameters	Vc=80m/min, f=0.6mm/r, ap=6mm
使用刀片 Inserts	CNMM250924–QH–GP1225







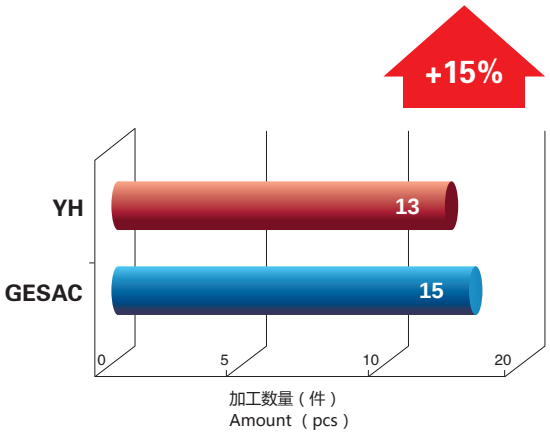
不锈钢车削刀片
Turning Inserts of Stainless Steel

SF槽型+GS3115 牌号
SF Geometry and GS3115 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	304
加工方式 Processing Way	车削、精加工、湿切 Turning, Finishing, Wet
切削参数 Cutting Parameters	Vc=200m/min, f=0.15mm/r, ap =0.5mm
使用刀片 Inserts	WNMG080404–SF–GS3115







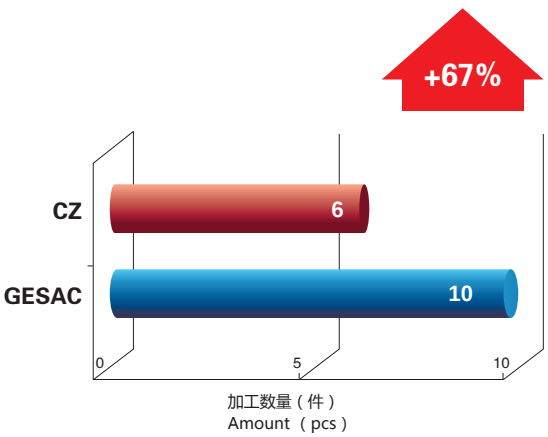
不锈钢车削刀片
Turning Inserts of Stainless Steel

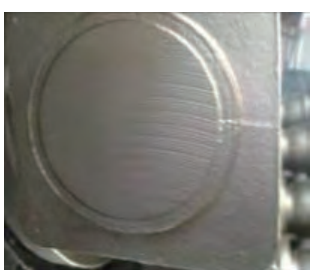
SM槽型+GM3125 牌号
SM Geometry and GM3125 Grade

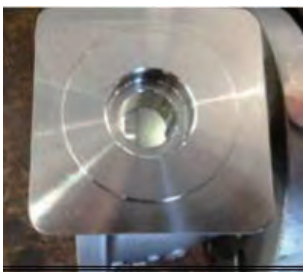
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	316
加工方式 Processing Way	车削、半精加工、湿切 Turning, Semi–finishing, Wet
切削参数 Cutting Parameters	Vc=235m/min, f=0.2mm/r, ap =1.5mm
使用刀片 Inserts	CNMG120404–SM–GM3125

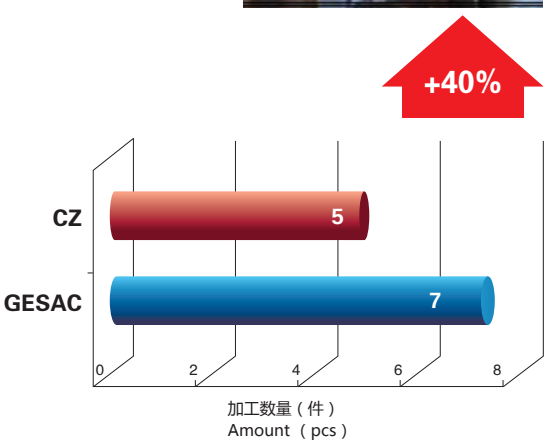






Case 2

工件材质 Workpiece Material	304
加工方式 Processing Way	车削、半精加工、湿切 Turning, Semi–finishing, Wet
切削参数 Cutting Parameters	Vc=200m/min, f=0.1–0.15mm/r, ap =1.5mm
使用刀片 Inserts	CNMG120404–SM–GM3125







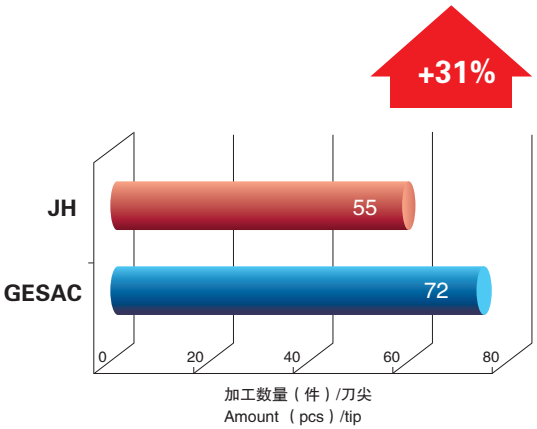
铸铁车削刀片
Turning Inserts of Cast Iron

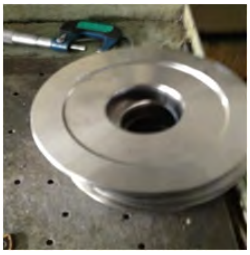
UK槽型+GK1125 牌号
UK Geometry and GK1125 Grade

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	HT250（HB190）
加工方式 Processing Way	外圆、端面精加工、湿切 Ongitudinal and Face Finishing, Wet
切削参数 Cutting Parameters	Vc=220m/min, f=0.3mm/r, ap=1mm
使用刀片 Inserts	CNMG120408–UK–GK1125







铸铁车削刀片
Turning Inserts of Cast Iron

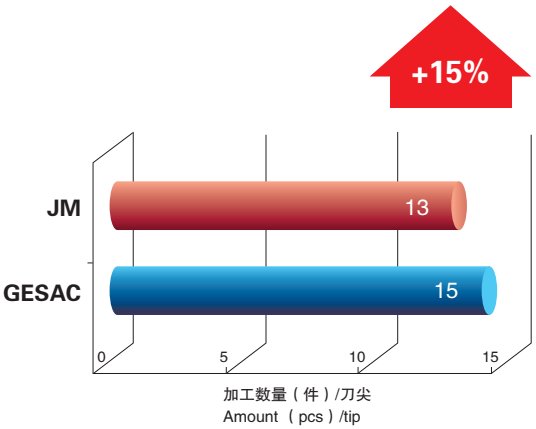
HK槽型+GK1125 牌号
HK Geometry and GK1125 Grade

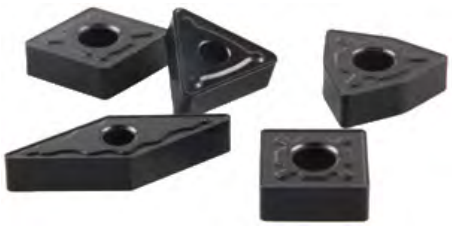
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	QT500–7（HB200）
加工方式 Processing Way	外圆、端面粗加工、干切 Ongitudinal and Face Roughing, Wet
切削参数 Cutting Parameters	Vc=380m/min, f=0.25mm/r, ap=2.5mm
使用刀片 Inserts	WNMG080412–HK–GK1125







铝合金车削刀片
Turning Inserts of Aluminium Alloy

AL槽型+GN9125 牌号
AL Geometry and GN9125 Grade

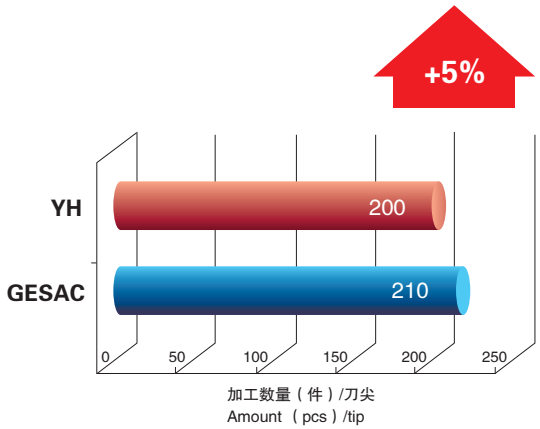
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	A356
加工方式 Processing Way	外圆车削、半精加工、干切 Ongitudinal Semi– finishing, Wet
切削参数 Cutting Parameters	Vc =1600 m/min, f = 0.5 mm/r, ap = 1.5 mm
使用刀片 Inserts	VCGX220530–AL–GN9125







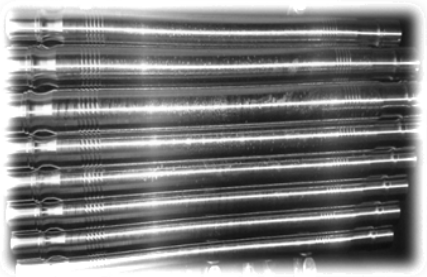


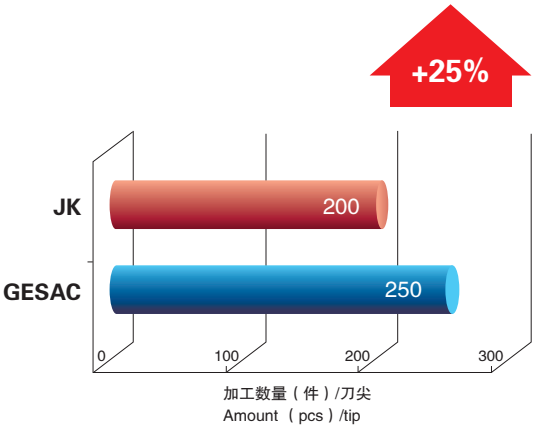
金属陶瓷车削刀片
CERMET Insert Grade for Turning

加工案例
Case Studies

Case 1

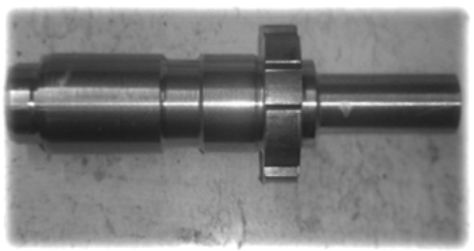
工件材质 Workpiece Material	40Cr
加工方式 Processing Way	车削、半精加工、湿切 Turning, Semi-finishing, Wet
切削参数 Cutting Parameters	Vc=200m/min, f=0.24mm/r, ap =1.0mm
使用刀片 Inserts	WNMG160404-QF-GP91TF

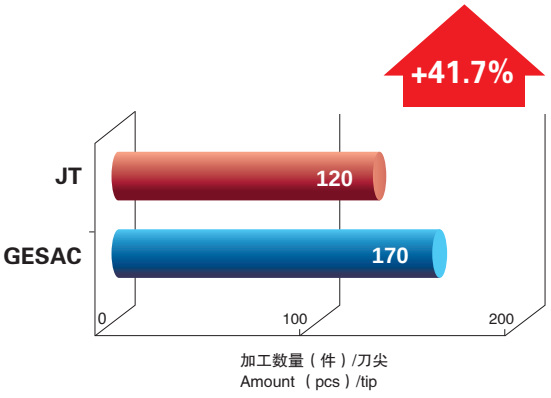




Case 2

工件材质 Workpiece Material	20CrMo
加工方式 Processing Way	车削、精加工、湿切 Turning, Finishing, Wet
切削参数 Cutting Parameters	Vc=120m/min, f=0.1mm/r, ap =0.5mm
使用刀片 Inserts	TNMG160404-QM-GP91TF



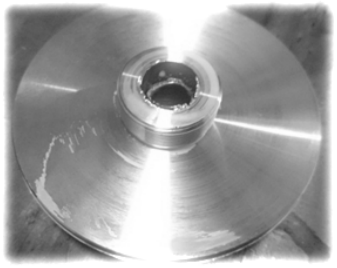


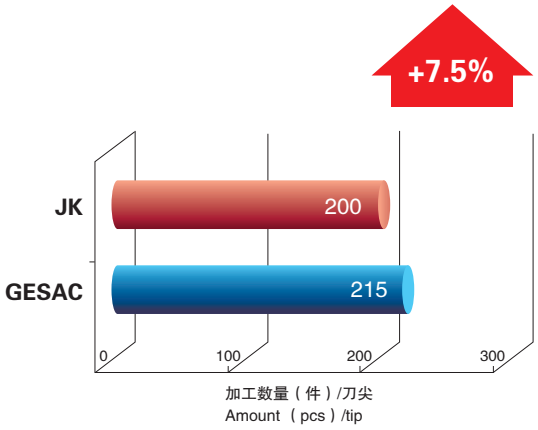
金属陶瓷车削刀片
CERMET Insert Grade for Turning

加工案例
Case Studies

Case 3

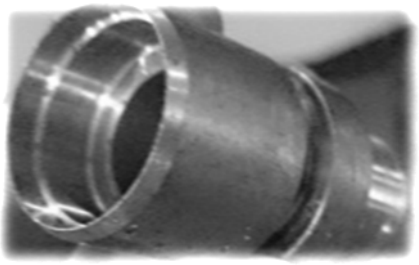
工件材质 Workpiece Material	45#
加工方式 Processing Way	车削、精加工、湿切 Turning, Finishing, Wet
切削参数 Cutting Parameters	Vc=100–350m/min, f=400mm/min, ap =0.1mm
使用刀片 Inserts	WNMG160404–QF–GP91TF

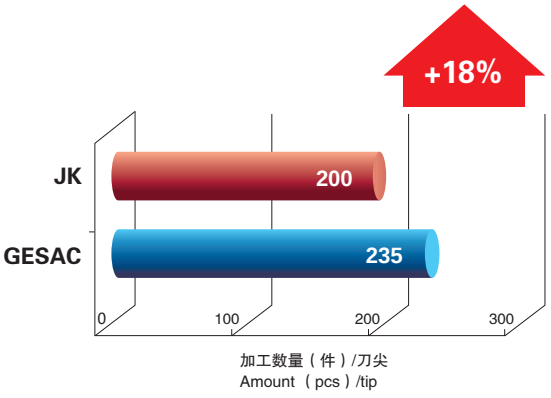


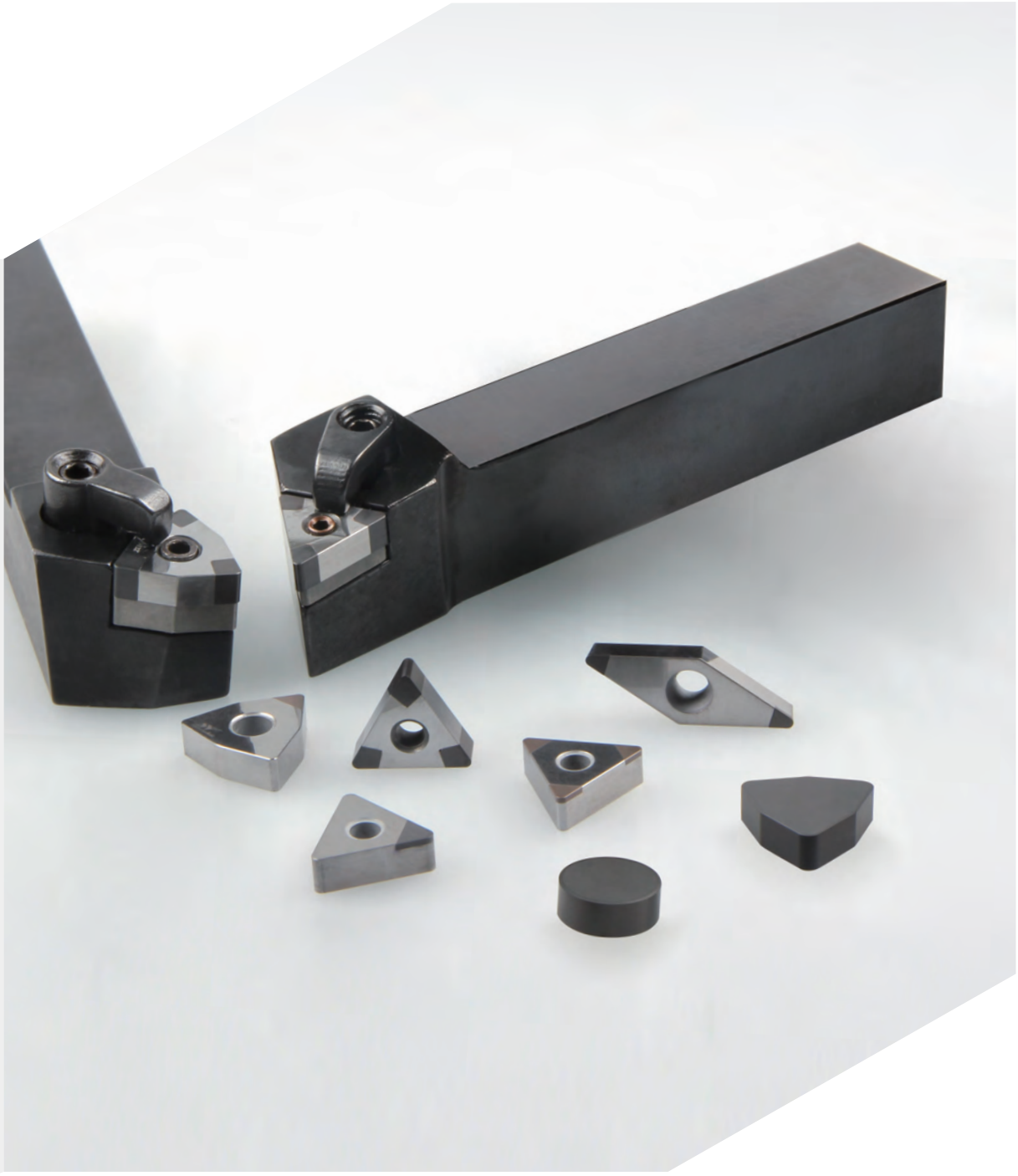


Case 4

工件材质 Workpiece Material	45#
加工方式 Processing Way	车削、精加工、湿切 Turning, Finishing, Wet
切削参数 Cutting Parameters	Vc=150m/min, f=0.15mm/r, ap =0.6mm
使用刀片 Inserts	CCMT09T304–GP–GP91TF







PCBN/PCD TURNING TOOLS

PCBN/PCD 车削刀具

PCBN/PCD车削刀片牌号简介
PCBN/PCD Turning Insert Grades

(一) 加工K类材料用PCBN牌号
PCBN Grades for K Applications

牌号 Grade	加工类型 Cutting Range	特点 Advantages	主要用途 Applications
GB9121 (YP)	精加工 Finishing	• 细颗粒，高含量，金属陶瓷结合剂PCBN刀片，可实现材料的连续到重断续加工 Fine grain size, high CBN content and cermet binder system of PCBN inserts, which can realize continuous to heavy interrupted cutting. • 具有优异的抗冲击性及化学稳定性 Superior impact resistance and chemical stability.	• 铸铁及粉末冶金材料的连续精加工 Suitable for finish cutting of Cast iron and Sintered Powder Metal. • 工具钢及硬化钢的铣削 Suitable for milling of tool steels and hardened steels.
NEW GB9123 (YP)	半精加工 Semi–finishing	• 细粒度，高含量，金属结合剂PCBN刀片 Fine grain size, high CBN content and metal binder system. • 高耐磨性，优异的抗冲击强度，出色的刃口质量及加工表面精度 High abrasion resistance, Outstanding impact strength, excellent edge quality and fine surface finishes.	• 适用于断续或粗车珠光体灰铸铁 Suitable for light interrupted or Rough cutting of pearlitic cast iron. • 适用于工具或模具钢的铣削 Suitable for milling of tool steels or die steels. • 适用于镍基和钴基超合金的精加工 Suitable for finish cutting of Ni and Co–based supper alloys.
NEW GB9131 (YS/YZ)	精–半精加工 Finishing and Semi–finishing	• 混合粒度结构，高含量整体CBN Solid CBN with mixed grain size distribution and high CBN content. • 具有良好的抗冲击性能和耐化学磨损性，通用性好 High impact resistance and chemical wear resistance which has universal use.	• 高硬度合金铸铁、灰铸铁材料的半精加工与精加工 Suitable for semi–finishing and finishing of high hard alloy cast iron and gray cast iron. • 淬火钢等材料的半精加工与精加工 Suitable for semi–finishing and finishing of hardened steels.
NEW GB9132 (YS/YZ)	精加工 Finishing	• 细粒度，高含量整体CBN刀片 Solid CBN with fine grain size and high CBN content. • 具有优异的耐磨性及抗崩刃性 Excellent abrasion resistance and chip resistance.	• 灰铸铁等材料的粗精加工 Suitable for roughing and finishing of gray cast iron. • 高硬度合金铸铁等材料的粗精加工 Suitable for roughing and finishing of high hard alloy cast iron.
NEW GB9141 (YS)	重度粗加工 Heavy Roughing	• 不规则CBN颗粒烧结体 Irregularly CBN grain appearance. • 具有优异的抗冲击性能和抗崩刃性 Excellent impact and chip resistance.	• 高硬度合金铸铁、灰铸铁等材料的粗精加工 Suitable for heavy roughing or finishing of high hard alloy cast iron, gray cast iron. • 高锰钢等材料的精加工 Suitable for roughing and finishing of high manganese steels.

(二) 加工 H 类材料用PCBN牌号
PCBN Grades for H Applications

牌号 Grade	加工类型 Cutting Range	特点 Advantages	主要用途 Applications
GB9420 (YP)	精加工 Finishing	• 细粒度，低含量，陶瓷结合剂PCBN刀片 Fine grain size, lower CBN content, ceramic binder system. • 出色的耐磨性及化学稳定性，高的断裂韧性 Excellent abrasion resistance and chemical stability, high fracture toughness.	• 适用于HRC＞50钢材料的连续到轻断续加工，在硬车方面可代替传统的氧化铝砂轮磨削，实现以车代磨 It was designed for continuous and light interrupted finish machining of hardened steels (>50 HRC),and can successfully replace conventional Aluminum oxide grinding in hard turning operations.
GB9523 (YP)	精加工 Finishing	• 细粒度，低含量，陶瓷结合剂PCBN刀片 Fine grain size, lower CBN content, ceramic binder system. • 具有出色的耐磨性及优良的抗崩刃性 Excellent abrasion resistance and chip resistance.	• 大部分汽车用钢高速连续精加工 Suitable for finish cutting of automotive steels in high speed, continuous conditions. • 冷作工具钢及阀座合金钢 Suitable for cool-work steels and Valve seat alloy steels.
NEW GB9241 (YS)	半精加-粗加工 Semi-finishing and Roughing	• 高含量，粗粒度整体CBN烧结体 Solid CBN is sintered by high percentage coarse grains. • 具有优异的抗冲击性能 Excellent impact resistance.	• 适用于淬火钢等材料的断续粗加工 Suitable for roughing of hardened steels under interrupted conditions. • 铸造高速钢 Suitable for cutting of cast high speed steels.
NEW GB9310 (YS/YZ)	精加工 Finishing	• 细粒度，低含量整体CBN Solid CBN is sintered by low content micro grains. • 具有优异的耐磨性和后刀面抗磨损性能，良好的表面加工质量 Excellent wear resistance, flank wear resistance and good surface quality.	• 适用于合金钢等材料淬火后半精和精加工 Suitable for semi-finishing and finishing of quenched alloy steels.

(三) 加工 N 类材料用PCD牌号
PCD Grades for N Applications

牌号 Grade	加工类型 Cutting Range	特点 Advantages	主要用途 Applications
GD9700 (YP)	精加工–粗加工 Finishing and Roughing	• 高密度烧结超微粒的金刚石，发挥最高的耐磨性与耐崩损性，锋利性优越 High density sintered by super fine diamond grains, have highest wear resistance and fracture resistance, excellent shape edge also.	• 适合于铝合金的铣削和粗加工；相比较其他细颗粒PCD，其适用于中高硅铝合金加工,钛及钛合金加工；同时适用于要求镜面加工效果的场合 Suitable for milling and rough cutting of aluminumalloy.Compare to other fine grain PCD material, it is suitable for machining medium and high silicon aluminum alloy，titanium and composites. Itis also suitable for machining where mirror surface finishes are required.
GD9852 (YP)	精加工–粗加工 Finishing and Roughing	• 中粒度PCD刀片，具有较好的耐磨性及放电性能，良好的抗冲击性能，通用性较强 Medium grain PCD inserts, have good wear resistance and discharge ability, high fracture resistance, and good for general use.	• 主要用于中低硅铝合金，铜及铜合金，硬质合金及陶瓷预烧坯等材料的加工 Mainly use for middle or low silicon aluminum alloy, copper or copper alloy, cemented carbide and ceramic presintered compact, etc.
GD9900 (YP)	精加工–半精加–粗加工 Finishing and Semi–finishing and Roughing	• 混合粒度PCD刀片，兼具优异的耐磨性及良好的刃口质量，很好的热稳定性 Mixed grain size distribution, combination of excellent wear resistance, high edge qualityand high thermal stability.	• 主要用于高硅铝合金，碳纤维及玻璃纤维复合片材料，MMC材料及双金属材料的加工 Application areas: Machining of high silicon aluminum, CFRP, GFRP, MMC and bi–metal alloy.
GD9950 (YP)	半精加–粗加工 Semi–finishing and Roughing	• 大粒度PCD刀片，极高的耐磨性及出色的抗冲击强度，超长的刀具寿命，表面光洁度一般 Coarse grain size, high wear resistance and excellent impact strength, have longer tool life but moderate surface quality.	• 主要用于粗车断续加工硅含量大于14%铝合金，硬质合金,烧结陶瓷材料和其他耐磨材料 Suitable for interrupted cutting of high silicon Al alloy (Si ＞14%)(ex. Milling), Tungsten carbide, sintered ceramic and other abrasive materials.

PCBN/PCD车削刀片型号的表示规则

PCBN/PCD Turning Indexable Inserts Identification System

代号 Symbol	形状 Shape	刀尖（度） Corner Angle	图形 Figure
S	正 方 形 Square	90°	□
T	正三角形 Triangle	60°	△
C	菱形 Rhombic	80°	◇
D		55°	
V		35°	
W	六 边 形 Trigon	80°	⬡
L	长 方 形 Rectangle	90°	▭
A	平行四边形 Parallelogram	85°	▱
R	圆 形 Round	--	○

③形状代号 Shape Symbol

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



④后角代号 Clearance Angle Symbol

代号 Symbol (级)	公差(毫米) Tolerance (mm) 刀尖高 Corner Height(m)	厚度 Thickness(s)	内切圆 I.C.Size(Ød)
A	±0.005 ±0.005	±0.025 ±0.025	±0.025 ±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
K	±0.013	±0.025	±0.05~ ±0.13
L	±0.025	±0.025	±0.05~ ±0.13
M	±0.08~ ±0.18	±0.13	±0.05~ ±0.13

⑤精度代号 Tolerance Symbol

①	②	③	④	⑤	⑥
YP	1	C	N	G	A

①刀片形式 Insert Series

代号 Symbol	图示 Sample
YP	
YZ	
YS	

②切削刃刃数 Cutting Edge

代号 Symbol	刃数 Edge
1	1
2	2
3	3
4	4
0	其他 Other

⑥断屑槽.孔代号 Hole/Chipbreaker Symbol

代号 Symbol	有无孔 hole	孔的形状 Hole Shape	断屑槽 Chipbreaker	形状 Shape
N	无 Without	——	无 Without	
A (G)	有 With	圆柱孔 With Hole	无 Without	
W (T)	有 With	圆柱孔单面倒角 40° ~60°	无 Without	
X	——	——	——	

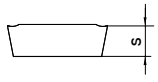
R 代号 Symbol	S 代号 Symbol	C 代号 Symbol	W 代号 Symbol	T 代号 Symbol	D 代号 Symbol	V 代号 Symbol	K 代号 Symbol	内切圆直径 IC Size(mm)
	03	03		06	04			3.97
	04	04		08	05			4.76
05								5
	05	05	03	09	06			5.56
06								6
	06	06	04	11	07	11		6.35
	07	08	05	13	09			7.94
08								8
09	09	09	06	16	11	16	16	9.525
10								10
12								12
12	12	12	08	22	15	22		12.7
15	15	16	10	27	19			15.875
16								16
19	19	19	13	33	23			19.05
20								20
	22	22		38	27			22.225
25								25
25	25	25		44	31			25.4
31	31	32		55	38			31.75
31							——	32
⑦内切圆代号 Inscribed Circle Size Symbol（mm）								

⑦ ⑧ ⑨ ⑩

09 T3 04 Q3

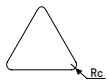
⑦ ⑧ ⑨ ⑩

⑧厚度代号
Thickness Symbol



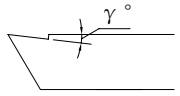
代号 Symbol	厚度 Thickness(mm)
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

⑨刀尖代号
Corner Symbol



代号 Symbol	刀尖半径 Corner–Rc(mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2

⑩前角代号
Rake Angle Symbol



代号 Symbol	前角代号 Rake Angle Symbol
Q5	5°
Q7	7°
无 Without	0°

PCBN刀具常用刃口形式
Commonly Used Cutting Edge Conditions of PCBN Tools



S

倒棱+钝化刃形
The Negative Land and Honing Cutting Edge Condition

切削刃强度和综合性能最好，CBN刀具应用最广泛的刃口，车削合金硬铸铁多用S10020，灰铸铁多用S02020，淬火钢多用S01020。

Both the strength and the comprehensive performance of this cutting edge are the best, and this edge is most widely used for CBN cutting tools.The cutting edge S10020 is used to turn hard alloy cast iron, and turning gray cast iron is S02020, turning hardened steel is S01020.



T

倒棱刃形
The Negative Land Cutting Edge Condition

倒棱有利于提高切削刃的抗冲击性能。与S刃口相比，有利于提高加工表面质量，有利于保证尺寸稳定性。

The negative land helps to improve the impact resistance of the cutting edges. Compared with S type cutting edge, the quality of the machined surface could be improved and the dimensional stability could be ensured.



E

钝化刃形
Honing by Er Cutting Edge Condition

钝化可减少微崩刃，有助于提高切削刃完整性。钝化越重，切削刃型越完好，强度越好，但切削抗力和切削热也会随之提高。系统刚性和机床功率足够或断续切削时可选用重钝化。

Honing can help to reduce micro–chipping and to protect the cutting edges.both the heavier honing and the more perfect cutting edges,the better strength will be improved. however, the cutting force and the cutting temperature will be also improved.Finally, the heavy honing would be selected under the condition that both the system rigidity and the machine power are enough, even if interrupted cutting.

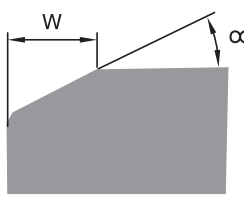


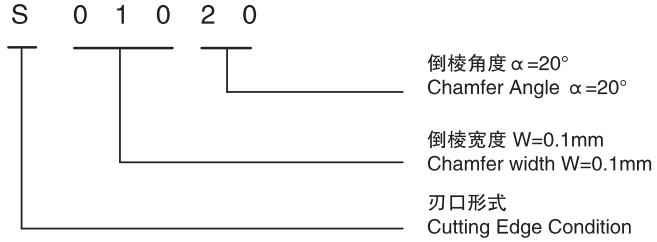
F

锋利刃形
Sharp Cutting Edge Condition

锋利刃口有助于提高加工表面质量，不易产生振纹。因为过于锋利造成耐用度稍差，因此只是在加工一般铸铁并要求较高表面精度时选用。多用于精车灰铸铁刹车盘。

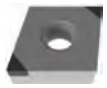
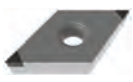
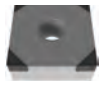
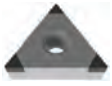
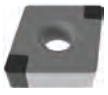
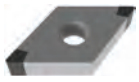
It is difficult to generate the chatter marks and easy to reduce the roughness of the machined surface if the sharp cutting edge would be used.But on the other hand the tool life would be reduced if the edges are over–sharped.consequently，this kind of edge is only adopted under the condition of cutting common cast iron and high precision surface requirement，such as finish turning gray cast iron brake discs.



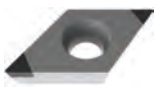


PCBN车削刀片一览表
Features of PCBN Turning Inserts

PCBN车削刀片（负型）
PCBN Turning Inserts (Negative)

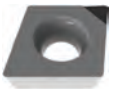
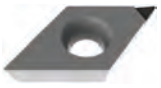
刀片形式 Insert Series	菱形80° Rhombic 80°	菱形55° Rhombic 55°	正方形90° Square 90°	三角形60° Triangle 60°	六边形80° Trigon 80°	菱形35° Rhombic 35°	圆形360° Round360°
YP							
	CNGA	DNGA	SNGA	TNGA	WNGA	VNGA	
	Page63	Page64	Page65	Page66	Page67	Page68	
YS							
	CNGN	DNGN	SNGN	TNGN	WNGN		RNGN
	Page69	Page70	Page71	Page72	Page73		Page74
YZ							
	CNGA	DNGA		TNGA	WNGA		
	Page75	Page76		Page77	Page78		

PCBN车削刀片（正型）
PCBN Turning Inserts (Positive)

刀片形式 Insert Series	菱形80° Rhombic 80°	菱形55° Rhombic 55°	正方形90° Square 90°	三角形60° Triangle 60°	六边形80° Trigon 80°	菱形35° Rhombic 35°	圆形360° Round360°
YP							
	CCGW	DCGW		TCGW		VBGW	
	Page79	Page81		Page82		Page84	
	CPGW			TPGW		VCGW	
	Page80			Page83		Page85	
YS							
			SCGN				RCGN
			Page86				Page41

PCD车削刀片一览表
Features of PCD Turning Inserts

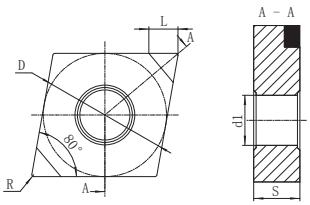
PCD车削刀片（正型）
PCD Turning Inserts (Positive)

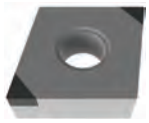
刀片形式 Insert Series	菱形80° Rhombic 80°	菱形55° Rhombic 55°	三角形60° Triangle 60°	菱形35° Rhombic 35°
YP				
	CCGW	DCGW	TCGW	VCGW
	Page88	Page90	Page91	Page93
	CPGW		TPGW	
	Page89		Page92	

PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

CNGA

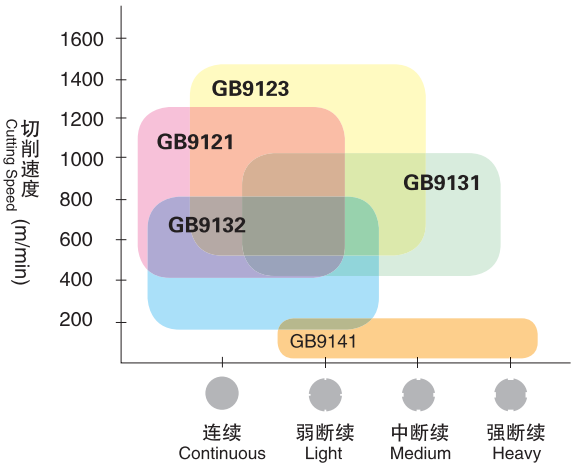
菱形80° 有孔
Rhombic 80° , with Hole



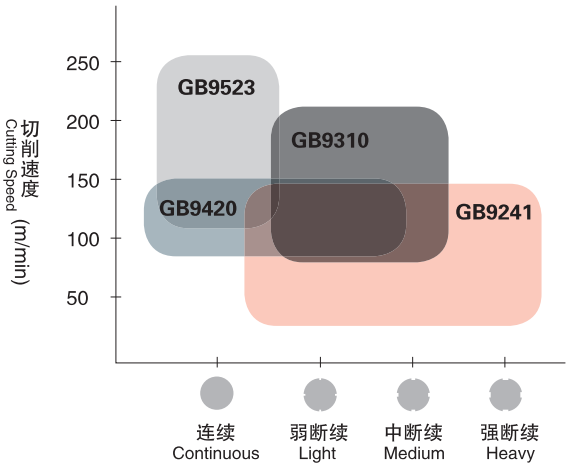
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	GB9123 NEW	GB9420	GB9523
	YP2CNGA120402	2	3.0	12.7	4.76	5.16	0.2	○	○	○	○
	YP2CNGA120404	2	3.0	12.7	4.76	5.16	0.4	●	○	●	○
	YP2CNGA120408	2	3.0	12.7	4.76	5.16	0.8	●	○	●	○
	YP2CNGA120412	2	3.0	12.7	4.76	5.16	1.2	●	○	●	○
	YP2CNGA120416	2	3.0	12.7	4.76	5.16	1.6	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



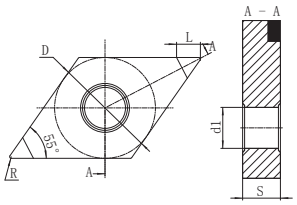
淬火钢加工牌号应用
Grades for H Applications

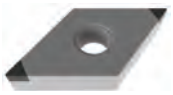


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

DNGA

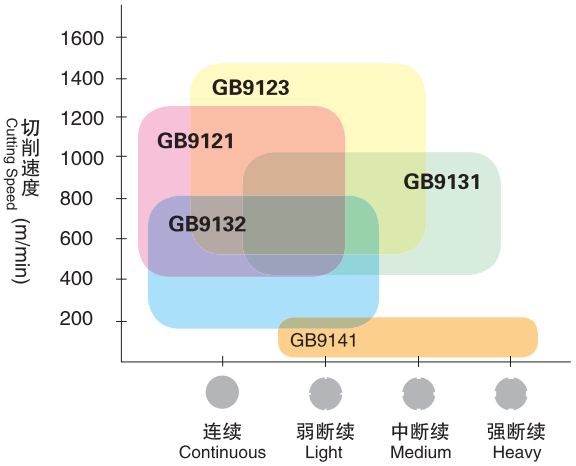
菱形55° 有孔
Rhombic 55° , with Hole



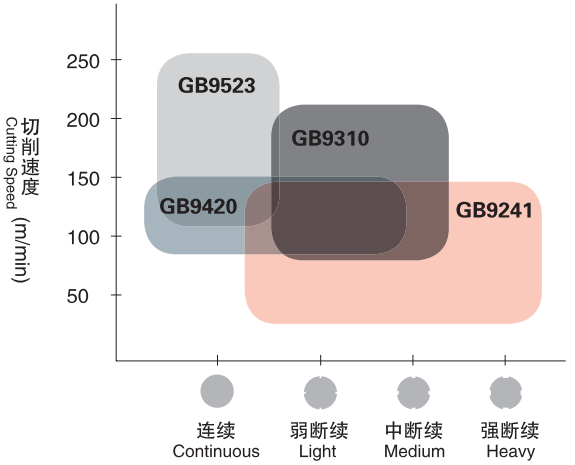
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP2DNGA150402	2	3.0	12.7	4.76	5.16	0.2	○	○	○	○
	YP2DNGA150404	2	3.0	12.7	4.76	5.16	0.4	●	○	●	○
	YP2DNGA150408	2	3.0	12.7	4.76	5.16	0.8	●	○	●	○
	YP2DNGA150412	2	3.0	12.7	4.76	5.16	1.2	●	○	●	○
	YP2DNGA150416	2	3.0	12.7	4.76	5.16	1.6	○	○	●	○
	YP2DNGA150604	2	3.0	12.7	6.35	5.16	0.4	○	○	○	○
	YP2DNGA150608	2	3.0	12.7	6.35	5.16	0.8	○	●	○	●
	YP2DNGA150612	2	3.0	12.7	6.35	5.16	1.2	○	●	○	●
	YP2DNGA150616	2	3.0	12.7	6.35	5.16	1.6	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



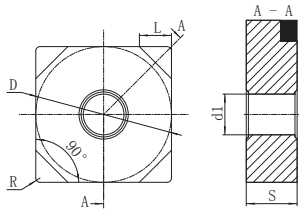
淬火钢加工牌号应用
Grades for H Applications

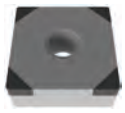


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

SNGA

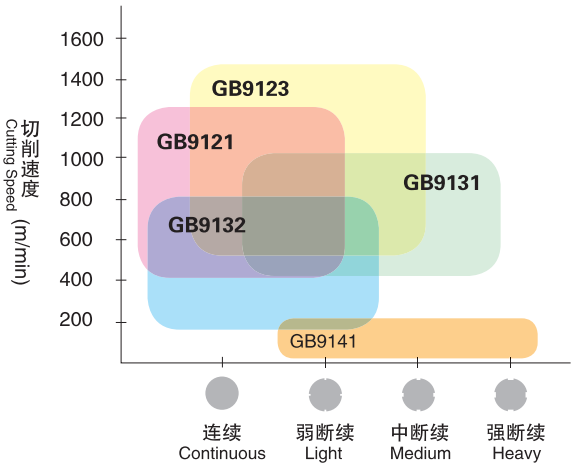
正方形90° 有孔
Square 90°, with Hole



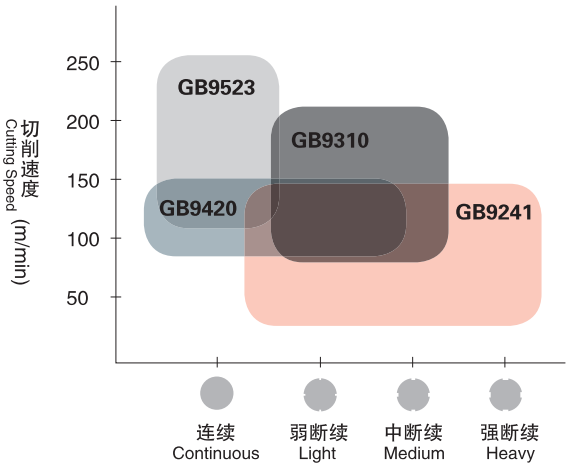
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP4SNGA120404	4	3.0	12.7	4.76	5.16	0.4	○	●	○	●
	YP4SNGA120408	4	3.0	12.7	4.76	5.16	0.8	○	●	○	●
	YP4SNGA120412	4	3.0	12.7	4.76	5.16	1.2	○	○	○	○
	YP4SNGA120416	4	3.0	12.7	4.76	5.16	1.6	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



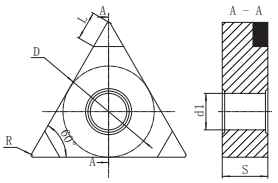
淬火钢加工牌号应用
Grades for H Applications

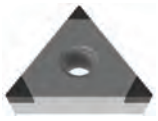


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

TNGA

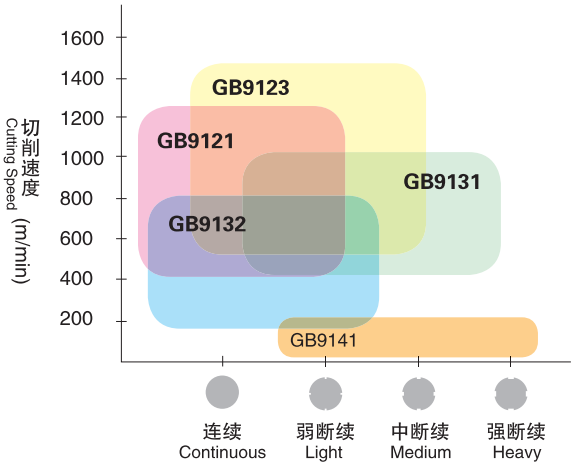
三角形60° 有孔
Triangle 60°, with Hole



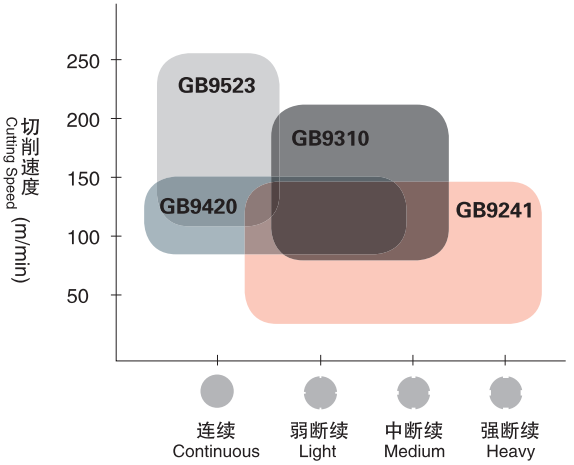
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP3TNGA160402	3	3.0	9.525	4.76	3.81	0.2	○	●	○	●
	YP3TNGA160404	3	3.0	9.525	4.76	3.81	0.4	○	●	○	●
	YP3TNGA160408	3	3.0	9.525	4.76	3.81	0.8	○	●	○	●
	YP3TNGA160412	3	3.0	9.525	4.76	3.81	1.2	○	●	○	●
	YP3TNGA160416	3	3.0	9.525	4.76	3.81	1.6	○	○	○	●

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



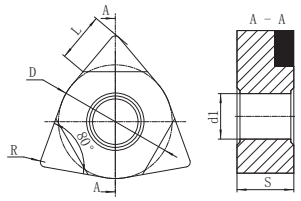
淬火钢加工牌号应用
Grades for H Applications

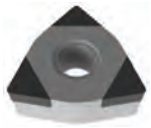


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

WNGA

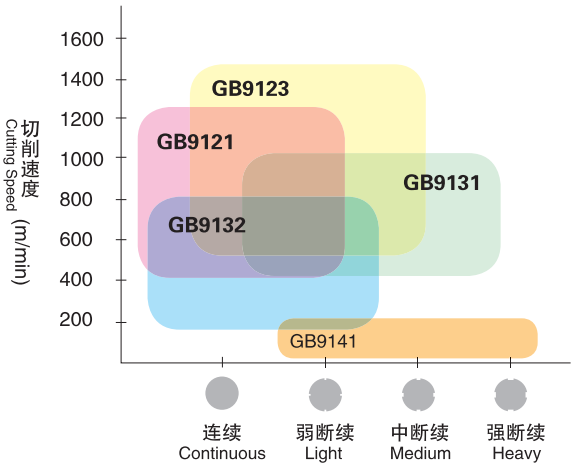
六边形80° 有孔
Trigon 80°， with Hole



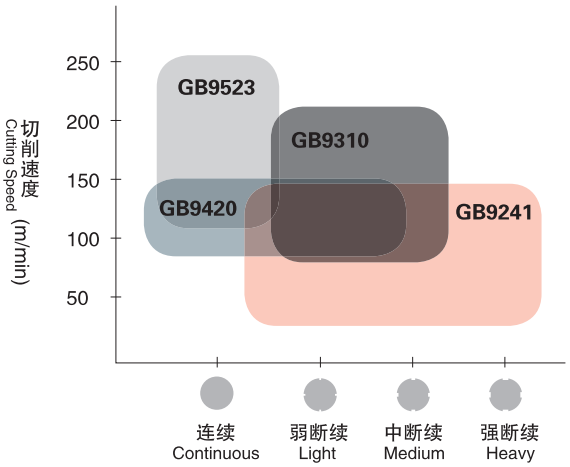
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP3WNGA060404	3	3.0	9.525	4.76	3.81	0.4	○	○	○	○
	YP3WNGA060408	3	3.0	9.525	4.76	3.81	0.8	○	●	○	●
	YP3WNGA060412	3	3.0	9.525	4.76	3.81	1.2	○	●	○	●
	YP3WNGA060416	3	3.0	9.525	4.76	3.81	1.6	○	○	○	○
	YP3WNGA080404	3	3.0	12.7	4.76	5.16	0.4	○	○	○	○
	YP3WNGA080408	3	3.0	12.7	4.76	5.16	0.8	●	○	●	○
	YP3WNGA080412	3	3.0	12.7	4.76	5.16	1.2	●	○	●	○
	YP3WNGA080416	3	3.0	12.7	4.76	5.16	1.6	○	○	●	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



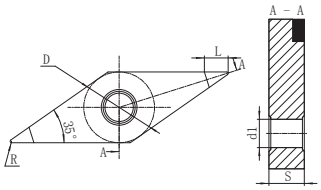
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

VNGA

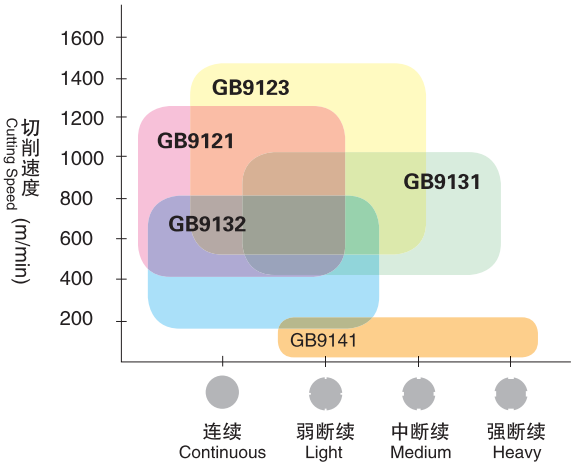
菱形35° 有孔
Rhombic 35°，with Hole



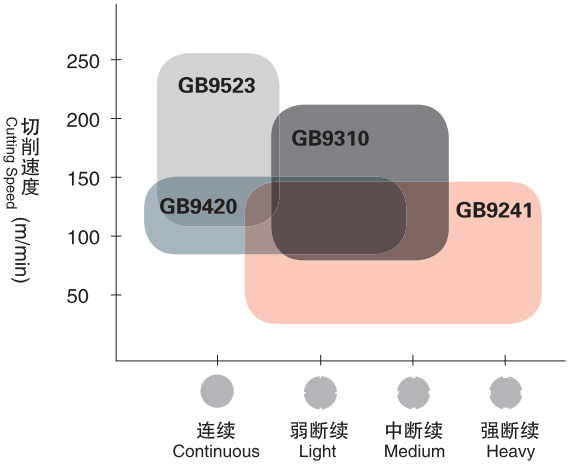
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP2VNGA160402	2	3.0	9.525	4.76	3.81	0.2	●	○	●	○
	YP2VNGA160404	2	3.0	9.525	4.76	3.81	0.4	●	○	●	○
	YP2VNGA160408	2	3.0	9.525	4.76	3.81	0.8	●	○	●	○
	YP2VNGA160412	2	3.0	9.525	4.76	3.81	1.2	○	○	○	○
	YP2VNGA160416	2	3.0	9.525	4.76	3.81	1.6	○	○	○	○
	YP2VNGA220402	2	3.0	12.7	4.76	5.16	0.2	○	○	○	○
	YP2VNGA220404	2	3.0	12.7	4.76	5.16	0.4	○	●	○	●
	YP2VNGA220408	2	3.0	12.7	4.76	5.16	0.8	○	●	○	●
	YP2VNGA220412	2	3.0	12.7	4.76	5.16	1.2	○	●	○	●
	YP2VNGA220416	2	3.0	12.7	4.76	5.16	1.6	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



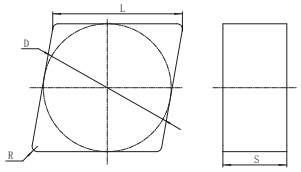
淬火钢加工牌号应用
Grades for H Applications

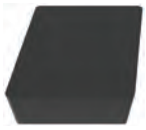


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

CNGN NEW

菱形80° 无孔
Rhombic 80°， without Hole

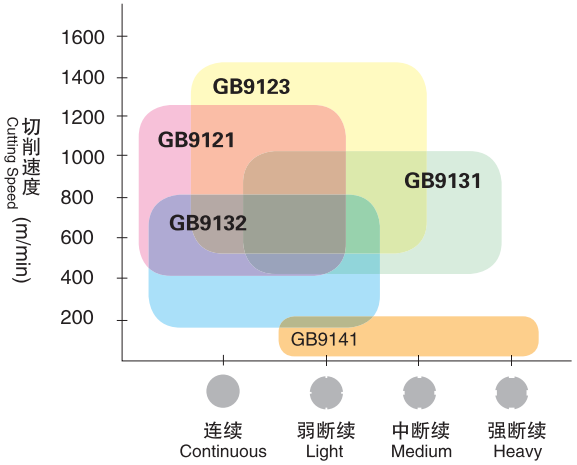




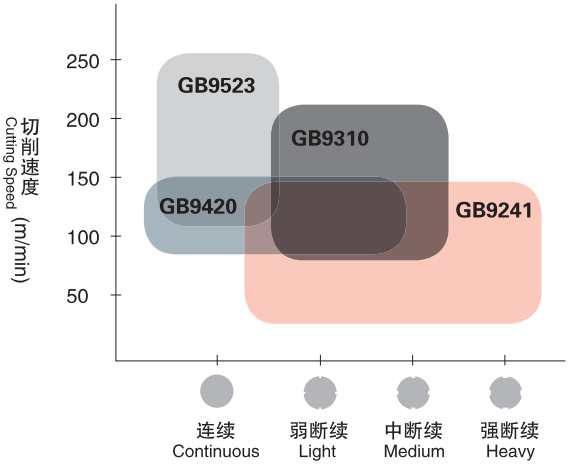
订货号 Ordering Code	刃数 Edge	尺寸 Dimensions(mm)				PCBN牌号 Grades of PCBN				
		L	D	S	R	GB9131	GB9132	GB9141	GB9241	GB9310
YS4CNGN090404	4	9.525	9.525	4.76	0.4	○	○			
YS4CNGN090408	4	9.525	9.525	4.76	0.8	○	○			
YS4CNGN090412	4	9.525	9.525	4.76	1.2	○	○			
YS4CNGN120404	4	12.7	12.7	4.76	0.4	●	●		●	○
YS4CNGN120408	4	12.7	12.7	4.76	0.8	●	●		●	○
YS4CNGN120412	4	12.7	12.7	4.76	1.2	●	●		●	○
YS4CNGN120704	4	12.7	12.7	7.94	0.4	●	●		○	○
YS4CNGN120708	4	12.7	12.7	7.94	0.8	●	●		○	○
YS4CNGN120712	4	12.7	12.7	7.94	1.2	●	●		○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



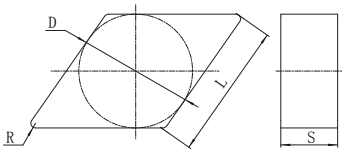
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

DNGN NEW

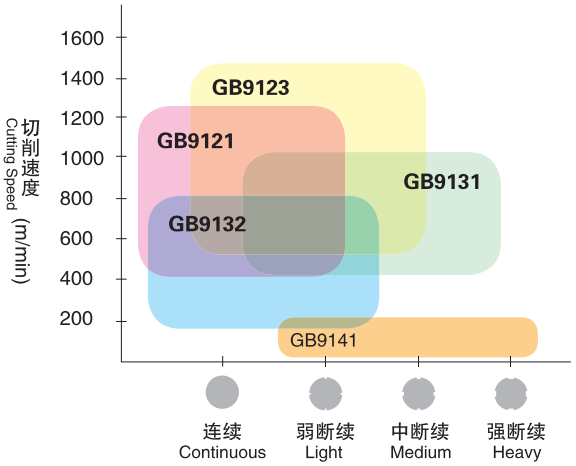
菱形55° 无孔
Rhombic 55°，without Hole



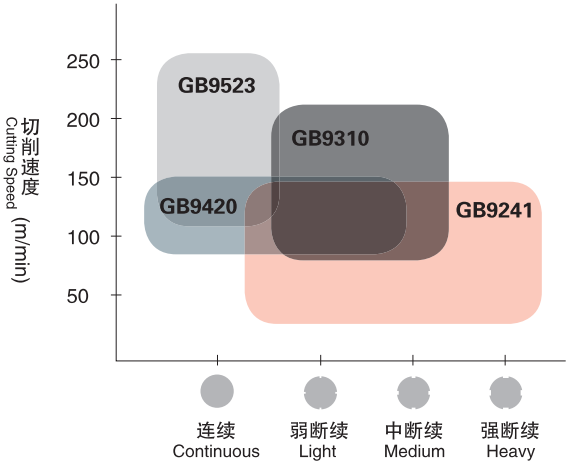
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) L	D	S	R	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
	YS4DNGN150604	4	15.5	12.7	6.35	0.4	○	○			
	YS4DNGN150608	4	15.5	12.7	6.35	0.8	○	○			
	YS4DNGN150612	4	15.5	12.7	6.35	1.2	○	○			

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



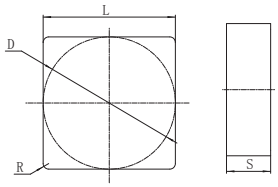
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

SNGN NEW

正方形90° 无孔
Square 90°， without Hole

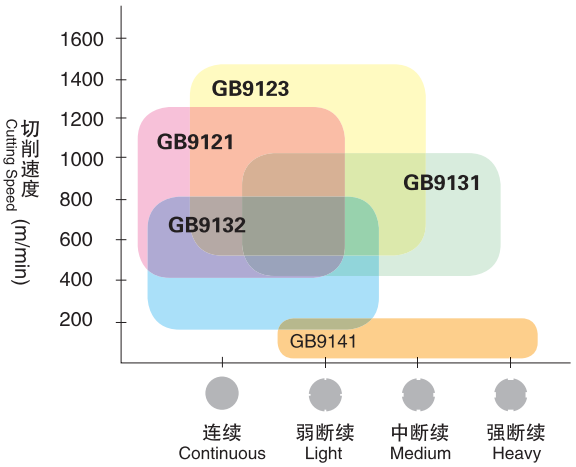


订货号 Ordering Code	刃数 Edge	尺寸 Dimensions(mm) L	D	S	R	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
YS0SNGN090304	8	9.525	9.525	3.18	0.4	○	○			
YS0SNGN090308	8	9.525	9.525	3.18	0.8	○	○			
YS0SNGN090312	8	9.525	9.525	3.18	1.2	○	○			
YS0SNGN090404	8	9.525	9.525	4.76	0.4	○	○			
YS0SNGN090408	8	9.525	9.525	4.76	0.8	○	○			
YS0SNGN090412	8	9.525	9.525	4.76	1.2	○	○			
YS0SNGN120404	8	12.7	12.7	4.76	0.4	●	●	○	○	○
YS0SNGN120408	8	12.7	12.7	4.76	0.8	●	●	○	○	○
YS0SNGN120412	8	12.7	12.7	4.76	1.2	●	●	○	○	○
YS0SNGN120708	8	12.7	12.7	7.94	0.8	●	●	○	○	○
YS0SNGN120712	8	12.7	12.7	7.94	1.2	●	●	○	○	○
YS0SNGN150708	8	15.875	15.875	7.94	0.8	○	○	●	●	
YS0SNGN150712	8	15.875	15.875	7.94	1.2	○	○	●	●	
YS0SNGN201008	8	20	20	10	0.8			●	●	
YS0SNGN201012	8	20	20	10	1.2			●	●	

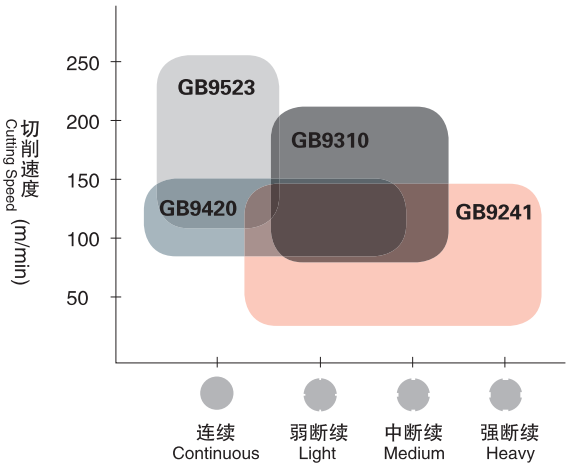


●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



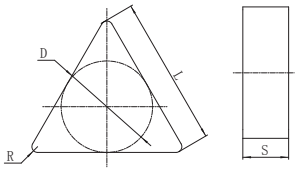
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

TNGN NEW

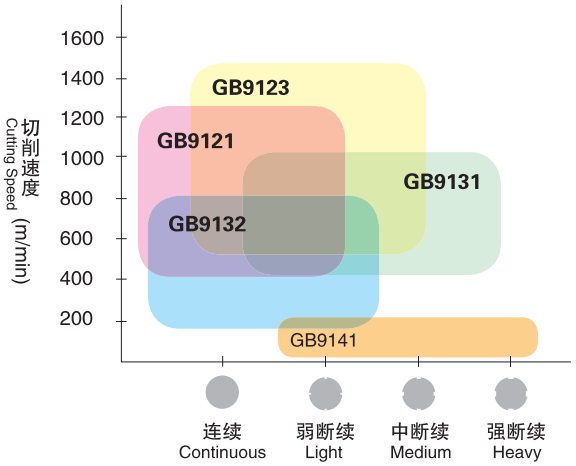
三角形60° 无孔
Triangle 60°， without Hole



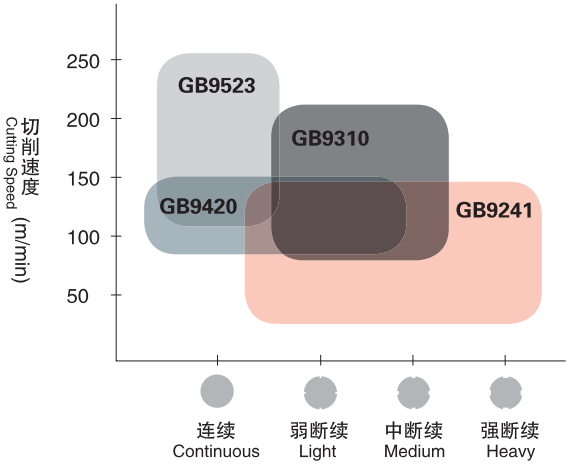
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) L	D	S	R	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
	YS0TNGN110304	6	11.0	6.35	3.18	0.4	○	○			
	YS0TNGN110308	6	11.0	6.35	3.18	0.8	○	○			
	YS0TNGN110312	6	11.0	6.35	3.18	1.2	○	○			
	YS0TNGN160404	6	16.5	9.25	4.76	0.4	○	○		○	○
	YS0TNGN160408	6	16.5	9.25	4.76	0.8	○	○		○	○
	YS0TNGN160412	6	16.5	9.25	4.76	1.2	○	○		○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



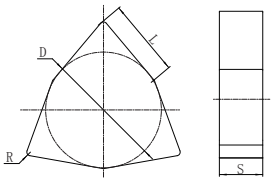
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

WNGN NEW

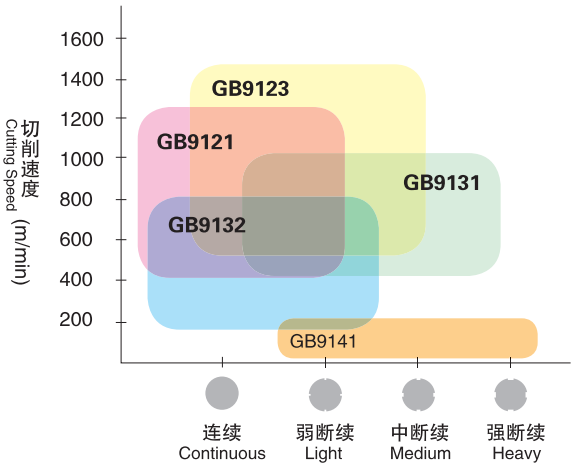
六边形80° 无孔
Trigon 80°，without Hole



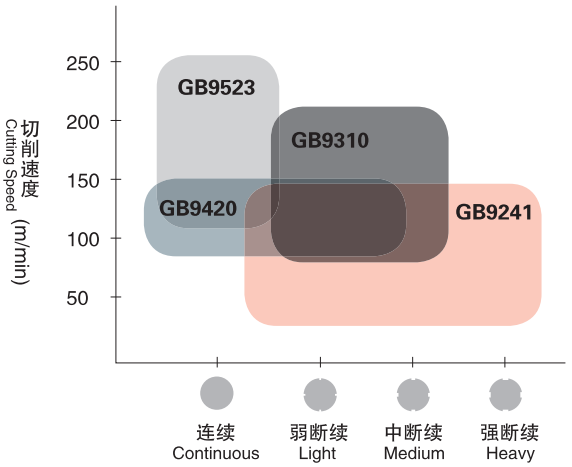
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) L	D	S	R	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
	YS0WNGN080404	6	8.72	12.7	4.76	0.4	●	●		○	○
	YS0WNGN080408	6	8.72	12.7	4.76	0.8	●	●		○	○
	YS0WNGN080412	6	8.72	12.7	4.76	1.2	●	●		○	○
	YS0WNGN080416	6	8.72	12.7	4.76	1.6	●	●		○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



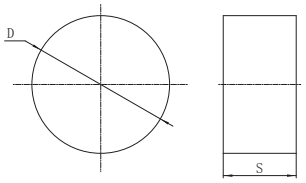
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

RNGN NEW

圆形360° 无孔
Round 360°，without Hole

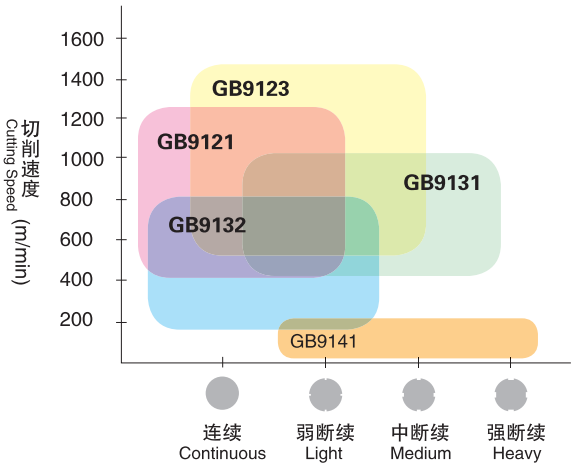


订货号 Ordering Code	刃数 Edge	尺寸 Dimensions(mm) D	S	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
YS0RNGN090300	Round	9.525	3.18	○	○		○	○
YS0RNGN090400	Round	9.525	4.76	○	○		○	○
YS0RNGN120400	Round	12.7	4.76	○	○		○	○
YS0RNGN120600	Round	12.7	6.35	○	○		○	○
YS0RNGN120700	Round	12.7	7.94	○	○		●	○
YS0RNGN150700	Round	15.875	7.94	○	○	○	●	○
YS0RNGN201000	Round	20	10	○	○	●	○	○

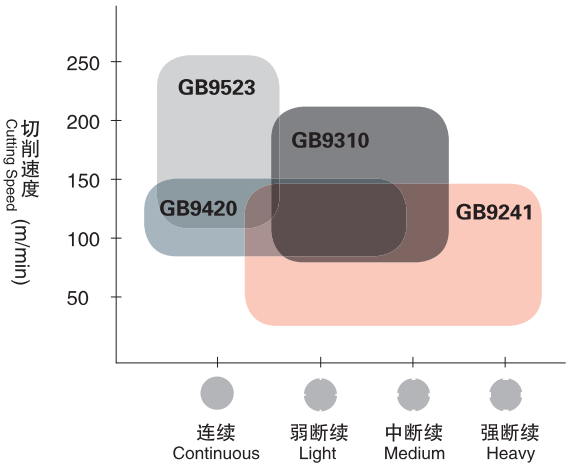


●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



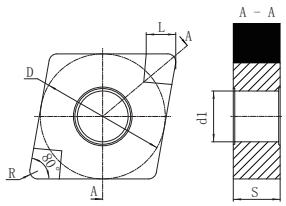
淬火钢加工牌号应用
Grades for H Applications

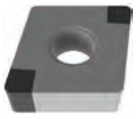


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

CNGA NEW

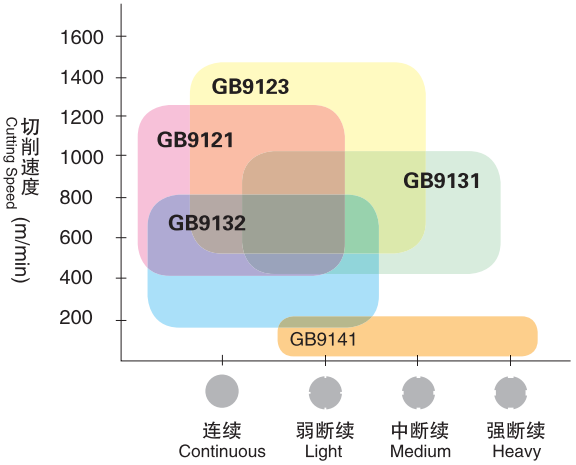
菱形80° 有孔
Rhombic 80°， with Hole



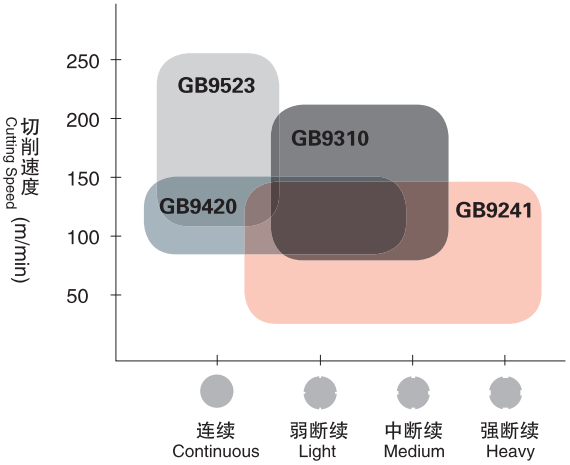
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN				
			L	D	S	d1	R	GB9131	GB9132	GB9141	GB9241	GB9310
	YZ4CNGA120404	4	3.0	12.7	4.76	5.16	0.4	●	●			●
	YZ4CNGA120408	4	3.0	12.7	4.76	5.16	0.8	●	●			●
	YZ4CNGA120412	4	3.0	12.7	4.76	5.16	1.2	●	●			●
	YZ4CNGA120416	4	3.0	12.7	4.76	5.16	1.6	●	●			●

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



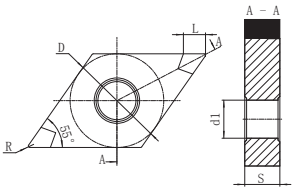
淬火钢加工牌号应用
Grades for H Applications

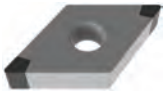


PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

DNGA NEW

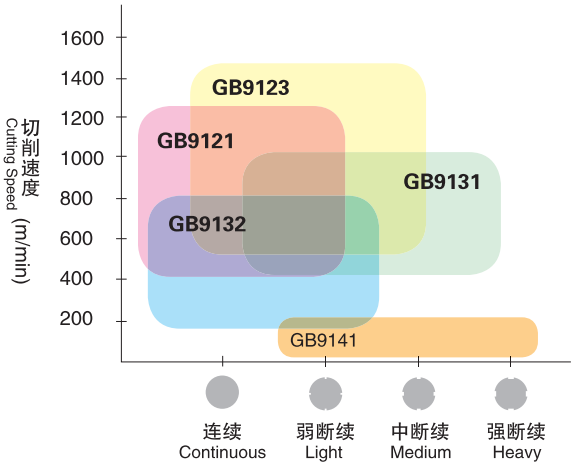
菱形55° 有孔
Rhombic 55° ，with Hole



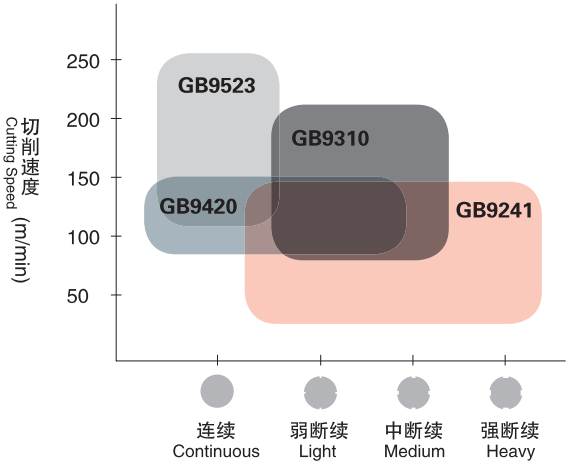
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN				
			L	D	S	d1	R	GB9131	GB9132	GB9141	GB9241	GB9310
	YZ4DNGA150404	4	3.0	12.7	4.76	5.16	0.4	○	○			○
	YZ4DNGA150408	4	3.0	12.7	4.76	5.16	0.8	○	○			○
	YZ4DNGA150412	4	3.0	12.7	4.76	5.16	1.2	○	○			○
	YZ4DNGA150604	4	3.0	12.7	6.35	5.16	0.4	○	○			○
	YZ4DNGA150608	4	3.0	12.7	6.35	5.16	0.8	○	○			○
	YZ4DNGA150612	4	3.0	12.7	6.35	5.16	1.2	○	○			○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



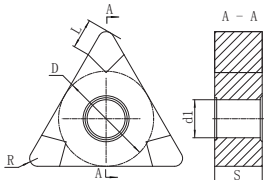
淬火钢加工牌号应用
Grades for H Applications



PCBN车削刀片(负型)
PCBN Turning Inserts (Negative)

TNGA NEW

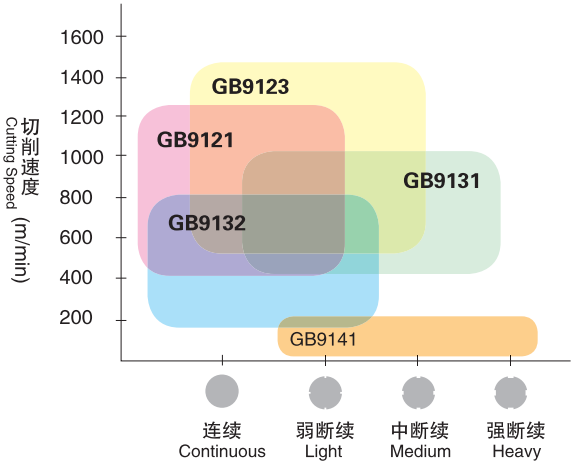
三角形60° 有孔
Triangle 60°， with Hole



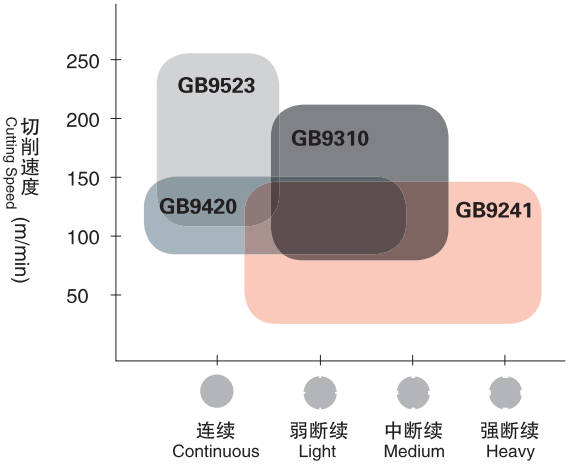
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN				
			L	D	S	d1	R	GB9131	GB9132	GB9141	GB9241	GB9310
	YZ0TNGA160404	6	3.0	9.525	4.76	3.81	0.4	○	○			○
	YZ0TNGA160408	6	3.0	9.525	4.76	3.81	0.8	○	○			○
	YZ0TNGA160412	6	3.0	9.525	4.76	3.81	1.2	○	○			○
	YZ0TNGA160416	6	3.0	9.525	4.76	3.81	1.6	○	○			○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



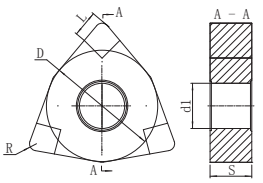
淬火钢加工牌号应用
Grades for H Applications

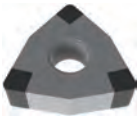


PCBN车削(正型)
PCBN Turning Inserts (Positive)

WNGA NEW

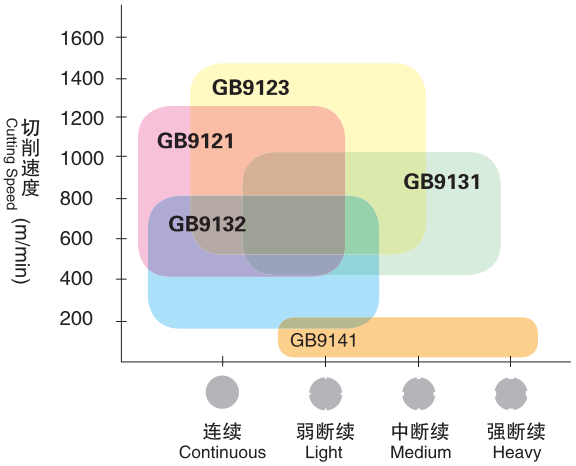
六边形80° 有孔
Trigon 80°，with Hole



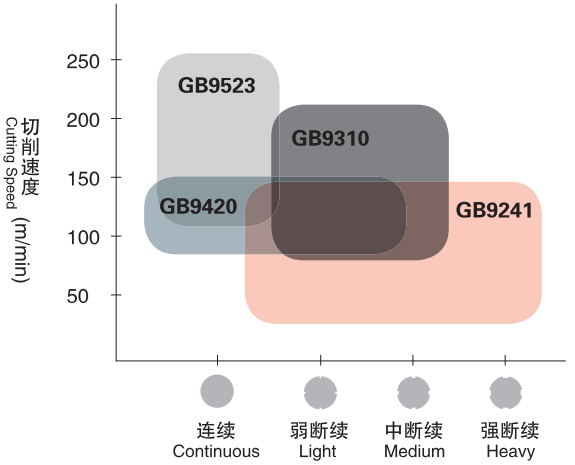
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN				
			L	D	S	d1	R	GB9131	GB9132	GB9141	GB9241	GB9310
	YZ0WNGA080404	6	3.0	12.7	4.76	5.16	0.4	●	●			●
	YZ0WNGA080408	6	3.0	12.7	4.76	5.16	0.8	●	●			●
	YZ0WNGA080412	6	3.0	12.7	4.76	5.16	1.2	●	●			●
	YZ0WNGA080416	6	3.0	12.7	4.76	5.16	1.6	●	●			●

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



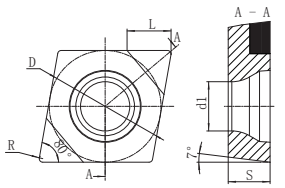
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

CCGW

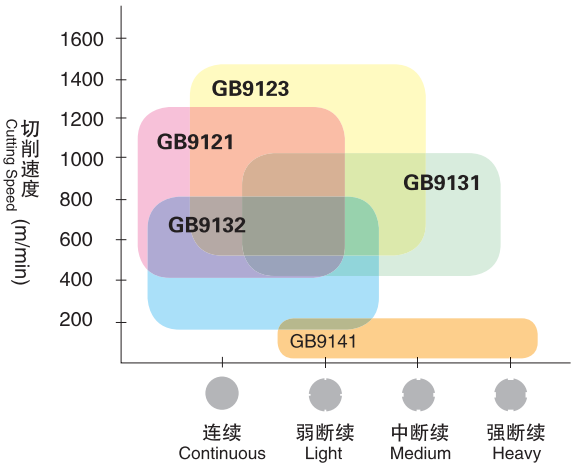
菱形80° 有孔
Rhombic 80°， with Hole



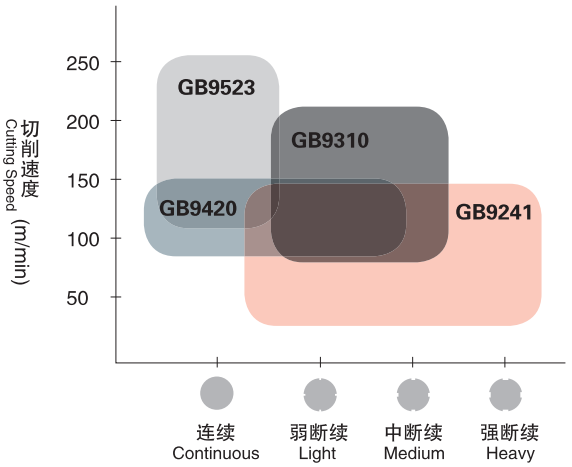
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP2CCGW060202	2	2.5	6.35	2.38	2.8	0.2	●	○	●	○
	YP2CCGW060204	2	2.5	6.35	2.38	2.8	0.4	●	○	●	○
	YP2CCGW060208	2	2.5	6.35	2.38	2.8	0.8	●	○	●	○
	YP2CCGW09T302	2	3.0	9.525	3.97	4.4	0.2	●	○	●	○
	YP2CCGW09T304	2	3.0	9.525	3.97	4.4	0.4	○	●	○	●
	YP2CCGW09T308	2	3.0	9.525	3.97	4.4	0.8	○	●	○	●
	YP2CCGW120402	2	3.0	12.7	4.76	5.5	0.2	○	○	○	○
	YP2CCGW120404	2	3.0	12.7	4.76	5.5	0.4	○	●	○	●
	YP2CCGW120408	2	3.0	12.7	4.76	5.5	0.8	○	●	○	●

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



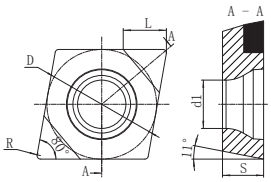
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

CPGW

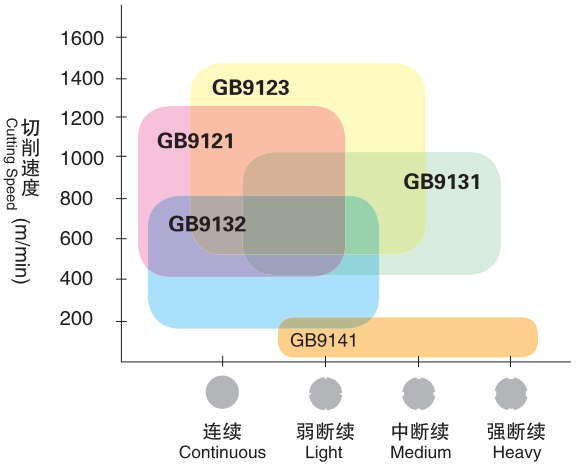
菱形80° 有孔
Rhombic 80°，with Hole



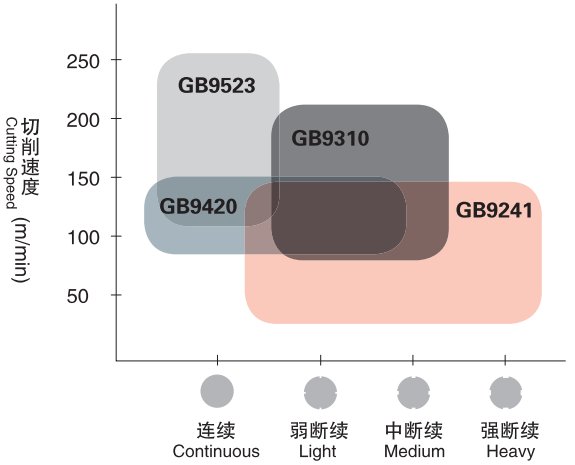
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) L	D	S	d1	R	PCBN牌号 Grades of PCBN GB9121	GB9123 NEW	GB9420	GB9523
	YP2CPGW090302	2	3.0	9.525	3.18	4.4	0.2	○	○	○	○
	YP2CPGW090304	2	3.0	9.525	3.18	4.4	0.4	○	○	○	○
	YP2CPGW090308	2	3.0	9.525	3.18	4.4	0.8	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



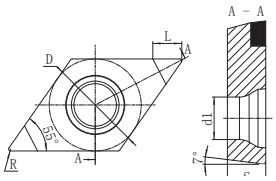
淬火钢加工牌号应用
Grades for H Applications

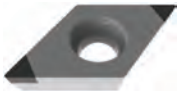


PCBN车削(正型)
PCBN Turning Inserts (Positive)

DCGW

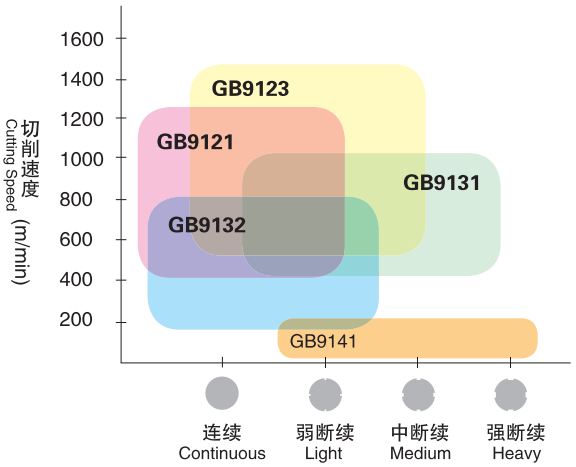
菱形55° 有孔
Rhombic 55°， with Hole



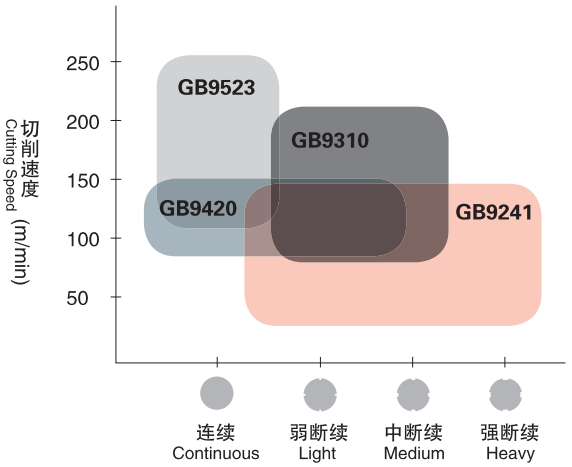
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP2DCGW070202	2	2.5	6.35	2.38	2.8	0.2	○	●	○	●
	YP2DCGW070204	2	2.5	6.35	2.38	2.8	0.4	○	●	○	●
	YP2DCGW070208	2	2.5	6.35	2.38	2.8	0.8	○	●	○	●
	YP2DCGW11T302	2	3.0	9.525	3.97	4.4	0.2	●	○	●	○
	YP2DCGW11T304	2	3.0	9.525	3.97	4.4	0.4	●	○	●	○
	YP2DCGW11T308	2	3.0	9.525	3.97	4.4	0.8	●	○	●	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



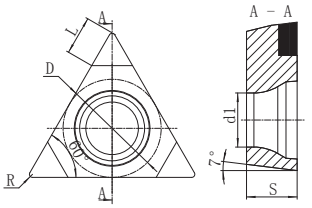
淬火钢加工牌号应用
Grades for H Applications

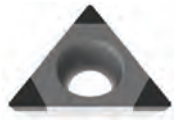


PCBN车削(正型)
PCBN Turning Inserts (Positive)

TCGW

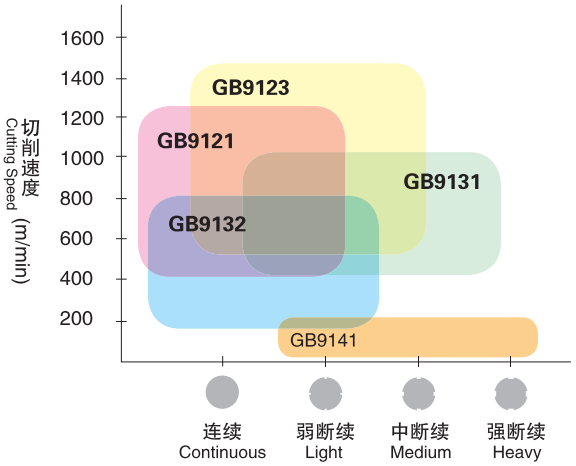
三角形60° 有孔
Triangle 60°， with Hole



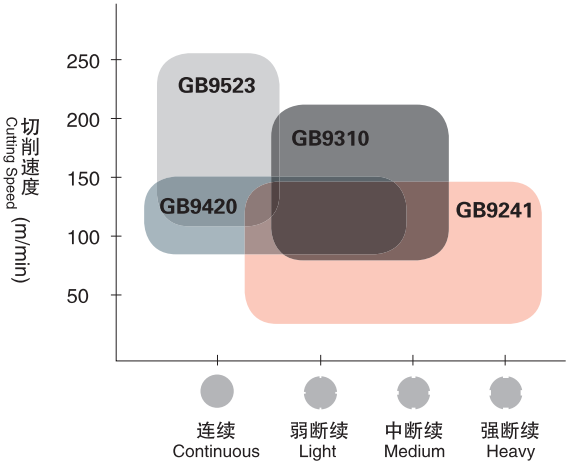
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	GB9123 NEW	GB9420	GB9523
	YP3TCGW110302	3	2.5	6.35	3.18	2.8	0.2	○	●	○	●
	YP3TCGW110304	3	2.5	6.35	3.18	2.8	0.4	○	●	○	●
	YP3TCGW110308	3	2.5	6.35	3.18	2.8	0.8	○	●	○	●
	YP3TCGW160404	3	3.0	9.525	4.76	4.4	0.4	●	○	●	○
	YP3TCGW160408	3	3.0	9.525	4.76	4.4	0.8	●	○	●	○
	YP3TCGW160412	3	3.0	9.525	4.76	4.4	1.2	●	○	●	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



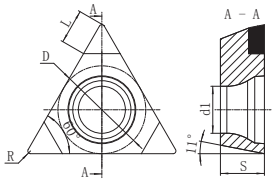
淬火钢加工牌号应用
Grades for H Applications

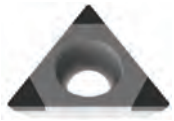


PCBN车削(正型)
PCBN Turning Inserts (Positive)

TPGW

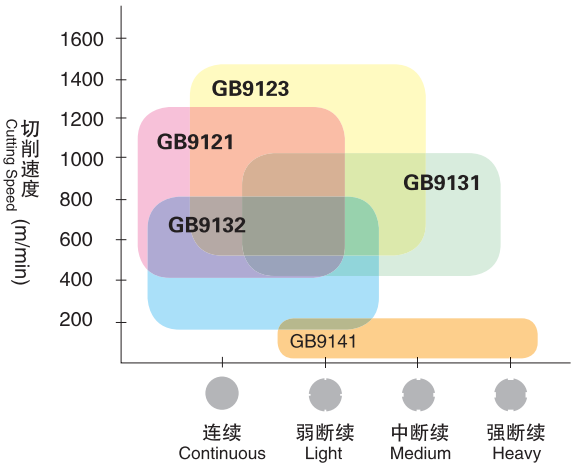
三角形60° 有孔
Triangle 60°， with Hole



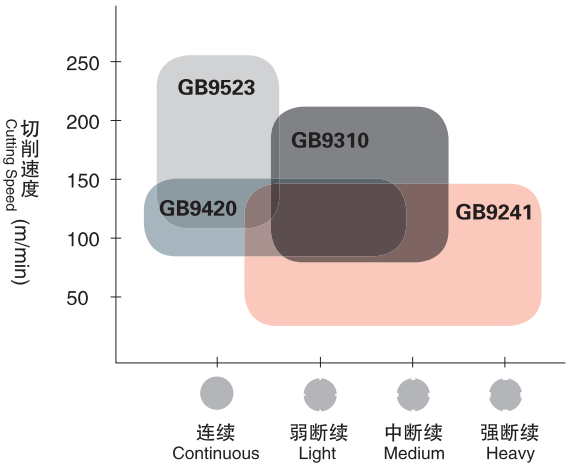
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP3TPGW110202	3	2.5	6.35	2.38	2.8	0.2	○	○	○	○
	YP3TPGW110204	3	2.5	6.35	2.38	2.8	0.4	○	○	○	○
	YP3TPGW110208	3	2.5	6.35	2.38	2.8	0.8	○	○	○	○
	YP3TPGW110302	3	2.5	6.35	3.18	2.8	0.2	○	○	○	○
	YP3TPGW110304	3	2.5	6.35	3.18	2.8	0.4	○	○	○	○
	YP3TPGW110308	3	2.5	6.35	3.18	2.8	0.8	○	○	○	○
	YP3TPGW160402	3	3.0	9.525	4.76	4.4	0.2	○	○	○	○
	YP3TPGW160404	3	3.0	9.525	4.76	4.4	0.4	○	○	○	○
	YP3TPGW160408	3	3.0	9.525	4.76	4.4	0.8	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



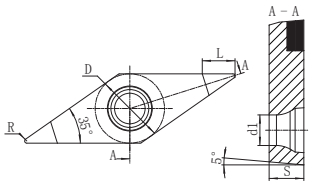
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

VBGW

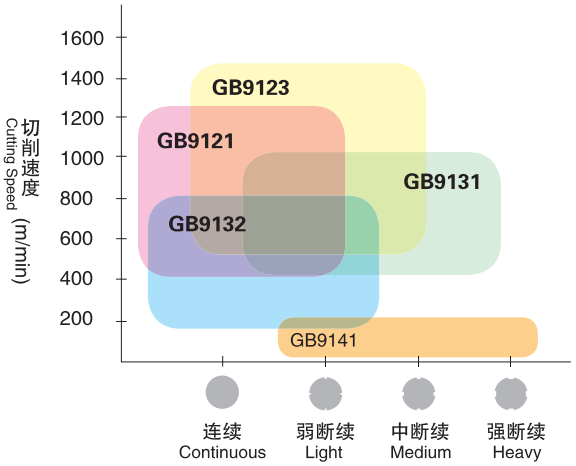
菱形35° 有孔
Rhombic 35°，with Hole



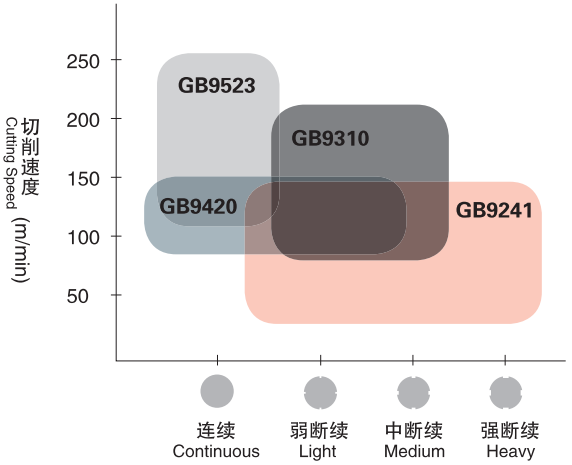
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	GB9123 NEW	GB9420	GB9523
	YP2VBGW110302	2	3.0	6.35	3.18	2.8	0.2	○	○	○	○
	YP2VBGW110304	2	3.0	6.35	3.18	2.8	0.4	○	○	○	○
	YP2VBGW110308	2	3.0	6.35	3.18	2.8	0.8	○	○	○	○
	YP2VBGW160402	2	3.0	9.525	4.76	4.4	0.2	○	○	○	○
	YP2VBGW160404	2	3.0	9.525	4.76	4.4	0.4	○	○	○	○
	YP2VBGW160408	2	3.0	9.525	4.76	4.4	0.8	○	○	○	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



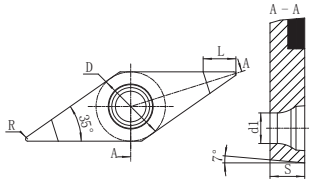
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

VCGW

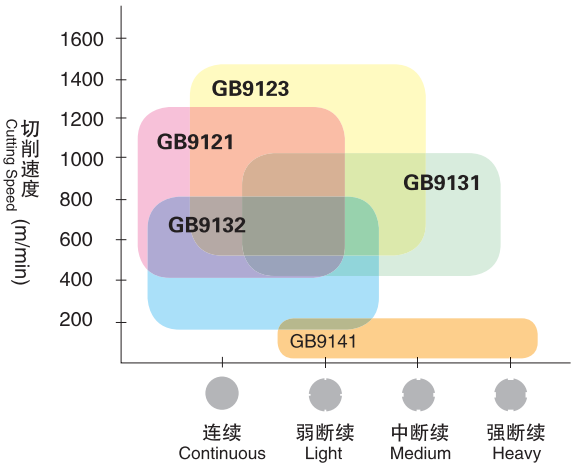
菱形35° 有孔
Rhombic35°， with Hole



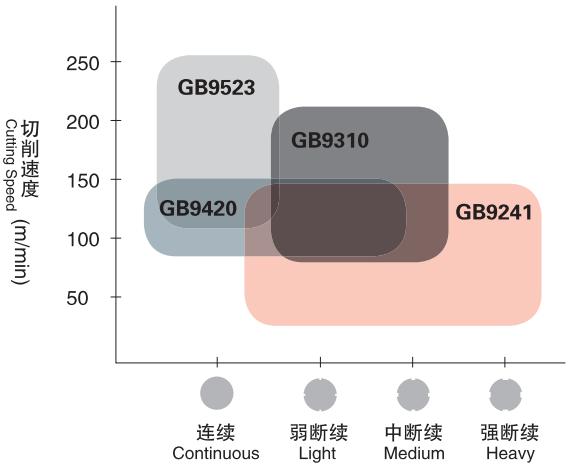
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)					PCBN牌号 Grades of PCBN			
			L	D	S	d1	R	GB9121	NEW GB9123	GB9420	GB9523
	YP2VCGW110302	2	3.0	6.35	3.18	2.8	0.2	○	●	○	●
	YP2VCGW110304	2	3.0	6.35	3.18	2.8	0.4	○	●	○	●
	YP2VCGW110308	2	3.0	6.35	3.18	2.8	0.8	○	●	○	●
	YP2VCGW160402	2	3.0	9.525	4.76	4.4	0.2	○	●	○	●
	YP2VCGW160404	2	3.0	9.525	4.76	4.4	0.4	●	○	●	○
	YP2VCGW160408	2	3.0	9.525	4.76	4.4	0.8	●	○	●	○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



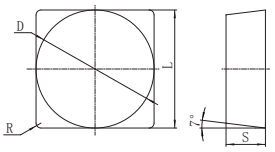
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

SCGN NEW

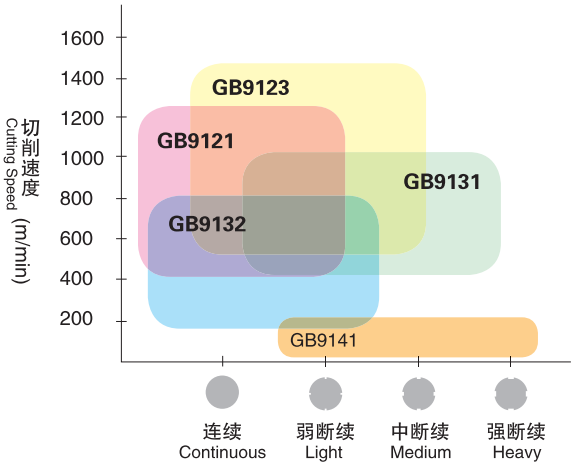
正方形90° 无孔
Square 90°，without Hole



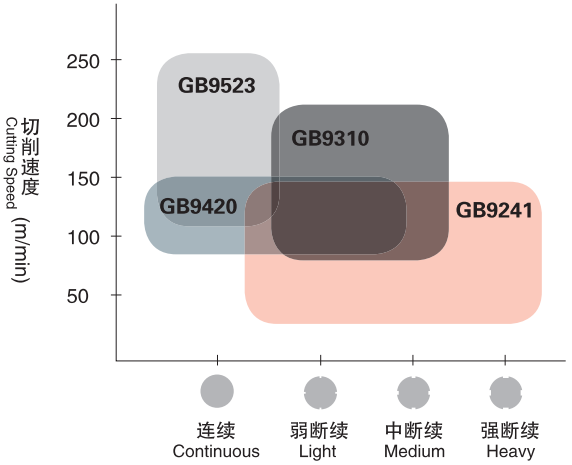
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) L	D	S	R	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
	YS4SCGN090304	4	9.525	9.525	3.18	0.4		○			
	YS4SCGN090308	4	9.525	9.525	3.18	0.8		○			
	YS4SCGN090312	4	9.525	9.525	3.18	1.2		○			
	YS4SCGN090404	4	9.525	9.525	4.76	0.4		●			
	YS4SCGN090408	4	9.525	9.525	4.76	0.8		●			
	YS4SCGN090412	4	9.525	9.525	4.76	1.2		●			

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



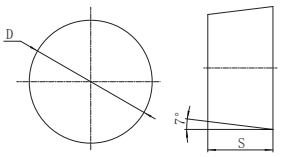
淬火钢加工牌号应用
Grades for H Applications



PCBN车削(正型)
PCBN Turning Inserts (Positive)

RCGN NEW

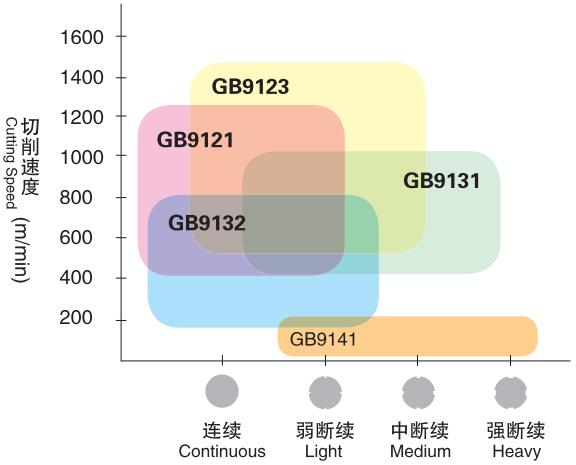
圆形360° 无孔
Round 360°，withithout Hole



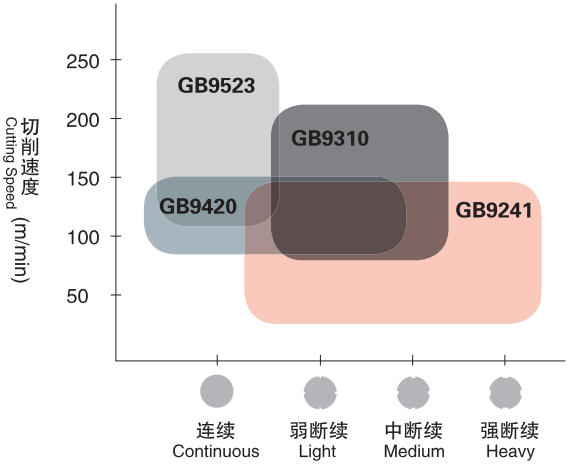
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm) D	S	PCBN牌号 Grades of PCBN GB9131	GB9132	GB9141	GB9241	GB9310
	YS0RCGN090400	Round	9.525	4.76		○			○
	YS0RCGN090600	Round	9.525	6.35		○			○
	YS0RCGN120600	Round	12.7	6.35		○			○
	YS0RCGN120700	Round	12.7	7.94		○			○

●标准库存 Stock ○需预定 Available upon Order

铸铁加工牌号应用
Grades for K Applications



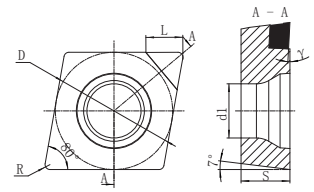
淬火钢加工牌号应用
Grades for H Applications

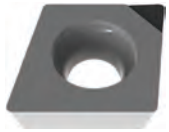


PCD车削刀片(正型)
PCD Turning Inserts (Positive)

CCGW

菱形80° 有孔
Rhombic 80°，with Hole



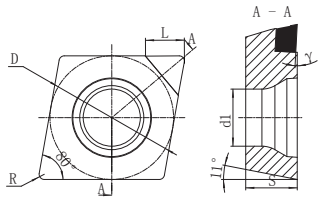
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1CCGW09T304	1	3.0	9.525	3.97	4.4	0.4	0	●	●	○	○
	YP1CCGW09T308	1	3.0	9.525	3.97	4.4	0.8	0	●	●	○	○
	YP1CCGW09T304Q5	1	3.0	9.525	3.97	4.4	0.4	5	●	●	○	○
	YP1CCGW09T308Q5	1	3.0	9.525	3.97	4.4	0.8	5	●	●	○	○
	YP1CCGW09T304Q7	1	3.0	9.525	3.97	4.4	0.4	7	●	●	○	○
	YP1CCGW09T308Q7	1	3.0	9.525	3.97	4.4	0.8	7	●	●	○	○
	YP1CCGW120404	1	3.0	12.7	4.76	5.5	0.4	0	○	●	○	●
	YP1CCGW120408	1	3.0	12.7	4.76	5.5	0.8	0	○	●	○	●
	YP1CCGW120404Q5	1	3.0	12.7	4.76	5.5	0.4	5	○	●	○	●
	YP1CCGW120408Q5	1	3.0	12.7	4.76	5.5	0.8	5	○	●	○	●
	YP1CCGW120404Q7	1	3.0	12.7	4.76	5.5	0.4	7	○	●	○	●
	YP1CCGW120408Q7	1	3.0	12.7	4.76	5.5	0.8	7	○	●	○	●

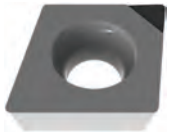
●标准库存 Stock ○需预定 Available upon Order

PCD车削刀片(正型)
PCD Turning Inserts (Positive)

CPGW

菱形80° 有孔
Rhombic 80°， with Hole



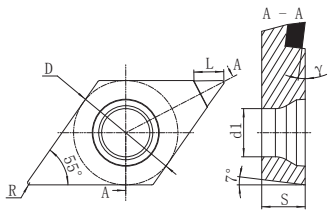
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1CPGW09T304	1	3.0	9.525	3.97	4.4	0.4	0	○	●	○	●
	YP1CPGW09T308	1	3.0	9.525	3.97	4.4	0.8	0	○	●	○	●
	YP1CPGW09T304Q5	1	3.0	9.525	3.97	4.4	0.4	5	○	●	○	●
	YP1CPGW09T308Q5	1	3.0	9.525	3.97	4.4	0.8	5	○	●	○	●
	YP1CPGW09T304Q7	1	3.0	9.525	3.97	4.4	0.4	7	○	●	○	●
	YP1CPGW09T308Q7	1	3.0	9.525	3.97	4.4	0.8	7	○	●	○	●
	YP1CPGW120404	1	3.0	12.7	4.76	5.5	0.4	0	○	●	○	●
	YP1CPGW120408	1	3.0	12.7	4.76	5.5	0.8	0	○	●	○	●
	YP1CPGW120404Q5	1	3.0	12.7	4.76	5.5	0.4	5	●	●	○	○
	YP1CPGW120408Q5	1	3.0	12.7	4.76	5.5	0.8	5	●	●	○	○
	YP1CPGW120404Q7	1	3.0	12.7	4.76	5.5	0.4	7	●	●	○	○
	YP1CPGW120408Q7	1	3.0	12.7	4.76	5.5	0.8	7	●	●	○	○

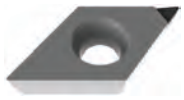
●标准库存 Stock ○需预定 Available upon Order

PCD车削刀片(正型)
PCD Turning Inserts (Positive)

DCGW

菱形55° 有孔
Rhombic 55°， with Hole



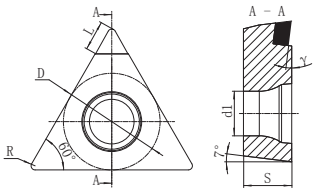
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1DCGW110302	1	3.0	9.525	3.97	4.4	0.2	0	○	●	○	●
	YP1DCGW110304	1	3.0	9.525	3.97	4.4	0.4	0	○	●	○	●
	YP1DCGW110308	1	3.0	9.525	3.97	4.4	0.8	0	○	●	○	●
	YP1DCGW110302Q5	1	3.0	9.525	3.97	4.4	0.2	5	○	●	○	●
	YP1DCGW110304Q5	1	3.0	9.525	3.97	4.4	0.4	5	○	●	○	●
	YP1DCGW110308Q5	1	3.0	9.525	3.97	4.4	0.8	5	○	●	○	●
	YP1DCGW110302Q7	1	3.0	9.525	3.97	4.4	0.2	7	●	●	○	○
	YP1DCGW110304Q7	1	3.0	9.525	3.97	4.4	0.4	7	●	●	○	○
	YP1DCGW110308Q7	1	3.0	9.525	3.97	4.4	0.8	7	●	●	○	○
	YP1DCGW11T302	1	3.0	9.525	3.97	4.4	0.2	0	●	●	○	○
	YP1DCGW11T304	1	3.0	9.525	3.97	4.4	0.4	0	●	●	○	○
	YP1DCGW11T308	1	3.0	9.525	3.97	4.4	0.8	0	●	●	○	○
	YP1DCGW11T302Q5	1	3.0	9.525	3.97	4.4	0.2	5	●	●	○	○
	YP1DCGW11T304Q5	1	3.0	9.525	3.97	4.4	0.4	5	●	●	○	○
	YP1DCGW11T308Q5	1	3.0	9.525	3.97	4.4	0.8	5	●	●	○	○
	YP1DCGW11T302Q7	1	3.0	9.525	3.97	4.4	0.2	7	○	●	○	●
	YP1DCGW11T304Q7	1	3.0	9.525	3.97	4.4	0.4	7	○	●	○	●
	YP1DCGW11T308Q7	1	3.0	9.525	3.97	4.4	0.8	7	○	●	○	●

●标准库存 Stock ○需预定 Available upon Order

PCD车削刀片(正型)
PCD Turning Inserts (Positive)

TCGW

三角形60° 有孔
Triangle 60°， with Hole



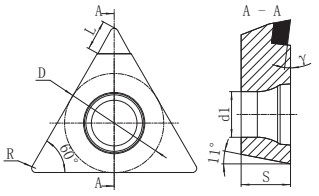
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1TCGW110302	1	3.0	6.35	3.18	2.8	0.2	0	○	●	○	●
	YP1TCGW110304	1	3.0	6.35	3.18	2.8	0.4	0	○	●	○	●
	YP1TCGW110302Q5	1	3.0	6.35	3.18	2.8	0.2	5	○	●	○	●
	YP1TCGW110304Q5	1	3.0	6.35	3.18	2.8	0.4	5	○	●	○	●

●标准库存 Stock ○需预定 Available upon Order

PCD车削刀片(正型)
PCD Turning Inserts (Positive)

TPGW

三角形60° 有孔
Triangle 60°， with Hole



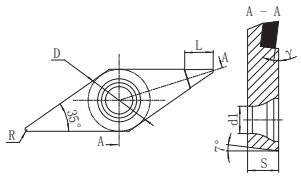
订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1TPGW110302	1	3.0	6.35	3.18	2.8	0.2	0	○	●	○	●
	YP1TPGW110304	1	3.0	6.35	3.18	2.8	0.4	0	○	●	○	●
	YP1TPGW110302Q5	1	3.0	6.35	3.18	2.8	0.2	5	○	●	○	●
	YP1TPGW110304Q5	1	3.0	6.35	3.18	2.8	0.4	5	○	●	○	●
	YP1TPGW160404	1	3.0	9.525	4.76	4.4	0.4	0	●	●	○	○
	YP1TPGW160408	1	3.0	9.525	4.76	4.4	0.8	0	●	●	○	○
	YP1TPGW160404Q5	1	3.0	9.525	4.76	4.4	0.4	5	●	●	○	○
	YP1TPGW160408Q5	1	3.0	9.525	4.76	4.4	0.8	5	●	●	○	○
	YP1TPGW160404Q7	1	3.0	9.525	4.76	4.4	0.4	7	●	●	○	○
	YP1TPGW160408Q7	1	3.0	9.525	4.76	4.4	0.8	7	●	●	○	○

●标准库存 Stock ○需预定 Available upon Order

PCD车削刀片(正型)
PCD Turning Inserts (Positive)

VCGW

菱形35° 有孔
Rhombic 35°， with Hole



订货号 Ordering Code		刃数 Edge	尺寸 Dimensions(mm)						PCD牌号 Grades of PCD			
			L	D	S	d1	R	γ (°)	GD9950	GD9852	GD9900	GD9700
	YP1VCGW110302	1	3.0	6.35	3.18	2.8	0.2	0	○	●	○	●
	YP1VCGW110304	1	3.0	6.35	3.18	2.8	0.4	0	○	●	○	●
	YP1VCGW110302Q5	1	3.0	6.35	3.18	2.8	0.2	5	○	●	○	●
	YP1VCGW110304Q5	1	3.0	6.35	3.18	2.8	0.4	5	○	●	○	●
	YP1VCGW110302Q7	1	3.0	6.35	3.18	2.8	0.2	7	○	●	○	●
	YP1VCGW110304Q7	1	3.0	6.35	3.18	2.8	0.4	7	○	●	○	●
	YP1VCGW160404	1	3.0	9.525	4.76	4.4	0.4	0	●	●	○	○
	YP1VCGW160408	1	3.0	9.525	4.76	4.4	0.8	0	●	●	○	○
	YP1VCGW160404Q5	1	3.0	9.525	4.76	4.4	0.4	5	●	●	○	○
	YP1VCGW160408Q5	1	3.0	9.525	4.76	4.4	0.8	5	●	●	○	○
	YP1VCGW160404Q7	1	3.0	9.525	4.76	4.4	0.4	7	●	●	○	○
	YP1VCGW160408Q7	1	3.0	9.525	4.76	4.4	0.8	7	●	●	○	○

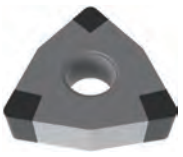
●标准库存 Stock ○需预定 Available upon Order

PCBN车削刀片
PCBN Turning Insert

PCBN刀片铸铁加工
PCBN Inserts for Cutting of Cast Iron

加工案例
Case Studies

Case 1 NEW

GB9132–铸铁加工 GB9132 for Cutting of Cast Iron		示意图片 Workpiece	
加工工件 Workpiece	空调压缩机轴承盖 Air Conditioning Compressor Bearing Cover		
刀具型号 Type	WNGA080408		
被加工材料 Workpiece Materials	HT250（190–220HB）		
加工参数 Cutting Parameters	Vc=600m/min ap=1.5mm f=0.25mm/r		
切削方式 Cutting Method	干式断续切削 Dry Interrupted Cutting		

刀具对比 Comparison	切削速度Vc Cutting Speed	效率 Efficiency	寿命 Life
涂层合金 Coated Alloy	300m/min	30秒/件 30Sec/pcs	120件/刃 120pcs/edge
金鹭GB9132 GESAC GB9132	600m/min	15秒/件 15Sec/pcs	500件/刃 500pcs/edge

Case 2 NEW

GB9132–铸铁加工 GB9132 for Cutting of Cast Iron		示意图片 Workpiece	
加工工件 Workpiece	皮带轮 Pulley		
刀具型号 Type	CNMN120412		
被加工材料 Workpiece Materials	HT200（190–220HB）		
加工参数 Cutting Parameters	Vc=520m/min ap=0.5mm f=0.35mm/r		
切削方式 Cutting Method	高速车削加工 High Speed Turning		

刀具对比 Comparison	切削速度Vc Cutting Speed	效率 Efficiency	寿命 Life
某日系涂层合金 Japanese Series Coated Alloy	280m/min	19秒/件 19Sec/pcs	30件/刃 30pcs/edge
金鹭GB9132 GESAC GB9132	520m/min	10秒/件 10Sec/pcs	125件/刃 125pcs/edge

PCBN车削刀片
PCBN Turning Insert

PCBN刀片铸铁加工
PCBN Inserts for Cutting of Cast Iron

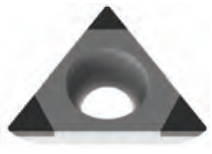
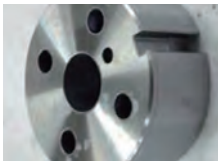
加工案例
Case Studies

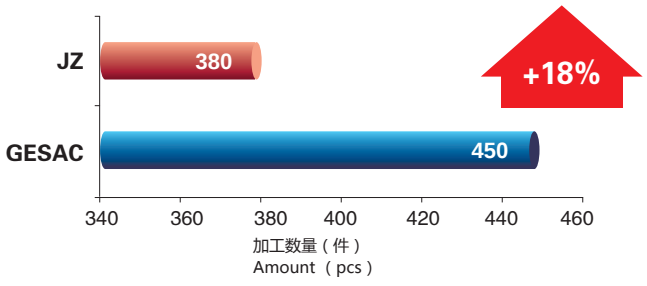
Case 3 NEW

GB9132–铸铁加工 GB9132 for Cutting of Cast Iron		示意图片 Workpiece
加工工件 Workpiece	汽车轮毂 Brake Disc	 
刀具型号 Type	CNGN120720	
被加工材料 Workpiece Materials	HT200（170–210HB）	
加工参数 Cutting Parameters	Vc=320m/min ap=3mm f=0.5mm/r	
切削方式 Cutting Method	车削加工,湿切 Ra3.2 Turning Wet,Ra3.2	

刀具对比 Comparison	切削速度Vc Cutting Speed	效率 Efficiency	寿命 Life
某日系涂层合金 Japanese Series Coated Alloy	150m/min	90秒/件 90Sec/pcs	45件/刃 45pcs/edge
金鹭GB9132 GESAC GB9132	320m/min	40秒/件 40Sec/pcs	120件/刃 120pcs/edge

Case 4 NEW

GB9123–铸铁加工 GB9123 for Cutting of Cast Iron		示意图片 Workpiece
加工工件 Workpiece	汽车轴套 Auto Sleeve	 
刀具型号 Type	TPGW110304	
被加工材料 Workpiece Materials	粉末冶金FNF4Q Powder Metallurgy FNF4Q	
加工参数 Cutting Parameters	Vc=290m/min ap=0.01mm f=0.05mm/r	
切削方式 Cutting Method	轻断续精加工 Light Interrupted Finishing	



PCBN车削刀片
PCBN Turning Insert

PCBN刀片钢材加工
PCBN Inserts for Cutting of Steel

加工案例
Case Studies

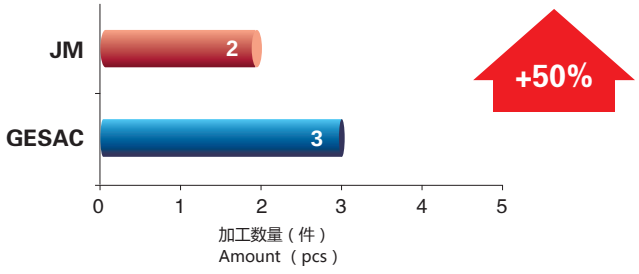
Case 1 NEW

GB9241–钢材加工 GB9241 for Cutting of Steel		示意图片 Workpiece
加工工件 Workpiece	齿轮 Gear	 
刀具型号 Type	SNGN201020	
被加工材料 Workpiece Materials	40CrMo（45~55HRC）	
加工参数 Cutting Parameters	粗Rough： ap=4mm，f=0.7mm/r 精Finishing： ap=0.5mm，f=0.6mm/r	
切削方式 Cutting Method	齿顶外圆车加工 Gear Top Excircle Turning	

刀具对比 Comparison	切削速度Vc Cutting Speed	效率 Efficiency	寿命 Life
某欧系硬质合金 European Series Alloy	20m/min	20小时/件 20h/pcs	0.25件/刃 0.25pcs/edge
金鹭GB9241 GESAC GB9241	50m/min	2小时/件 2h/pcs	2件/刃 2pcs/edge

Case 2 NEW

GB9241–钢材加工 GB9241 for Cutting of Steel		示意图片 Workpiece
加工工件 Workpiece	轴承 Bearing	 
刀具型号 Type	SNGN150720	
被加工材料 Workpiece Materials	Gr15（55–62HRC）	
加工参数 Cutting Parameters	Vc=120m/min ap=4mm f=0.1mm/r	
切削方式 Cutting Method	外圆与端面车加工 Excircle, face turning	



PCBN车削刀片
PCBN Turning Insert

PCBN刀片钢材加工
PCBN Inserts for Cutting of Steel

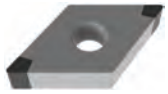
加工案例
Case Studies

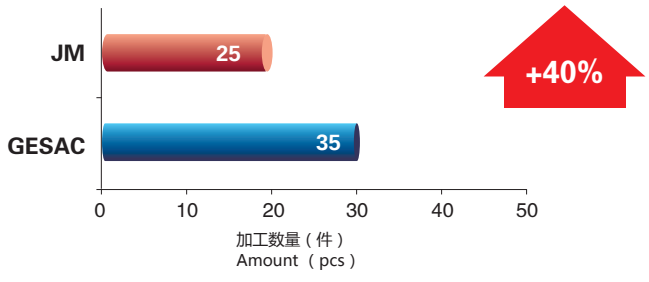
Case 3 NEW

GB9310–钢材加工 GB9310 for Cutting of Steel		示意图片 Workpiece	
加工工件 Workpiece	回转支撑架 Rotary Support		
刀具型号 Type	RCGN090700		
被加工材料 Workpiece Materials	42CrMo（47–55HRC）		
加工参数 Cutting Parameters	Vc=90m/min ap=0.2mm f=0.3mm/r		
切削方式 Cutting Method	内圆车加工 Inner Circle Turning		

刀具对比 Comparison	切削速度Vc Cutting Speed	效率 Efficiency	寿命 Life
涂层合金 Coated Alloy	50m/min	2小时/件 2h/pcs	1件/刃 1pcs/edge
金鹭GB9310 GESACGB9310	90m/min	30分钟/件 30min/pcs	4件/刃 4pcs/edge

Case 4 NEW

GB9310–钢材加工 GB9310 for Cutting of Steel		示意图片 Workpiece	
加工工件 Workpiece	曲轴 Crankshaft		
刀具型号 Type	DNGA110408		
被加工材料 Workpiece Materials	42CrMo（42–47HRC）		
加工参数 Cutting Parameters	Vc=170m/min ap=0.3mm f=0.1mm/r		
切削方式 Cutting Method	外圆断续加工，湿切 Excircle Interrupted Turing, Wet		

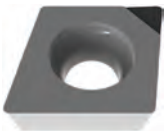
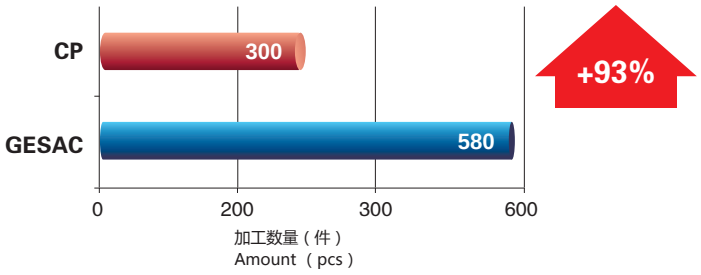


PCD车削刀片
PCD Turning Insert

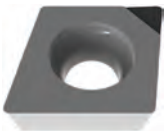
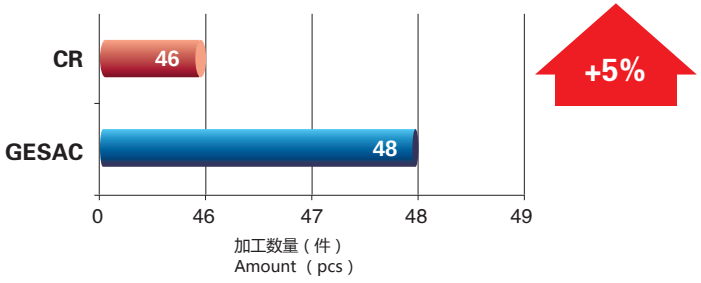
PCD刀片铸造铝合金加工
PCD Inserts for Cutting of Cast Aluminum Alloy

加工案例
Case Studies

Case 1 NEW

GD9700–铸造铝合金加工 GD9700 for Cutting of Cast Aluminum Alloy		示意图片 Workpiece
加工工件 Workpiece	汽车阀芯导座 Auto Valve Seat	 
刀具型号 Type	CCGW09T304Q5	
被加工材料 Workpiece Materials	铸造铝合金（20HRC） Cast Aluminum Alloy	
加工参数 Cutting Parameters	Vc=500m/min ap=1.2mm f=0.2mm/r	
切削方式 Cutting Method	轻断续半精加工 Light Interrupted Semi–finishing	

Case 2 NEW

GD9700–铸造铝合金加工 GD9700 for Cutting of Cast Aluminum Alloy		示意图片 Workpiece
加工工件 Workpiece	汽车模具 Auto Mould	 
刀具型号 Type	CCGW09T304Q5	
被加工材料 Workpiece Materials	铸造铝合金（20HRC） Cast Aluminum Alloy	
加工参数 Cutting Parameters	Vc=480m/min ap=0.15mm f=0.02mm/r	
切削方式 Cutting Method	连续精加工 Continuous Finishing	

车削刀杆一览表
Features of Turning Holder

MCBNR	MCLNR	MDJNR	MDPNN	MDQNR
Page102	Page102	Page103	Page103	Page104
				
MSBNR	MSKNR	MSSNR	MTENN	MTFNR
Page104	Page105	Page105	Page106	Page106
				
MTGNR	MTJNR	MVJNR	MVQNR	MWLNR
Page107	Page107	Page108	Page108	PagePage109
				
SCLCR	SDJCR	SSDCN	STGCR	SVJCR
Page110	Page110	PagePage111	Page111	Page112
				
SWLCR	SCLCR	SCKCR	SCLCR–A16	SDUCR
Page113	Page116	Page116	Page117	Page117
				
SDQCR	SDXCR	STUCR	STWCR	STFCR
Page118	Page118	Page119	Page119	Page120
				
SVUCR	SSKCR	SWLCR	SCLPR	STFPR
Page120	Page121	Page121	Page122	Page123
				

外圆车刀杆型号表示规则
External Turning Toolholders Identification System



①夹紧机构 Method of Holding	
D	双重夹紧型 Double Clamp Type
M	楔块锁紧型 重切削用双重夹紧型 Wedge Lock Type Heavy Cutting Double Clamp Type
P	杠杆锁紧型 Lever Lock Type
S	螺钉夹紧型 Screw–on Type

②刀片形状 Insert Shape	
C	80° 菱形 80° Rhombic
D	55° 菱形 55° Rhombic
R	圆形 Round
S	正方形 Square
T	正三角形 Triangle
V	35° 菱形 35° Rhombic
W	六边形 Trigon
X	特殊形状 Special Shape

③主偏角 Cutting Edge Angle	
A	90° 无偏置 90° Without Bias
B	75°
D	45° 中立 45° Neutral
E	60°
F	91°
G	90° 有偏置 90° Bias
J	93°
K	75°
L	95°
N	63°
P	62.5°
Q	45°
S	45°
T	60°
V	72.5°
Z	特殊 Special

④刀片后角 Insert Clearance	
B	5°
C	7°
N	0°
E	20°

⑤切削方向 Hand of Tool	
R	右手 Right Hand
L	左手 Left Hand
N	左、右 Left Right

25	25	M	12
⑥	⑥	⑦	⑧

⑥刀柄剖面 Tool Section(mm)	
8	8
10	10
12	12
16	16
20	20
25	25
32	32

⑦刀柄长度 Tool Length(mm)	
D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

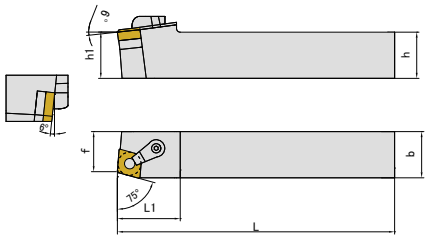
⑧切削刃长度 Cutting Edge Length(mm)

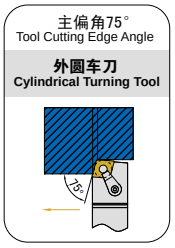
刀片内接圆 (mm) Insert IC (mm)	刀片形状 Insert Shape					
	正方形 Square	正三角形 Triangle	圆形 Round	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	35° 菱形 35° Rhombic
6	–	–	06	–	–	–
6.35		11		06	07	11
7.94	–	13	–	–	–	–
8			08			
9.525	09	16	–	09	11	16
10	–	–	10	–	–	–
12	–	–	12	–	–	–
12.7	–	22	–	12	15	–
15.875	15	27	–	16	–	–
16	–	–	16	–	–	–
19.05	19	–	19	–	–	–
20	–	–	20	–	–	–
25	–	–	25	–	–	–
25.4	25	–	–	–	–	–
32	–	–	32	–	–	–

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MCBNR



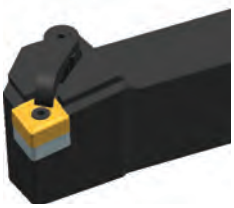


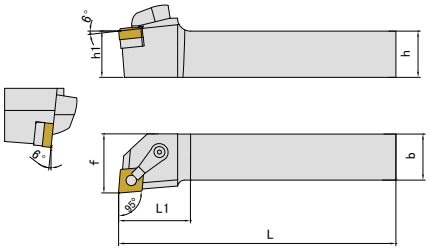


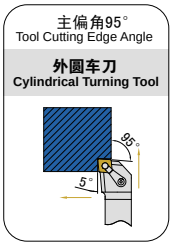
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MCBNR2020K09	20	20	125	31	20	17	CN**0903**	720500 763035	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	○
MCBNR2020K12	20	20	125	32	20	17	CN**1204**	720500 763036	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	●
MCBNR2525M12	25	25	150	32	25	22							●
MCBNR3232P12	32	32	170	32	32	27							●
MCBNR2525M16	25	25	150	32	25	33	CN**1606**	720500 763037	730109 001574	720500 762969	730100 460070	720301 260456/ 720301 260458	●
MCBNR3232P19	32	32	170	40	32	29	CN**1906**	720500 763038	730109 001577	720500 762969	730100 460070	720301 260456	○

●标准库存 Stock ○需预定 Available upon Order

MCLNR





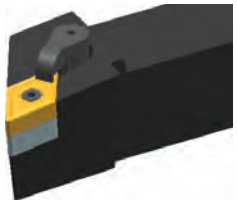


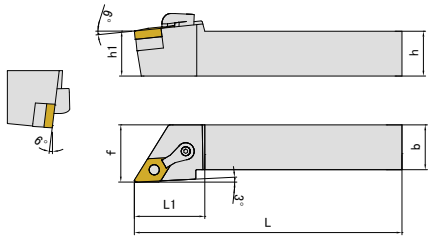
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MCLNR2020K09	20	20	125	28	20	25	CN**0903**	720500 763035	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	○
MCLNR2020K12	20	20	125	25	20	32	CN**1204**	720500 763036	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	○
MCLNR2525M12	25	25	150	32	25	32							●
MCLNR3232P12	32	32	170	40	32	32							●
MCLNR2525M16	25	25	150	32	25	33	CN**1606**	720500 763037	730109 001574	720500 762969	730100 460070	720301 260456/ 720301 260458	●
MCLNR3232P19	32	32	170	38	32	40	CN**1906**	720500 763038	730109 001577	720500 762969	730100 460070	720301 260456/ 720301 260458	○

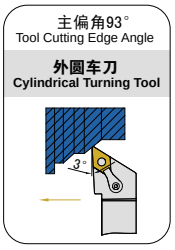
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MDJNR





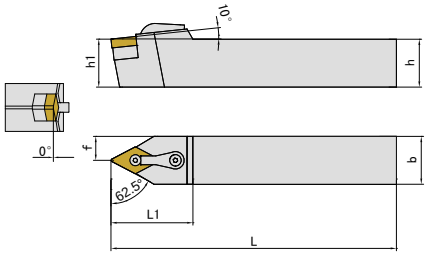


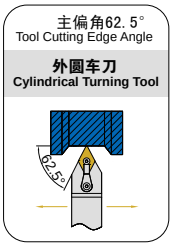
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MDJNR2020K11	20	20	125	34	20	25	DN**1104**	720500 763039	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MDJNR2020K1506	20	20	125	38	20	25	DN**1504**	720500 763040	730109 001567	720500 762967	730100 460063	720301 260453/ 720301 260455	○
MDJNR2525M1506	25	25	150	38	25	32							○
MDJNR3232P1504	32	32	170	38	32	40	DN**1506**	720500 763041					○

●标准库存 Stock ○需预定 Available upon Order

MDPNN





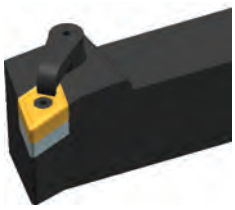


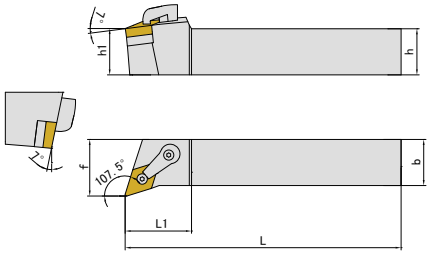
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MDPNN2020K11	20	20	125	36	20	10	DDN1104M	720500 763039	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MDPNN2020K1504	20	20	125	42	20	10	DDN1506M	720500 763040	730109 001567	720500 762967	730100 460063	720301 260453/ 720301 260455	●
MDPNN2525M1504	25	25	150	42	25	12.5							●
MDPNN3232P1506	32	32	170	42	32	16	DDN1504M	720500 763041					○

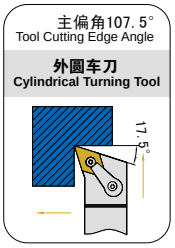
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MDQNR





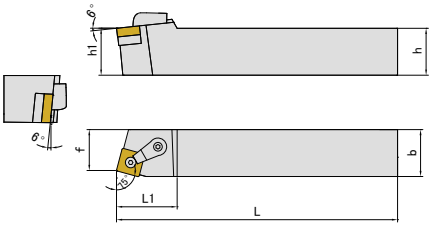


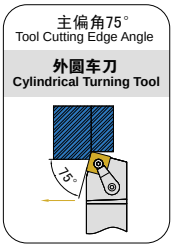
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MDQNR2020K11	20	20	125	32	20	25	DN**1104**	720500 763039	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MDQNR2020K1504	20	20	125	36	20	25	DN**1504**	720500 763040	730109 001567	720500 762967	730100 460063	720301 260453/ 720301 260455	●
MDQNR2525M1504	25	25	150	36	25	32							●
MDQNR3232P1506	32	32	170	36	32	40	DN**1506**	720500 763041					○

●标准库存 Stock ○需预定 Available upon Order

MSBNR





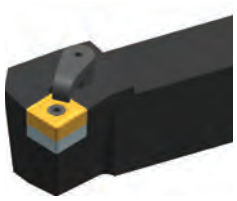


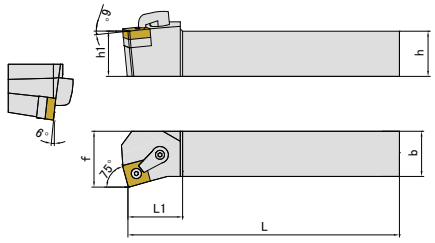
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MSBNR2020K09	20	20	125	36	20	17	SN**0903**	DSN090 3M	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	○
MSBNR2020K12	20	20	125	32.5	20	17	SN**1204**	720500 763042	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	●
MSBNR2525M12	25	25	150	32.5	25	22							●
MSBNR3232P12	32	32	170	32.5	32	27							●
MSBNR2525M15	25	25	150	38	25	22	SN**1506**	720500 763043	730109 001574	720500 762969	730100 460070	720301 260455/ 720301 260456	○
MSBNR3232P19	32	32	170	42	32	27	SN**1906**	720500 763044	730109 001577	720500 762969	730100 460070	720301 260456	○

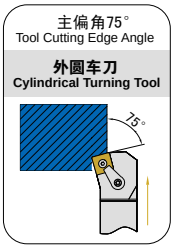
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MSKNR





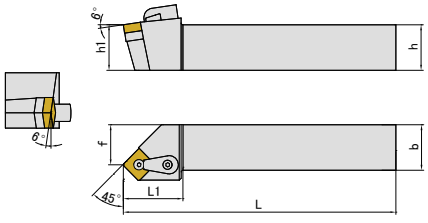


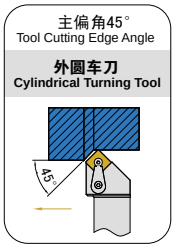
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MSKNR2020K09	20	20	125	30	20	25	SN**0903**	720500 763035	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	○
MSKNR2020K12	20	20	125	29	20	25	SN**1204**	720500 763042	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	●
MSKNR2525M12	25	25	150	29	25	32							●
MSKNR3232P12	32	32	170	29	32	40							○
MSKNR2525M15	25	25	150	34	25	32	SN**1506**	720500 763043	730109 001574	720500 762969	730100 460070	720301 260455/ 720301 260456	○
MSKNR3232P19	32	32	170	35	32	40	SN**1906**	720500 763044	730109 001577	720500 762969	730100 460070	720301 260456	○

●标准库存 Stock ○需预定 Available upon Order

MSSNR







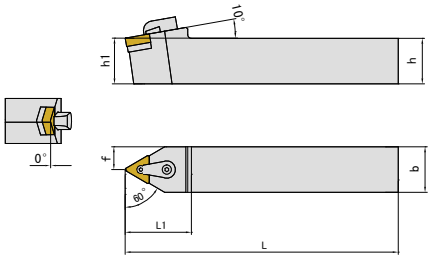
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MSSNR2020K09	20	20	125	38	20	25	SN**0903**	720500 763035	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	○
MSSNR2020K12	20	20	125	32	20	17	SN**1204**	720500 763042	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	●
MSSNR2525M12	25	25	150	32	25	22							●
MSSNR3232P12	32	32	170	32	32	27							●
MSSNR2525M15	25	25	150	40	25	32	SN**1506**	720500 763043	730109 001574	720500 762969	730100 460070	720301 260455/ 720301 260456	○
MSSNR3232P19	32	32	170	43	32	40	SN**1906**	720500 763044	730109 001577	720500 762969	730100 460070	720301 260456	○

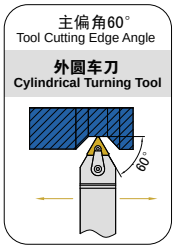
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MTENN





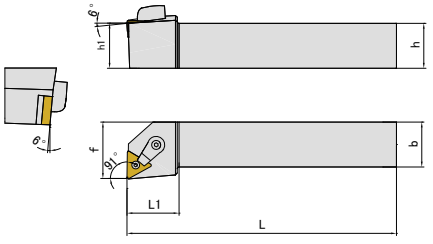


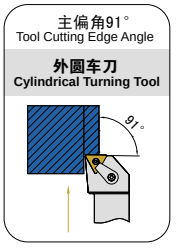
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MTENN2020K16	20	20	125	35	20	10	TN**1604**	720500 763045	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MTENN2525M16	25	25	150	35	25	12.5							●
MTENN3232P16	32	32	170	35	32	16							○
MTENN3232P22	32	32	170	38	32	16	TN**2204**	720500 763046	730109 001574	720500 762966	730100 460070	720301 260453/ 720301 260456	○

●标准库存 Stock ○需预定 Available upon Order

MTFNR





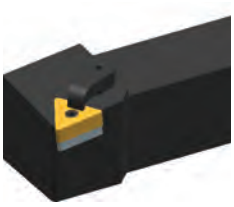


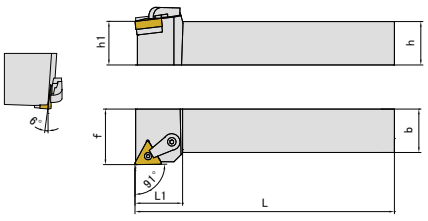
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MTFNR2020K16	20	20	125	28	20	25	TN**1604**	720500 763045	730109 001565	720500 762965	730100 460063	720301 260452 720301/ 260455	●
MTFNR2525M16	25	25	150	28	25	32							●
MTFNR3232P16	32	32	170	28	32	40							○
MTFNR3232P22	32	32	170	32	32	32	TN**2204**	720500 763046	730109 001574	720500 762966	730100 460070	720301 260453/ 720301 260456	○

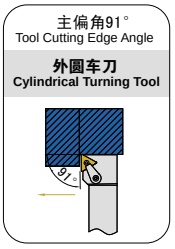
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MTGNR



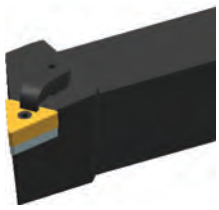


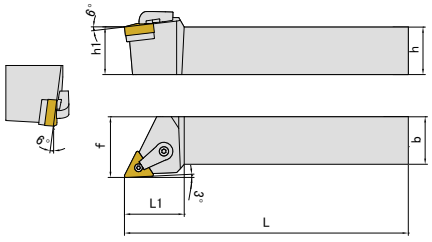


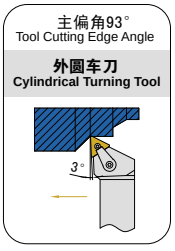
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MTGNR2020K16	20	20	125	28	20	25	TN**1604**	720500 763045	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MTGNR2525M16	25	25	150	28	25	32							●
MTGNR3232P16	32	32	170	34	32	40							○
MTGNR3232P22	32	32	170	32	32	40	TN**2204**	720500 763046	730109 001574	720500 762966	730100 460070	720301 260453/ 720301 260456	○

●标准库存 Stock ○需预定 Available upon Order

MTJNR







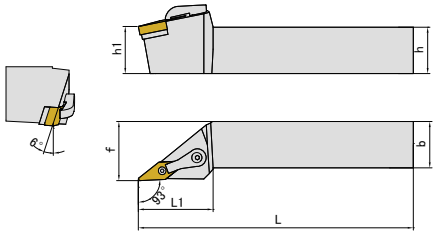
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MTJNR2020K16	20	20	125	32	20	25	TN**1604**	720500 763045	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MTJNR2525M16	25	25	150	32	25	32							●
MTJNR3232P16	32	32	170	32	32	40							○
MTJNR3232P22	32	32	170	38	32	16	TN**2204**	720500 763046	730109 00157	720500 762966	730100 460070	720301 260453/ 720301 260456	○

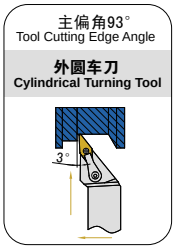
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MVJNR





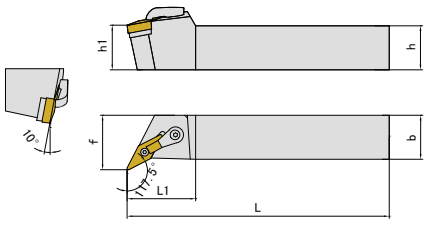


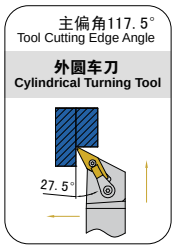
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MVJNR2020K16	20	20	125	42	20	20	VN**1604**	720500 763034	730109 003256	720500 762968	730100 460063	720301 260452/ 720301 260455	●
MVJNR2525M16	25	25	150	42	25	25							○
MVJNR3232P16	32	32	170	42	32	32							○

●标准库存 Stock ○需预定 Available upon Order

MVQNR





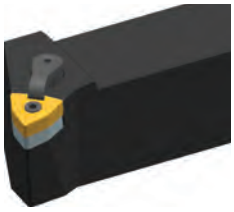


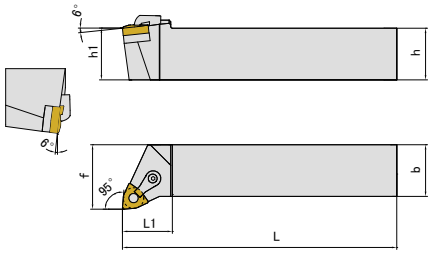
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MVQNR2020K16	20	20	125	40	20	25	VN**1604**	720500 763034	730109 003256	720500 762968	730100 460063	720301 260452/ 720301 260455	●
MVQNR2525M16	25	25	150	40	25	32							○
MVQNR3232P16	32	32	170	40	32	40							○

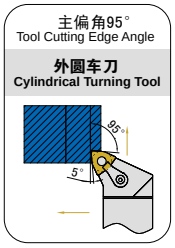
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（负型）
Cylindrical Turning Tool Holder (Negative)

MWLNR





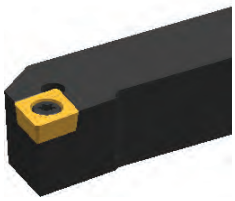


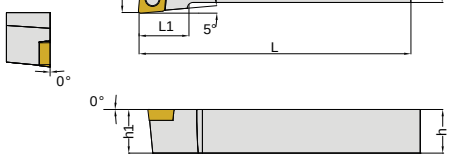
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts					库存 Stock
	h	b	L	L1	h1	f		刀垫 Shim	销钉 Pin	压板 Clamp	双头螺丝 Screw	扳手 Wrench	
MWLNR2020K06	20	20	125	25	20	32	WN**0604**	720500 763047	730109 001565	720500 762965	730100 460063	720301 260452/ 720301 260455	●
MWLNR2020K08	20	20	125	25	20	32	WN**0804**	720500 763048	730109 001566	720500 762965	730100 460063	720301 260453/ 720301 260455	○
MWLNR2525M08	25	25	150	32	25	32							○
MWLNR3232P08	32	32	170	40	32	32							●

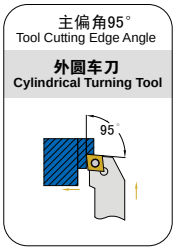
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（正型）
Cylindrical Turning Tool Holder (Positive)

SCLCR



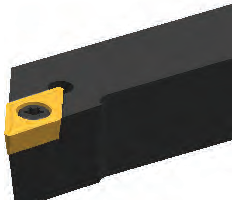


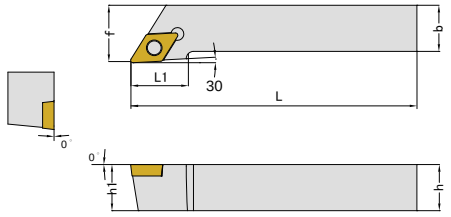


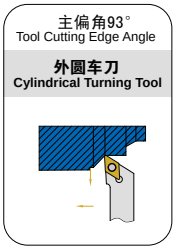
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
SCLCR1010E06	10	10	70	12	10	10	CC**0602**	730100 961040	720300 960508	○
SCLCR1212F09	12	12	80	16	12	16	CC**09T3**	730100 961128	720300 960510	○
SCLCR1616H09	16	16	100	20	16	20				●
SCLCR2020K09	20	20	125	25	20	25				●
SCLCR2525M12	25	25	150	32	25	32	CC**1204**	730100 961205	720300 960510	●

●标准库存 Stock ○需预定 Available upon Order

SDJCR





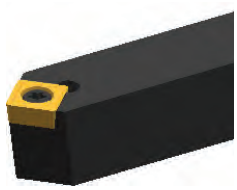


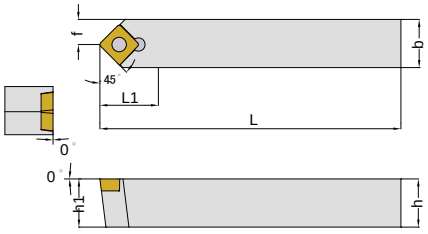
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
SDJCR1010E07	10	10	70	12	10	15	DC**0702**	730100 961040	720300 960508	○
SDJCR1212F07	12	12	80	16	12	15				○
SDJCR1616H11	16	16	100	20	16	24	DC**11T3**	730100 961128	720300 960510	●
SDJCR2020K11	20	20	125	20	20	24				●
SDJCR2525M11	25	25	150	23	25	29		730100 961205	720300 960515	●

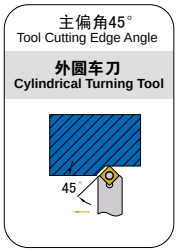
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（正型）
Cylindrical Turning Tool Holder (Positive)

SSDCN





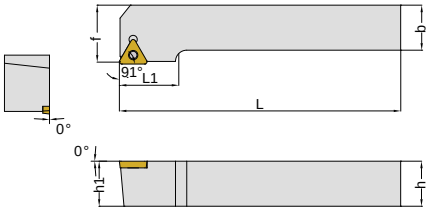


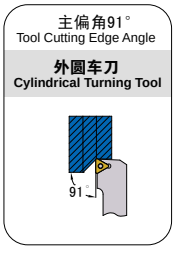
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
SSDCN1212F09	12	12	80	16	12	6	SC**09T3**	730100 961128	720300 960510	○
SSDCN1616H09	16	16	100	16	16	8				●
SSDCN2020K09	20	20	125	16	20	10				●
SSDCN2525M12	25	25	150	22	25	12.5	SC**1204**	730100 961205	720300 960515	○

●标准库存 Stock ○需预定 Available upon Order

STGCR





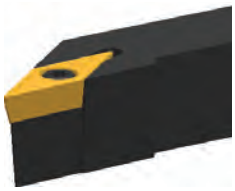


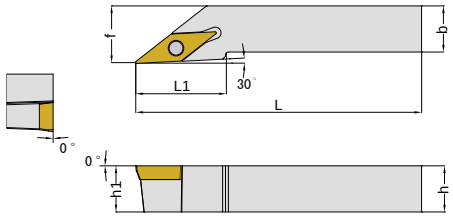
订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
STGCR1010E09	10	10	70	12	10	11	TC**0902**	730100 961030	720300 960506	○
STGCR1212F11	12	12	80	16	12	16	TC**1102**	730100 961040	720300 960508	○
STGCR1616H11	16	16	100	20	16	20				●
STGCR2020K16	20	20	125	25	20	25	TC**16T3**	730100 961128	720300 960510	●
STGCR2525M16	25	25	150	27	25	32				●

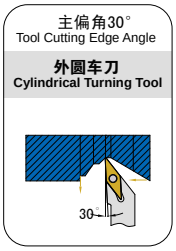
●标准库存 Stock ○需预定 Available upon Order

外圆车刀杆（正型）
Cylindrical Turning Tool Holder (Positive)

SVJCR







订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
SVJCR1212F11	12	12	80	24	12	16	VC**11T3**	730100 961040	720300 960508	○
SVJCR1616H11	16	16	100	26	16	20				●
SVJCR2020K16	20	20	125	32	20	25	VC**1604**	730100 961128	720300 960510	●
SVJCR2525M16	25	25	150	32	25	32				●

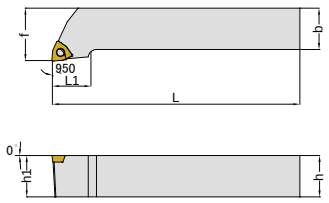
●标准库存 Stock ○需预定 Available upon Order

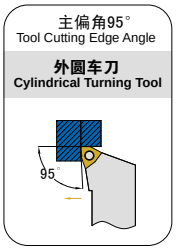
外圆车刀杆（正型）
Cylindrical Turning Tool Holder (Positive)

SWLCR









订货号 Ordering Code	基本尺寸 Dimensions (mm)						匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	h	b	L	L1	h1	f		螺钉 Screw	扳手 Wrench	
SWLCR1212F06	12	12	80	14	12	16	WC**06T3**	730100 961128	720300 960510	○
SWLCR1616H06	16	16	100	14	16	20		730100 961128		○
SWLCR2020K06	20	20	125	15	20	25				○
SWLCR2525M06	25	25	150	17	25	32				○

●标准库存 Stock ○需预定 Available upon Order

内孔车刀杆型号表示规则
Internal Boring Bars Identification System

S	16	M	S	C
①	②	③	④	⑤

① 刀杆材质 Tool Material	
A	带冷却孔钢刀杆 Steel Shank with Coolant Hole
C	硬质合金刀杆 Carbide Shank
E	带冷却孔硬质合金刀杆 Carbide Shank with Coolant Hole
S	钢刀杆 Steel Shank

②刀柄直径 Tool Diameter(mm)	
08	8
10	10
12	12
16	16
20	20
25	25
32	32
40	40

③刀柄长度 Tool Length(mm)	
F	80
H	100
K	125
M	150
N	160
Q	180
R	200
S	250
T	300
U	350
V	400

④夹紧方式 Method of Holding	
M	双重夹紧型 Double Clamp Type
C	压板夹紧型 Top Clamp Type
P	杠杆锁紧型 Lever Lock Type
S	螺钉夹紧型 Screw-on Type

⑤刀片形状 Insert Shape	
C	80° 菱形 80° Rhombic
D	55° 菱形 55° Rhombic
R	圆形 Round
S	正方形 Square
T	正三角形 Triangle
V	35° 菱形 35° Rhombic
W	六边形 Trigon

L C R 09

⑥ ⑦ ⑧ ⑨

⑥主偏角 Cutting Edge Angle	
K	75°
L	95°
F	91°
Q	107.5°
U	93°
W	60°
X	120°

⑦刀片后角 Insert Clearance Angle	
C	7°
B	5°
N	0°
P	11°

⑧方向 Hand of Tool	
R	右手 Right Hand
L	左手 Left Hand

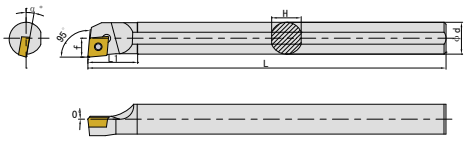
⑨切削刃长度 Cutting Edge Length(mm)

刀片内接圆 (mm) Insert IC (mm)	刀片形状 Insert Shape					
	正方形 Square	正三角形 Triangle	圆形 Round	80° 菱形 80° Rhombic	55° 菱形 55° Rhombic	35° 菱形 35° Rhombic
6	–	–	06	–	–	–
6.35		11		06	07	11
7.94	–	13	–	–	–	–
8			08			
9.525	09	16	–	09	11	16
10	–	–	10	–	–	–
12	–	–	12	–	–	–
12.7	–	22	–	12	15	–
15.875	15	27	–	16	–	–
16	–	–	16	–	–	–
19.05	19	–	19	–	–	–
20	–	–	20	–	–	–
25	–	–	25	–	–	–
25.4	25	–	–	–	–	–
32	–	–	32	–	–	–

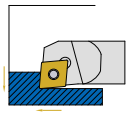
内孔车刀杆
Internal Boring Bars

SCLCR





主偏角95°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool

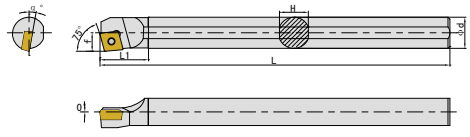


订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–SCLCR06	10	8	5.5	125	12	7	13	CC**0602**	730100 961040	720300 960508	●
S10K–SCLCR06	12	10	6	125	15	9	12				●
S12M–SCLCR06	14	12	7	150	16	11	10				●
S12M–SCLCR09	15	12	8	150	20	11	12	CC**09T3**	730100 961128	720300 960510	○
S16Q–SCLCR09	18	16	9.5	180	25	14.8	10				●
S20R–SCLCR09	22	20	11.5	200	28	18.4	8				●
S25S–SCLCR09	27	25	14	250	30	23.4	6				●
S25S–SCLCR12	28	25	14.5	250	35	23.4	8	CC**1204**	730100 961205	720300 960515	○

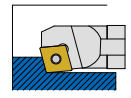
●标准库存 Stock ○需预定 Available upon Order

SCKCR





主偏角75°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool



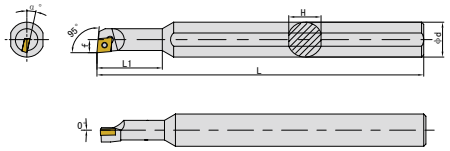
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–SCKCR06	10	8	5.5	125	13	7	13	CC**0602**	730100 961040	720300 960508	●
S10K–SCKCR06	12	10	6	125	14	9	12				●
S12M–SCKCR06	14	12	7	150	16	11	10				●
S12M–SCKCR09	15	12	8	150	23	11	12	CC**09T3**	730100 961128	720300 960510	○
S16Q–SCKCR09	18	16	9.5	180	25	14.8	10				●
S20R–SCKCR09	22	20	11.5	200	28	18.4	8				○
S25S–SCKCR09	27	25	14	250	30	23.4	6				○

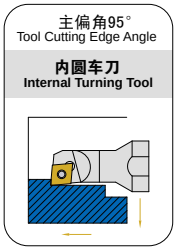
●标准库存 Stock ○需预定 Available upon Order

内孔车刀杆
Internal Boring Bars

SCLCR–A16





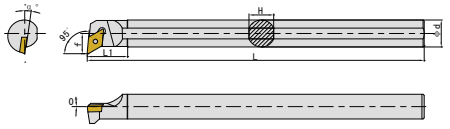


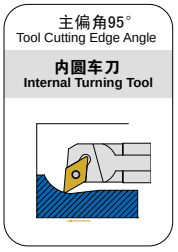
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S07M–SCLCR06–A16	9	16	4.9	150	25	14.8	15	CC**0602**	730100 961040	720300 960508	●
S08M–SCLCR06–A16	10	16	5.5	150	28	14.8	13				●
S10M–SCLCR06–A16	12	16	6	150	30	14.8	12				●
S12M–SCLCR06–A16	14	16	7	150	33	14.8	10				●

●标准库存 Stock ○需预定 Available upon Order

SDUCR







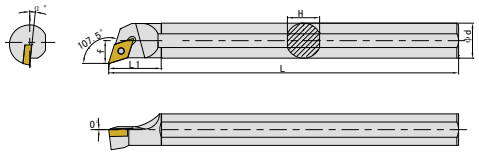
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S10K–SDUCR07	14	10	8	125	16	9	10	DC**0702**	730100 961040	720300 960508	●
S12M–SDUCR07	16	12	9	150	18	11	8				○
S16Q–SDUCR07	20	16	11	180	20	14.8	6				●
S16Q–SDUCR11	20	16	11	180	18	14.8	6	DC**11T3**	730100 961128	720300 960510	●
S20R–SDUCR11	24	20	13	200	28	18.4	6				●
S25S–SDUCR11	29	25	16	250	28	23.4	4				○

●标准库存 Stock ○需预定 Available upon Order

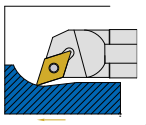
内孔车刀杆
Internal Boring Bars

SDQCR





主偏角107.5°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool

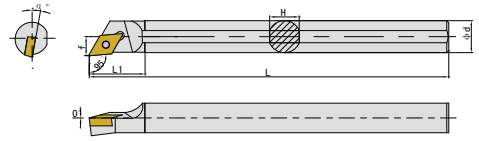


订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S10K–SDQCR07	13	10	7	125	18	9	10	DC**0702**	730100 961040	720300 960508	●
S12M–SDQCR07	16	12	9	150	18	11	8				●
S16Q–SDQCR07	20	16	11	180	24	14.8	6				●
S16Q–SDQCR11	20	16	10.5	180	26	14.8	6	DC**11T3**	730100 961128	720300 960510	●
S20R–SDQCR11	24	20	13	200	30	18.4	6				●
S25S–SDQCR11	29	25	16	250	35	23.4	4				○

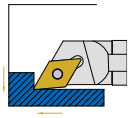
●标准库存 Stock ○需预定 Available upon Order

SDXCR





主偏角95°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool



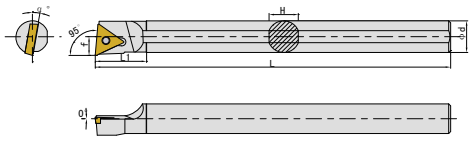
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–SDXCR07	10	8	5.5	125	18	7	12	DC**0702**	730100 961040	720300 960508	●
S10K–SDXCR07	12	10	6	125	18	9	10				●
S12M–SDXCR07	14	12	7	150	21	11	8				●
S16Q–SDXCR07	18	16	9	180	22	14.8	6		730100 961128	720300 960510	●
S20R–SDXCR11	22	20	11.5	200	30	18.4	6	DC**11T3**			○
S25S–SDXCR11	27	25	14	250	35	23.4	4				○

●标准库存 Stock ○需预定 Available upon Order

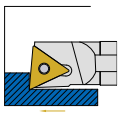
内孔车刀杆
Internal Boring Bars

STUCR





主偏角95°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool

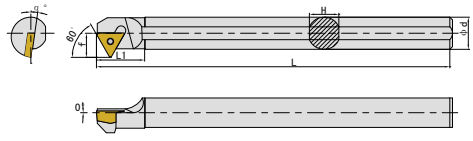


订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–STUCR09	10	8	5.5	125	14	7	15	TC**0902**	730100 961040	720300 960508	●
S10K–STUCR09	12	10	6	125	15	9	13				●
S10K–STUCR11	12	10	6	125	17	9	12	TC**1102**			●
S12M–STUCR11	14	12	7	150	20	11	10				●
S16Q–STUCR11	18	16	9	180	20	14.8	8				●
S20R–STUCR11	22	20	11	200	22	18.4	6				○
S20R–STUCR16	22	20	11.5	200	25	18.4	4	TC**16T3**	730100 961128	720300 960510	○
S25S–STUCR16	28	25	14	250	30	23.4	6				○

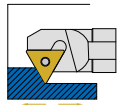
●标准库存 Stock ○需预定 Available upon Order

STWCR





主偏角60°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool



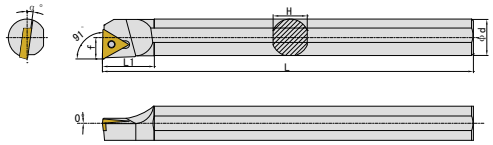
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–STWCR09	11	8	6	125	15	7	15	TC**0902**	730100 9610405	720300 960508	●
S10K–STWCR11	14	10	8	125	18	9	10	TC**1102**	730100 961050		●
S12M–STWCR11	16	12	9	150	18	11	8				●
S16Q–STWCR11	20	16	11	180	27	14.8	6				●
S20R–STWCR11	24	20	13	200	26	18.4	4				○
S20R–STWCR16	25	20	14.5	200	32	18.4	8	TC**16T3**	730100 961128	720300 960510	○
S25S–STWCR16	30	25	17	250	30	23.4	6				○

●标准库存 Stock ○需预定 Available upon Order

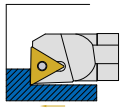
内孔车刀杆
Internal Boring Bars

STFCR





主偏角91°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool

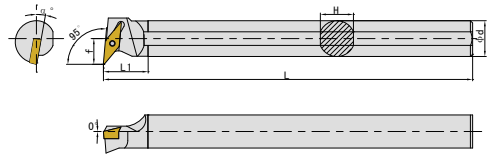


订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–STFCR09	10	8	5.5	125	14	7	15	TC**0902**	730100 961040	720300 960508	●
S10K–STFCR09	12	10	6	125	15	9	13				●
S12M–STFCR09	14	12	7	150	17	11	10				○
S12M–STFCR11	14	12	7	150	20	11	10	TC**1102**			●
S16Q–STFCR11	18	16	9	180	20	14.8	8				●
S20R–STFCR11	22	20	11	200	22	18.4	6				○
S20R–STFCR16	22	20	11.5	200	25	18.4	4	TC**16T3**	730100 961135	720300 960510	○
S25S–STFCR16	27	25	14	250	30	23.4	6				○

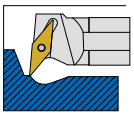
●标准库存 Stock ○需预定 Available upon Order

SVUCR





主偏角95°
Tool Cutting Edge Angle
内圆车刀
Internal Turning Tool



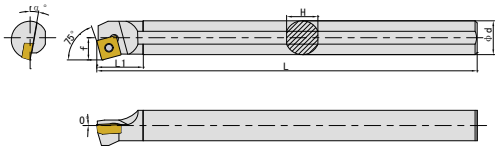
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
		Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S16Q–SVUCR11	20	16	11.5	180	20	14.8	10	VC**1103**	730100 961050	720300 960508	○
S20R–SVUCR11	25	20	14	200	25	18.4	8				○
S25S–SVUCR16	33	25	20	250	25	23.4	8	VC**1604**	730100 961135	720300 960510	○

●标准库存 Stock ○需预定 Available upon Order

内孔车刀杆
Internal Boring Bars

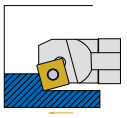
SSKCR





主偏角75°
Tool Cutting Edge Angle

内圆车刀
Internal Turning Tool

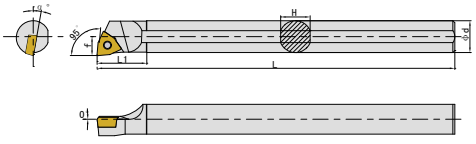


订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
		Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S12M–SSKCR09	15	12	8.5	150	11	11	10	SC**09T3**	730109 003240	720309 000832	●
S16Q–SSKCR09	19	16	10.5	180	22	14.8	10				●
S20R–SSKCR09	23	20	12.5	200	25	18.4	8				○
S25S–SSKCR12	28	25	15	250	40	23.4	6	SC**1204**	730109 003255	720309 000835	○

●标准库存 Stock ○需预定 Available upon Order

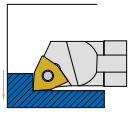
SWLCR





主偏角95°
Tool Cutting Edge Angle

内圆车刀
Internal Turning Tool



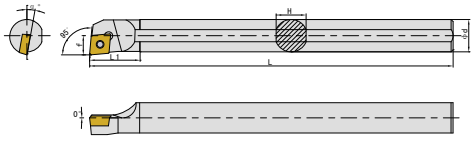
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S12M–SWLCR06	14	12	7.5	150	20	11	12	WC**06T3**	730100 961135	720300 960510	○
S16Q–SWLCR06	18	16	9.5	180	25	14.8	10				○
S20R–SWLCR06	22	20	11.5	200	28	18.4	8				○
S25S–SWLCR06	27	25	14	250	30	23.4	6				○

●标准库存 Stock ○需预定 Available upon Order

内孔车刀杆
Internal Boring Bars

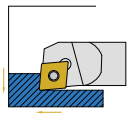
SCLPR





主偏角95°
Tool Cutting Edge Angle

内圆车刀
Internal Turning Tool



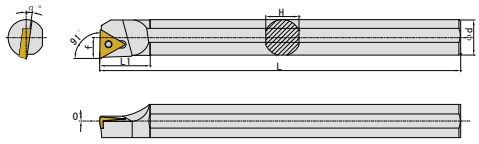
订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S08K–SCLPR06	10	8	5.5	125	12	7	13	CP**0602**	730100 961040	720300 960508	○
S10K–SCLPR06	12	10	6	125	15	9	12				○
S12M–SCLPR06	14	12	7	150	16	11	10				○
S12M–SCLPR09	15	12	8	150	20	11	12	CP**09T3**	730100 961128	720300 960510	○
S16Q–SCLPR09	18	16	9.5	180	25	14.8	10				○
S20R–SCLPR09	22	20	11.5	200	28	18.4	8				○
S25S–SCLPR09	27	25	14	250	30	23.4	6				○

●标准库存 Stock ○需预定 Available upon Order

内孔车刀杆
Internal Boring Bars

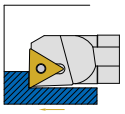
STFPR





主偏角91°
Tool Cutting Edge Angle

内圆车刀
Internal Turning Tool



订货号 Ordering Code	基本尺寸 Dimensions (mm)							匹配刀片 Gauge Insert	配件 Spare Parts		库存 Stock
	ΦDmin	Φd	f	L	L1	H	α°		螺钉 Screw	扳手 Wrench	
S10K–STFPR11	12	10	6	125	17	9	12	TP**1102**	730100 961040	720300 960508	○
S12M–STFPR11	14	12	7	150	20	11	10				○
S16Q–STFPR11	18	16	9	180	20	14.8	8				○
S20R–STFPR11	22	20	11	200	22	18.4	6				○
S20R–STFPR16	22	20	11.5	200	25	18.4	4	TP**16T3**	730100 961128	720300 960510	○
S25S–STFPR16	27	25	14	250	30	23.4	6				○

●标准库存 Stock ○需预定 Available upon Order

G–Notch 槽刀片命名规则
G–Notch Grooving Insert Identification System

G	N	G	P	3	M150	R
①	②	③	④	⑤	⑥	⑦

①公司代号 Company Mark

G=GESAC

②刀片型号 Type of Insert

N=Notch

③刀片类型 Insert Style

G=Grooving 切槽
R=Full Radius 圆头

④附加信息 Additional Information

P=Positive 正向前角
□=Flat 无前角

⑤刀片尺寸 Insert Size

	mm	inch
2	3.81	.150
3	4.95	.195



⑥槽宽尺寸 Groove Size

Metric 公制:
M150 = 1.5mm

Inch 英制:
125 = .125inch

⑦刀片方向 Hand of Insert

R=Right Hand
右手

L=Left Hand
左手

G N T P 3 R

① ② ③ ④ ⑤ ⑥

①公司代号 Company Mark
G=GESAC

②刀片型号 Type of Insert
N=Notch

③螺纹类型 Insert Style
T=60° V Thread 60° 通用螺纹

④附加信息 Additional Information
P=Positive 正向前角

⑤刀片尺寸 Insert Size		
	mm	inch
2	3.81	.150
3	4.95	.195

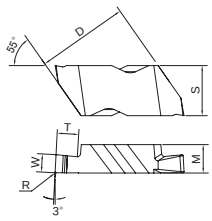


⑥刀片方向 Hand of Insert
R=Right Hand 右手 L=Left Hand 左手

切槽刀片
Grooving Inserts

GNGP

切槽正前角刀片
Grooving Positive Rake Inserts



订货号 Ordering Code	尺寸 Dimensions(mm)						刀片尺寸 Insert Size	库存 Stock		
	W	R	T	S	M	D		GM3125	GA4230	GS3115
GNGP2M100L	1.00	0.09	1.27	5.56	3.81	8.74	2			●
GNGP2M100R	1.00	0.09	1.27	5.56	3.81	8.74	2			●
GNGP2047L	1.19	0.09	1.27	5.56	3.81	8.74	2	●		
GNGP2047R	1.19	0.09	1.27	5.56	3.81	8.74	2	●		
GNGP2M150L	1.50	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2M150R	1.50	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2062L	1.57	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2062R	1.57	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2M170L	1.70	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2M170R	1.70	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2070L	1.78	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2078L	1.98	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2078R	1.98	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2M200L	2.00	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2M200R	2.00	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2M220L	2.20	0.19	2.79	5.56	3.81	8.74	2		○	
GNGP2M220R	2.20	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2094L	2.38	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2094R	2.38	0.19	2.79	5.56	3.81	8.74	2	●	●	●
GNGP2M250L	2.50	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2M250R	2.50	0.19	2.79	5.56	3.81	8.74	2			●
GNGP2125L	3.18	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP2125R	3.18	0.19	2.79	5.56	3.81	8.74	2	●		
GNGP3031L	0.79	0.09	1.27	8.74	4.95	16.1	3	●		
GNGP3031R	0.79	0.09	1.27	8.74	4.95	16.1	3	●		
GNGP3M100L	1.00	0.19	1.91	8.74	4.95	16.1	3	●		
GNGP3M100R	1.00	0.19	1.91	8.74	4.95	16.1	3	●		
GNGP3047L	1.19	0.19	1.91	8.74	4.95	16.1	3	●		



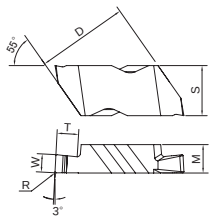
续/continued on next page

●标准库存 Stock ○需预定 Available upon Order

切槽刀片
Grooving Inserts

GNGP

切槽正前角刀片
Grooving Positive Rake Inserts



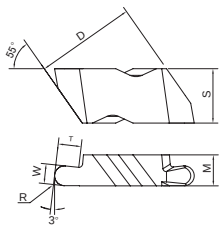
订货号 Ordering Code		尺寸 Dimensions(mm)						刀片尺寸 Insert Size	库存 Stock		
		W	R	T	S	M	D		GM3125	GA4230	GS3115
	GNGP3M150L	1.50	0.19	2.39	8.74	4.95	16.1	3		●	
	GNGP3M150R	1.50	0.19	2.39	8.74	4.95	16.1	3	●	●	●
	GNGP3062L	1.58	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3062R	1.58	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3070L	1.78	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3078L	1.98	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3078R	1.98	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3M200L	2.00	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3M200R	2.00	0.19	2.39	8.74	4.95	16.1	3	●		
	GNGP3094L	2.39	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3094R	2.39	0.19	3.81	8.74	4.95	16.1	3	●	●	●
	GNGP3M250L	2.50	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3M250R	2.50	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3M300L	3.00	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3M300R	3.00	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3125L	3.18	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3125R	3.18	0.19	3.81	8.74	4.95	16.1	3	●	●	●
	GNGP3M350L	3.50	0.19	3.81	8.74	4.95	16.1	3	●		
	GNGP3M350R	3.50	0.19	3.81	8.74	4.95	16.1	3	●		

●标准库存 Stock ○需预定 Available upon Order

切槽刀片
Grooving Inserts

GNR

切槽圆头刀片
Full Radius Inserts



订货号 Ordering Code		尺寸 Dimensions(mm)						刀片尺寸 Insert Size	库存 Stock		
		W	R	T	S	M	D		GM3125	GA4230	GS3115
	GNR3M100L	2.00	1.00	2.39	8.74	4.95	16.10	3		○	
	GNR3M100R	2.00	1.00	2.39	8.74	4.95	16.10	3	●		
	GNR3M150L	3.00	1.50	3.81	8.74	4.95	16.10	3		○	
	GNR3M150R	3.00	1.50	3.81	8.74	4.95	16.10	3	●		
	GNR3062L	3.18	1.59	3.81	8.74	4.95	16.10	3		○	
	GNR3062R	3.18	1.59	3.81	8.74	4.95	16.10	3	●		

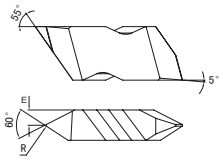
●标准库存 Stock ○需预定 Available upon Order

螺纹刀片
Threading Inserts

GNTP

60° 通用螺纹刀片,带前角

60°Partial Profile Threading Inserts With Positive Top Rake



订货号 Ordering Code		尺寸 Dimensions(mm)						刀片尺寸 Insert Size	库存 Stock		
		R	E	螺距 Pitch					GM3125	GA4230	GS3115
				外牙 External mm	内牙 Internal mm	外牙 External TPI	内牙 Internal TPI				
	GNTP2L	0.10	1.91	0.70–3.00	1.25–3.50	8–36	7–20	2	●		
	GNTP2R	0.10	1.91	0.70–3.00	1.25–3.50	8–36	7–20	2	●		
	GNTP3L	0.17	2.49	1.25–4.00	2.00–5.00	4–20	5–12	3	●		
	GNTP3R	0.17	2.49	1.25–4.00	2.00–5.00	4–20	5–12	3	●		
	GNTP3004L	0.10	2.49	1.25–4.00	2.00–5.00	5–36	5–12	3		○	
	GNTP3004R	0.10	2.49	1.25–4.00	2.00–5.00	5–36	5–12	3	●		

●标准库存 Stock ○需预定 Available upon Order

G–Notch 外圆刀杆命名规则
G–Notch External Holder Identification System

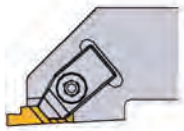
G	N	S	R	2525	M	3
①	②	③	④	⑤	⑥	⑦

①公司代号 Company Mark
G=GESAC

②夹紧方式 Clamping System
N=Notch



③刀片装夹位置 Insert Mounting Location
S=Side
侧装



④刀具方向 Hand of Tool
L=Left Hand
左手



R=Right Hand
右手



⑤刀柄尺寸 Shank Size

宽 Width	高 Height
12	12
16	16
20	20
25	25
32	32

⑥刀柄长度 Shank Length

D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

⑦刀片尺寸 Insert Size

	mm	inch
2	3.81	.150
3	4.95	.195



G N A R 25 M 3

① ② ③ ④ ⑤ ⑥ ⑦

①公司代号 Company Mark
G=GESAC

②夹紧方式 Clamping System
N=Notch



③刀杆类型 Insert Mounting Location
A=Steel With Coolant
带内冷孔的钢制刀杆

S=Steel Without Coolant
不带内冷孔的钢制刀杆

④刀具方向 Hand of Tool
L=Left Hand
左手



R=Right Hand
右手



⑤刀柄尺寸 Shank Size
12 = 12 mm
16 = 16 mm
20 = 20 mm
25 = 25 mm
32 = 32 mm

⑥刀柄长度 Shank Length

D	60
E	70
F	80
H	100
K	125
M	150
P	170
Q	180
R	200

⑦刀片尺寸 Insert Size

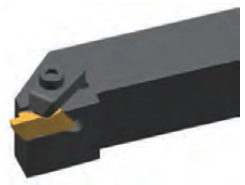
	mm	inch
2	3.81	.150
3	4.95	.195

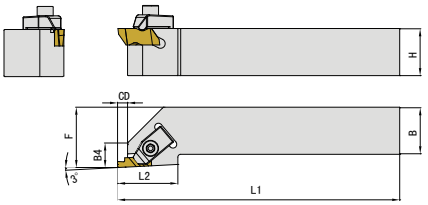


注意：左手内圆刀杆使用右手刀片，右手内圆刀杆使用左手刀片
Note: Left hand bars use right hand inserts, Right hand bars use left hand inserts.

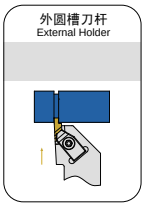
外圆刀杆
External Holder

GNSR/L





Right hand show



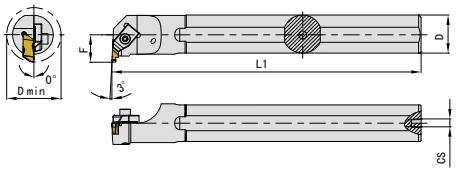
订货号 Ordering Code	尺寸 Dimensions(mm)							匹配刀片 Gauge Insert	配件 Spare Parts			库存 Stock
	H	B	F	L1	L2	B4	CD		压板 Clamp	螺钉 Screw	扳手 Wrench	
GNSR1616H2	16	16	20	100	19	9	3.5	GN.2R	720500762978	730109003291	720309000813	●
GNSR2020K2	20	20	25	125	19	9	3.5	GN.2R	720500762978	730109003291	720309000813	●
GNSR2525M2	25	25	32	150	19	9	3.5	GN.2R	720500762978	730109003291	720309000813	●
GNSR2020K3	20	20	25	125	32	13	5.3	GN.3R	720500762980	730109003295	720309000814	●
GNSR2525M3	25	25	32	150	32	13	5.3	GN.3R	720500762980	730109003295	720309000814	●
GNSL1616H2	16	16	20	100	19	9	3.5	GN.2L	720500762979	730109003291	720309000813	●
GNSL2020K2	20	20	25	125	19	9	3.5	GN.2L	720500762979	730109003291	720309000813	●
GNSL2525M2	25	25	32	150	19	9	3.5	GN.2L	720500762979	730109003291	720309000813	●
GNSL2020K3	25	20	25	125	32	13	5.3	GN.3L	720500762981	730109003295	720309000814	●
GNSL2525M3	25	25	32	150	32	13	5.3	GN.3L	720500762981	730109003295	720309000814	●

●标准库存 Stock ○需预定 Available upon Order

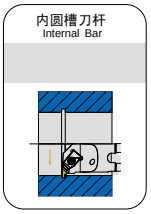
内圆刀杆
Internal Bar

GNAR/L





Right hand show



订货号 Ordering Code	尺寸 Dimensions(mm)					匹配刀片 Gauge Insert	配件 Spare Parts			库存 Stock
	D	D min	L1	F	CS		压板 Clamp	螺钉 Screw	扳手 Wrench	
GNAR20Q2	20	26	180	13	1/8–27 NPT	GN.2L	720500762979	730109003290	720309000813	●
GNAR25R2	25	34	200	17	1/4–18 NPT	GN.2L	720500762979	730109003290	720309000813	●
GNAR25R3	25	34	200	17	1/4–18 NPT	GN.3L	720500762981	730109003294	720309000814	●
GNAL20Q2	20	26	180	13	1/8–27 NPT	GN.2R	720500762978	730109003290	720309000813	●
GNAL25R2	25	34	200	17	1/4–18 NPT	GN.2R	720500762978	730109003290	720309000813	●
GNAL25R3	25	34	200	17	1/4–18 NPT	GN.3R	720500762980	730109003294	720309000814	●

●标准库存 Stock ○需预定 Available upon Order

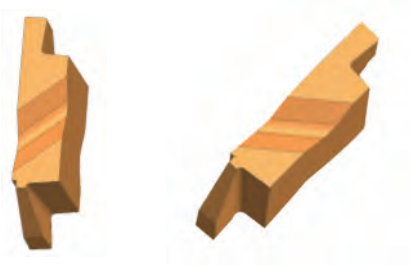
注意：左手内圆刀杆使用右手刀片，右手内圆刀杆使用左手刀片
Note: Left hand bars use right hand inserts, Right hand bars use left hand inserts

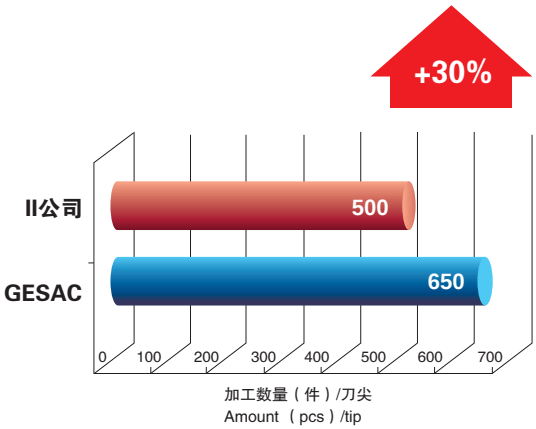
G-Notch系列浅槽刀
G-Notch series shallow grooving

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	碳钢 Carbon steel
加工方式 Processing way	内圆槽、低进给、油冷 Internal grooving、low feed、oil
切削参数 Cutting Parameters	Vc=130m/min, f=0.08mm/r
使用刀片 Inserts	GNGP3125R GA4230



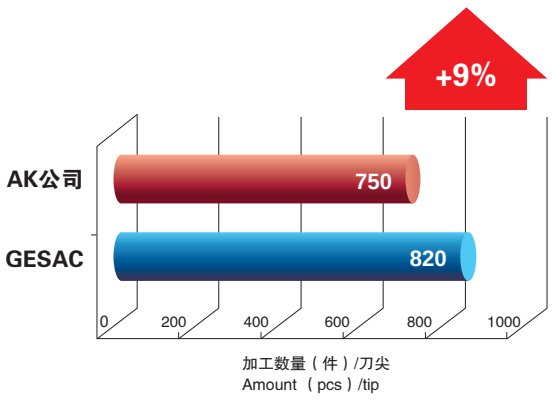




Case 2

工件材质 Workpiece Material	不锈钢 Stainless
加工方式 Processing way	外圆槽、低进给、水冷 external grooving、low feed、wet
切削参数 Cutting Parameters	Vc=140m/min, f=0.08mm/r
使用刀片 Inserts	GNGP3M150R GA4230









THREADING

螺纹切削刀具

螺纹刀片命名规则
Threading Inserts Identification System

16 E R 1.50 ISO – TC

① ② ③ ④ ⑤ ⑥

①刀片尺寸 Insert Size	
代号	IC(mm)
11	6.35
16	9.525
22	12.7

②螺纹类别 Thread Style
E=外螺纹
I=内螺纹
□=内外螺纹

③刀片方向 Hand of Insert
R=右手刀
L=左手刀
□=左右手刀

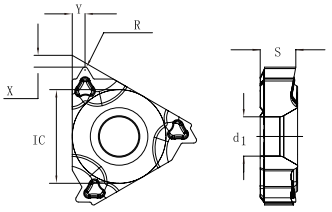
④螺距 Pitch		
全牙型螺距范围		
mm	TPI	
0.35–5.0	72–5	
范围牙型螺距范围		
代号	mm	TPI
A	0.5–1.5	48–16
AG	0.5–3.0	48–8
G	1.75–3.0	14–8
N	3.5–5.0	7–5

⑤螺纹标准 Thread Standard
60=60° 通用型螺纹
55=55° 通用型螺纹
ISO=公制ISO标准型螺纹
UN=美制统一标准型螺纹
W=英制惠氏螺纹
NPT=美制标准锥管螺纹
BSPT=英制标准锥管螺纹
ACME=美制梯形螺纹
STACME=美制短牙梯形螺纹
ABUT=美制锯齿形螺纹
API=美制石油工业螺纹
UNJ=美制航空航天螺纹

⑥附加信息 Additional Information
用来定义牙数或槽型等

公制 60° ● Metric 60°

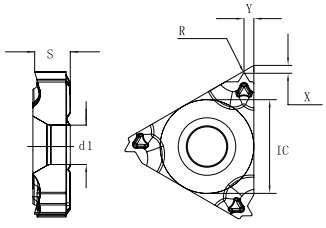
▶ 外螺纹 ● External



订货号 Ordering Code		螺距 Pitch (mm)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER1.00ISO–TC	1.00	0.8	0.7	0.14	9.525	3.47	4	●
	16 ER1.25ISO–TC	1.25	0.8	0.9	0.18	9.525	3.47	4	●
	16 ER1.50ISO–TC	1.50	0.8	1.0	0.22	9.525	3.47	4	●
	16 ER1.75ISO–TC	1.75	1.2	1.2	0.25	9.525	3.47	4	●
	16 ER2.00ISO–TC	2.00	1.2	1.3	0.29	9.525	3.47	4	●
	16 ER2.50ISO–TC	2.50	1.2	1.5	0.36	9.525	3.47	4	●
	16 ER3.00ISO–TC	3.00	1.2	1.5	0.43	9.525	3.47	4	●

●标准库存 Stock ○需预定 Available upon Order

▶ 内螺纹 ● Internal

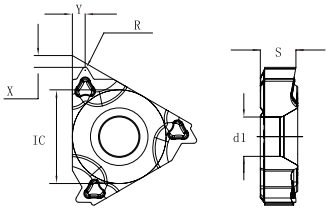


订货号 Ordering Code		螺距 Pitch (mm)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 IR1.00ISO–TC	1.00	0.8	0.7	0.07	9.525	3.47	4	●
	16 IR1.25ISO–TC	1.25	0.8	0.9	0.09	9.525	3.47	4	●
	16IR1.50ISO–TC	1.50	0.8	1.0	0.11	9.525	3.47	4	●
	16 IR1.75ISO–TC	1.75	1.2	1.2	0.13	9.525	3.47	4	●
	16 IR2.00ISO–TC	2.00	1.2	1.3	0.15	9.525	3.47	4	●
	16 IR2.50ISO–TC	2.50	1.2	1.5	0.18	9.525	3.47	4	●
	16 IR3.00ISO–TC	3.00	1.2	1.5	0.22	9.525	3.47	4	●

●标准库存 Stock ○需预定 Available upon Order

BSPT 55°

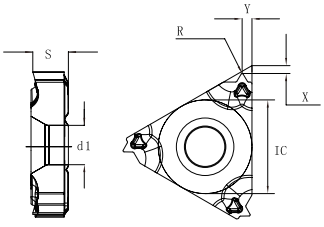
▶ 外螺纹 ● External



订货号 Ordering Code		螺距 Pitch (TPI)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER28BSPT–TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 ER19BSPT–TC	29	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER14BSPT–TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER11BSPT–TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●标准库存 Stock ○需预定 Available upon Order

▶ 内螺纹 ● Internal

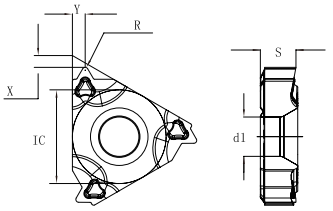


订货号 Ordering Code		螺距 Pitch (TPI)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 IR28BSPT–TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 IR19BSPT–TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR14BSPT–TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR11BSPT–TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●标准库存 Stock ○需预定 Available upon Order

惠氏55° ● Whitworth 55°

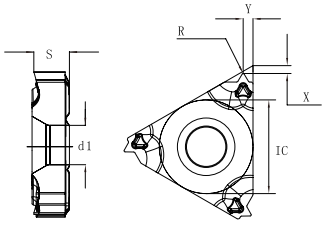
▶ 外螺纹 ● External



订货号 Ordering Code		螺距 Pitch (TPI)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER19W–TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER14W–TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER11W–TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●标准库存 Stock ○需预定 Available upon Order

▶ 内螺纹 ● Internal



订货号 Ordering Code		螺距 Pitch (TPI)	尺寸 Dimensions(mm)						库存 Availability
			X	Y	R	IC	S	d1	GM3225
	16 IR19W–TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR14W–TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR11W–TC	11	1.2	1.5	0.30	9.525	3.47	4	●

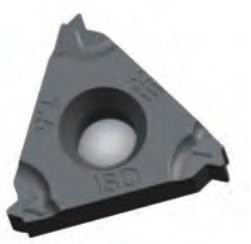
●标准库存 Stock ○需预定 Available upon Order

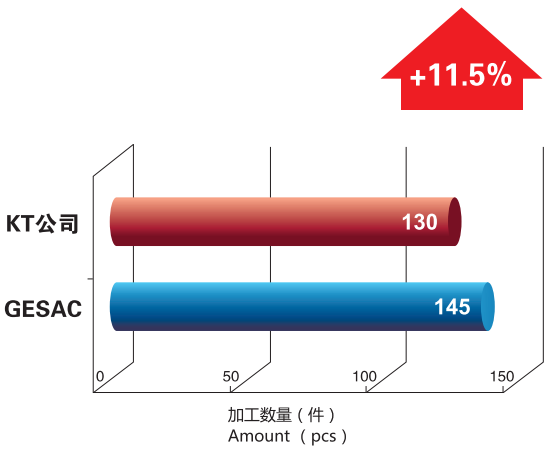
螺纹刀
Threading Inserts

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	C45
加工方式 Processing Way	螺纹加工、湿切 Threading,Wet
切削参数 Cutting Parameters	Vc=110m/min
使用刀片 Inserts	16ER1.50ISO–TC GM3225

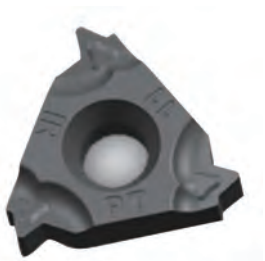


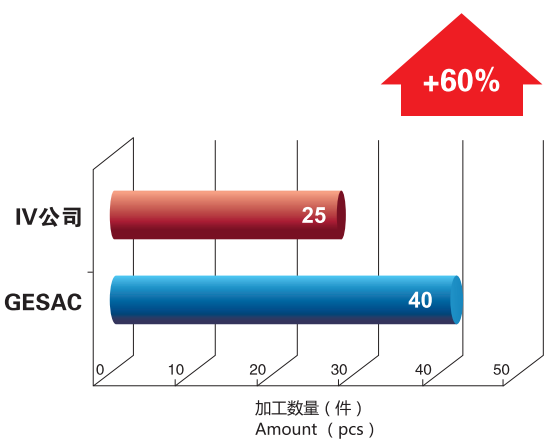




Case 2

工件材质 Workpiece Material	316
加工方式 Processing Way	螺纹加工、湿切 Threading,Wet
切削参数 Cutting Parameters	Vc=150m/min
使用刀片 Inserts	16IR11BSPT–TC GM3225







切削速度推荐表
Cutting Speed Recommendation Table

工件材料 Workpiece Material				材料硬度 Material Hardness	切削速度Cutting Speed Vc（m/min） 牌号Grade GM3225
P	碳素钢 Carbon Steel	低碳Low–carbon（C=0.1–0.25%）		HB125	160（120–230）
		中碳Medium–carbon（C=0.25–0.55%）		HB150	150（100–195）
		高碳High–carbon（C=0.55–0.80%）		HB170	140（90–180）
	低合金钢 Low–alloy Steel	非淬硬Non–hardened		HB180	130（100–180）
		淬硬Hardened and tempered		HB275	100（75–140）
		淬硬Hardened and tempered		HB350	80（60–130）
	高合金钢 High–alloy Steel	退火Annealed		HB200	110（80–140）
		淬硬Hardened and tempered		HB325	90（70–115）
	铸钢 Steel Castings	非合金Unalloyed		HB180	200（180–220）
		低合金Low–alloy		HB200	110（70–150）
		高合金High–alloy		HB225	100（60–120）
		锰钢Manganese steel（12–14% Mn）		HB250	40（40–50）
M	不锈钢 Stainless Steel	奥氏体Austenitic		HB180	120（90–140）
		铁素体/马氏体Ferritic/Martensitic		HB200	140（70–170）
		双相不锈钢Duplex stainless steel		HB230	90（60–120）
K	可锻铸铁 Malleable Cast Iron	铁素体Ferritic		HB130	130（110–170）
		珠光体Pearlitic		HB230	100（85–145）
	灰口铸铁 Gray Cast Iron	低拉伸强度Low tensile strength		HB180	120（100–160）
		高拉伸强度High tensile strength		HB260	100（80–140）
	球墨铸铁 Nodular Cast Iron	铁素体Ferritic		HB160	125（110–160）
		珠光体Pearlitic		HB250	100（80–120）
N	锻造铝合金 Wrought Aluminum Alloys	非时效Non aging		HB60	500（350–700）
		时效Aged		HB100	400（300–500）
	铸造铝合金 Cast Aluminum Alloys	非时效Non aging		HB75	450（300–500）
		时效Aged		HB90	290（200–400）
		含硅Containing silicon（13–22% Si）		HB130	200（100–300）
	铜和铜合金 Copper and Copper	黄铜Brass		HB90	220（100–300）
		青铜和非铅铜Bronze and non–leaded copper		HB100	180（80–255）
S	耐热合金 Heat–resistant Alloys	铁基Iron base	退火Annealed	HB200	45（35–60）
			时效Aged	HB280	35（25–50）
		镍基和钴基 Nickel base and cobalt base	退火Annealed	HB250	25（15–30）
			时效Aged	HB350	15（10–25）
			铸造Cast	HB320	13（10–20）
	钛合金 Titanium Alloys	商业纯 Commercial pure（99.5% Ti）		400Rm	150（140–170）
		α+β合金 α+ β alloys		1050Rm	60（50–70）
H	高硬材料 High Hardness Materials	淬硬钢Hardened steel		HRC55	45（40–50）
		冷硬铸铁Chilled cast iron		HB400	40（30–50）

走刀次数及径向进给推荐表
Cutting Passes and Radial Infeed Recommendation Table

▶ ISO公制 ● ISO Metric / 外螺纹 ● External

螺距 Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00
总进给量Total infeed (mm)	0.65	0.79	0.95	1.11	1.26	1.56	1.88
走刀次数Total passes	5	6	6	8	8	10	12
走刀顺序No. of infeed	径向进给/刀 (mm) Radial infeed per pass (mm)						
1	0.16	0.17	0.20	0.17	0.20	0.20	0.20
2	0.15	0.15	0.19	0.17	0.19	0.19	0.19
3	0.14	0.14	0.18	0.16	0.18	0.18	0.19
4	0.12	0.13	0.16	0.15	0.17	0.17	0.18
5	0.08	0.12	0.14	0.14	0.16	0.17	0.17
6		0.08	0.08	0.13	0.15	0.16	0.17
7				0.11	0.13	0.15	0.16
8				0.08	0.08	0.14	0.15
9						0.12	0.14
10						0.08	0.13
11							0.12
12							0.08

▶ ISO公制 ● ISO Metric / 内螺纹 ● Internal

螺距 Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00
总进给量Total infeed (mm)	0.63	0.77	0.92	1.05	1.20	1.48	1.78
走刀次数Total passes	5	6	6	8	8	10	12
走刀顺序No. of infeed	径向进给/刀 (mm) Radial infeed per pass (mm)						
1	0.15	0.16	0.20	0.16	0.19	0.19	0.19
2	0.14	0.15	0.18	0.15	0.18	0.18	0.18
3	0.13	0.14	0.17	0.15	0.17	0.17	0.18
4	0.12	0.13	0.15	0.14	0.16	0.17	0.17
5	0.08	0.11	0.13	0.13	0.15	0.16	0.16
6		0.08	0.08	0.12	0.14	0.15	0.16
7				0.11	0.12	0.14	0.15
8				0.08	0.08	0.13	0.14
9						0.12	0.14
10						0.08	0.12
11							0.11
12							0.08

走刀次数及径向进给推荐表
Cutting Passes and Radial Infeed Recommendation Table

▶ BSPT / 内、外螺纹 ● External & Internal

螺距 Pitch (TPI)	28	19	14	11
总进给量Total infeed (mm)	0.62	0.90	1.20	1.51
走刀次数Total passes	5	6	8	9
走刀顺序No. of infeed	径向进给/刀 (mm) Radial infeed per pass (mm)			
1	0.15	0.19	0.19	0.22
2	0.14	0.18	0.18	0.21
3	0.13	0.17	0.17	0.20
4	0.12	0.15	0.16	0.19
5	0.08	0.13	0.15	0.18
6		0.08	0.14	0.16
7			0.12	0.15
8			0.08	0.13
9				0.08

▶ 惠氏 ● Whitworth / 内、外螺纹 ● External & Internal

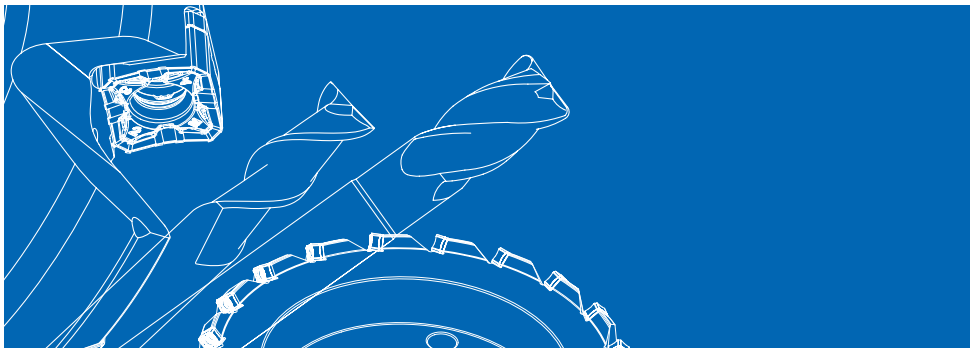
螺距 Pitch (TPI)	19	14	11
总进给量Total infeed (mm)	0.90	1.20	1.51
走刀次数Total passes	6	8	9
走刀顺序No. of infeed	径向进给/刀 (mm) Radial infeed per pass (mm)		
1	0.19	0.19	0.22
2	0.18	0.18	0.21
3	0.17	0.17	0.20
4	0.15	0.16	0.19
5	0.13	0.15	0.18
6	0.08	0.14	0.16
7		0.12	0.15
8		0.08	0.13
9			0.08

注：一般情况，径向进给不得小于0.05mm，加工奥氏体不锈钢时，径向进给不得小于0.08mm。
Attention: Infeeds of less than 0.05mm should be avoided, for austenitic stainless steels not less than 0.08mm.

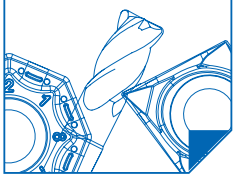


INDEXABLE MILLING

可转位铣削刀具



铣削 Milling



可转位铣削刀具 Indexable Milling

可转位铣削用刀体一览表 Milling Cutter Bodies Lineup	146–153
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整体立铣刀基本信息Solid Carbide EndmillsBasic Information

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整体立铣刀Solid Carbide Endmills

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圆角头 Cornor Radius	351–407
球头 Ballnose	408–431
其他 Other	432

整体立铣刀切削参数 Solid Carbide Endmills Cutting Parameters

应用案例 Application Case	433–444
推荐切削参数 Recommended Cutting Parameters	445–485

铣削刀体型号表示规则
Milling Toos Identification System

MF A 1 45 – 160 R

① ② ③ ④ ⑤ ⑥

①刀具类型 Milling Tool Type		
面铣 Face Milling	MF	常规面铣 General Face Milling
	MV	立装刀具 Tangential Face Milling
方肩铣 Shoulder Milling	ME	常规方肩铣 General Shoulder Milling
	MH	长刃刀具 Helical Milling
仿形铣 Profile Milling	MP	仿形粗铣 Rough Profile Milling
	MB	球头铣刀具 Ball nose Milling
槽铣刀 Slot Milling	MS	三面刃槽铣 Side and Face Milling
其他 Others	MK	快进给铣刀 High Feed Milling
	MC	倒角铣刀 Chamfer Milling
	MX	特殊铣刀 Special Milling

②系列编号 Series Number	

③产品代次 Serial Number	
1	第1代 First
2	第2代 Second

④主偏角 Lead Angle	
45	45 = 45°

⑤刀具直径 Cutting Diameters	
160	160 = 160mm

⑥切削方向 Cutting Direction	
R	右 Right Hand
L	左 Left Hand

09 C 40 – S E 13 (M)

⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

⑦齿数 No. of teeth	
09	9齿

⑧接口类型 Type of Coupling	
A	A 型接口 A type
B	B 型接口 B type
C	C 型接口 C type
D	D 型接口 D type
M	螺纹接口 Threaded Interface
P	直柄 Straight Shank
W	削平直柄 Weldon Shank
BT	BT 型接口 BT type

⑨接口尺寸 Coupling Size	
40	40 = 40mm

⑩刀片形状 Insert Shape	
V	35° 菱形 35° Rhombic
D	55° 菱形 55° Rhombic
C	80° 菱形 80° Rhombic
S	正方形 Square
T	正三角形 Triangle
R	圆形 Round
L	长方形 Rectangle

⑪刀片后角 Insert Clearance Angle	
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

⑫切削刃长度 Cutting Edge Length	
13	13 = 13mm

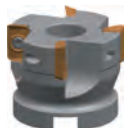
⑬刀杆长度 Body Length	
S	短 Short
M	一般 Normal
L	长 Long

铣削用刀体一览表
Milling Cutter Bodies Lineup

用途 Pur Pose	总系列 Group	分系列 Series	主偏角 Lead Angle	产品外形 Shape	
面铣 Face Milling	常规面铣 General Face Milling	MFA143	43°	 Page154	
		MFA145	45°	 Page158	
				 Page159	
		MFB145 /245	45°	 NEW Page163–164	
				 NEW Page165–166	
		MFB160	60°	 Page170	

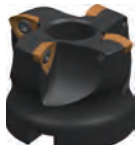
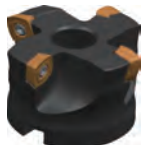
	规格 Specification	简介 Profile	特点 Features
	Φ40 Φ50 Φ63 Φ80 Φ100 Φ125 Φ160 Φ200	通用轻快切削，适用于各种材料的机械结构部件接触面高效面铣加工 Smoothly cutting with universal property, specially suit for efficiency face milling for connection face of mechanical components with different material.	● 优质合金钢材料 High quality alloy steelmaterial ● 闭口容屑槽设计 Close chip-room design ● 高精定位槽 High precision locating slot
	Φ50 Φ63 Φ80 Φ100 Φ125	通用轻快切削，适用于各种材料的机械结构部件接触面高效面铣加工 Smoothly cutting with universal property, specially suit for efficiency face milling for connection face of mechanical components with different material.	● 优质合金钢材料 High quality alloy steel material ● 闭口容屑槽设计 Close chip-room design ● 高精定位槽 High precision locating slot ● 喷丸强化处 Blasting process ● 最大切深：6mm Ap_{max}:6mm
	Φ50 Φ63		
	Φ50 Φ63 Φ80 Φ100 Φ125 Φ160 Φ200 Φ250 Φ315	通用轻快切削，适用于各种材料的机械结构部件接触面高效面铣加工 Smoothly cutting with universal property，specially suit for efficiency face milling for connection face of mechanical components with different material	● 优质合金钢材料： High quality alloy steelmaterial： ● 刀体表面进行特殊表面镀镍处理，提高刀体使用寿命 Special nickel-plated treatment improves tool life ● 高精定位槽： High precision locating slot： ● MFB145带刀垫系列： MFB145(with shim)
	Φ50 Φ63 Φ80 Φ100 Φ125 Φ160 Φ200 Φ250 Φ315	通用轻快切削，适用于各种材料的机械结构部件接触面高效面铣加工 Smoothly cutting with universal property，specially suit for efficiency face milling for connection face of mechanical components with different material	● 优质合金钢材料： High quality alloy steelmaterial： ● 刀体表面进行特殊表面镀镍处理，提高刀体使用寿命 Special nickel-plated treatment improves tool life ● 高精定位槽： High precision locating slot： ● MFB245无刀垫系列： MFB245(without shim)
	Φ80 Φ100 Φ125 Φ160 Φ200 Φ250 Φ315	铸铁专用型密齿高效高经济性面铣加工。 Efficiency and economically face milling specially for cast iron	● 超密齿结构 Close Pitch ● 12次可转位 12 times indexing ● 高精度定位 Precision positioning ● 60° 主偏角 60° lead angle

铣削用刀体一览表
Milling Cutter Bodies Lineup

用途 Pur Pose	总系列 Group	分系列 Series	主偏角 Lead Angle	产品外形 Shape	
方肩铣 Shoulder Milling	常规方肩铣 General Shoulder Milling	MEA190	90°	 Page173	
				 Page173	
仿形铣 Profile Milling	仿形粗铣 Rough Profile Milling	MPA100	–	 Page177	
				 Page178	
		MPB100	–	 Page181	
				 Page182	

	规格 Specification	简介 Profile	特点 Features
	Φ50 Φ63	通用方肩铣、通槽铣、仿形铣、和螺旋斜坡铣等 General purpose end mill for shouldering, slotting, contouring and ramping operations.	● 刀体强度高 High intensity ● 制造工艺出色 Excellent body manufacturing technology ● 适合大切深 Suitable for large cutting depth ● 11° 正型刀片 11° positive insert ● 最大切深：14mm Ap_{max}:14mm
	Φ16 Φ20 Φ25 Φ32		
	Φ40 Φ50 Φ63 Φ80 Φ100 Φ125	用于模具行业的模架平面铣削和型腔铣、机械加工平面及型腔加工 Mainly used for the face milling and pocket milling in mold and die, general machining.	● 双重夹紧 Double clamping ● 精确的定位槽 Accurate locating slot ● 大容屑槽设计 Big chip–room ● 表面特殊处理 Special surface treatment ● 最大切深：8mm Ap_{max}:8mm
	Φ10 Φ12 Φ16 Φ17 Φ20 Φ25 Φ32 Φ35		
	Φ40 Φ50 Φ63 Φ80 Φ100 Φ125	用于模具行业的模架平面铣削和型腔铣、机械加工平面及型腔加工 Mainly used for the face milling and pocket milling in mold and die, general machining .	● 双重夹紧 Double clamping ● 精确的定位槽 Accurate locating slot ● 大容屑槽设计 Big chip–room ● 表面特殊处理 Special surface treatment ● 最大切深：8mm Ap_{max}:8mm
	Φ16 Φ20 Φ25 Φ32 Φ40		

铣削用刀体一览表
Milling Cutter Bodies Lineup

用途 Pur Pose	总系列 Group	分系列 Series	主偏角 Lead Angle	产品外形 Shape	
槽铣 Slot Milling	三面刃槽铣 Side and Face Milling	MSA(110–113)	90°	 Page188	
				 Page189	
其他 Others	快进给 High Feed Milling	MKA110	10°	 Page192	
				 Page192	
		MKB113	13°	 Page199	
				 Page198	

	规格 Specification	简介 Profile	特点 Features
	Φ80 Φ100 Φ125 Φ160	纵置刀片，4刀尖式样，经济性好，圆弧切削刃，使切削更轻快。可切槽加工和台阶面加工 The laydown insert has 4 styles of the tool nose, moreeconomical, the circular arc cutting edge makes the cutting more fast, It can be used for cutting processing and surface processing steps.	● 高强度刀体 High strength cutter ● 高精度 High–accuracy ● 表面特殊处理 Special surface treatment
	Φ80 Φ100 Φ125 Φ160		
	Φ20 Φ25 Φ30 Φ32 Φ35	用于钢、铸铁、不锈钢等材料加工，主要应用于平面铣削以及型腔铣削加工 Suitable for the cutting of steel, cast iron and stainless steel, mainly used for face milling and pocket milling.	● 优质合金钢材料 High quality alloy steel ● 大容屑槽设计 Big chip–room design ● 螺钉夹紧 Screw clamping
	Φ50 Φ63 Φ80 Φ100		
	Φ32 Φ35 Φ40	用于钢、铸铁、不锈钢等材料加工，主要应用于平面铣削以及型腔铣削加工 Suitable for the cutting of steel, cast iron and stainless steel, mainly used for face milling and pocket milling.	● 优质合金钢材料 High quality alloy steel ● 大容屑槽设计 Big chip–room design ● 带特殊定位面的螺钉夹紧 Screw clamping with special position
	Φ50 Φ63 Φ80 Φ100 Φ125		

面铣 • 常规面铣
Face Milling • General Face Milling

通用43° 面铣削–MFA143
General Face Milling – MFA143

MFA143



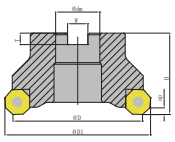


Fig1

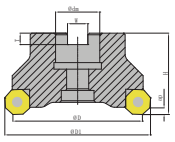


Fig2

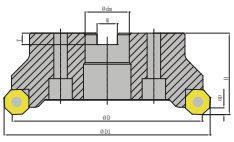


Fig3

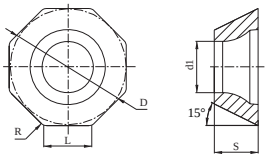
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions						切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD	ΦD1	Φdm	H	W	T			螺钉 Screw	扳手 Wrench		
MFA143040R03A16OD06	40	3	40	50	16	40	8.4	5.6	4	OD**0605	730100961200	720300960515	Fig.1	●
MFA143050R04A22OD06	50	4	50	60	22	40	10.4	6.3	4	OD**0605	730100961200	720300960515	Fig.1	●
MFA143063R05A22OD06	63	5	63	72	22	40	10.4	6.3	4	OD**0605	730100961200	720300960515	Fig.1	●
MFA143080R06B27OD06	80	6	80	90	27	50	12.4	7	4	OD**0605	730100961200	720300960515	Fig.2	●
MFA143100R07B32OD06	100	7	100	110	32	50	14.4	8	4	OD**0605	730100961200	720300960515	Fig.2	●
MFA143125R08B40OD06	125	8	125	135	40	63	16.4	9	4	OD**0605	730100961200	720300960520	Fig.2	●
MFA143160R10C40OD06	160	10	160	170	40	63	16.4	9	4	OD**0605	730100961200	720300960520	Fig.3	●
MFA143200R12C60OD06	200	12	200	210	60	63	25.7	14	4	OD**0605	730100961200	720300960520	Fig.3	●

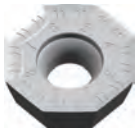
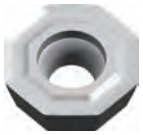
●标准库存 Stock ○需预定 Available upon Order

面铣 • 常规面铣
Face Milling • General Face Milling

刀片
Insert

ODKT



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	ODKT060508–GL	6.5	15.875	5.56	5.56	0.8	○	●								
	ODKT060508–GM	6.5	15.875	5.56	5.56	0.8	○	○			○					
	ODKT060508–GH	6.5	15.875	5.56	5.56	0.8	○	○								
	ODKT060508–AL	6.5	15.875	5.56	5.56	0.8									○	
	ODKT060508–NL	6.5	15.875	5.56	5.56	0.8								●		
	ODKW060508–WB	6.5	15.875	5.56	5.56	0.8	○	○								

●标准库存 Stock ○需预定 Available upon Order

ODKT 系列槽型
ODKT Series Geometry

轻载切削 Light Cutting	中载切削 Medium Cutting	重载切削 Heavy Cutting	铝切削 Aluminum Cutting	修光刃 Wipper
				
GL	GM	GH	AL	WB
				
大前角、窄刃宽， 最适于低切削力、 低进给率的轻载加工 Large rake angl, with narrow edge width, Suitable for Light milling of low cutting speed and low feed.	大前角，切削轻快， 一般工况下可实现高 稳定性加工 Large rake angle smoothly cutting, High stability milling can be achieved under general cutting conditions.	大槽宽，高强度刃口， 粗加工时表现优异 Wide chip pocket with strong cutting edge for rough cutting.	大前角，锋利刃， 切削轻快，抛光处理， 排屑良好； 亦适用高进给加工 Large rake angle, sharp cutting edge and good chip control, Suitable for high feed–in cutting.	修光刃设计， 显著提高表面加工质量 Wiper design to improve the surface quality.

适用范围
Application Range

ISO	P 钢 Steel					M 不锈钢 Stainless Steel					K 铸铁 Cast Iron					N 有色金属 Nonferrous Metal					S 耐热、钛合金 Heat–resistant Alloy TitaniumAlloy				
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	N20	N30	N40	S01	S10	S20	S30	S40
适用领域 Range		GA4225					GA4225						GA4230												
			GA4230					GA4230				GK4125					GN9125					GA4230			

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		材料硬度 Materials Hardness	牌号 Grade	切削速度 (mm/min) Recommended Cutting Speed	轻载切削 Light Cutting		中载切削 Medium Cutting		重载切削 Heavy Cutting	
					进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry
P	软 钢 Low Carbon Steel	≤HB180	GA4225 GA4230	220 (180–300)	0.2 (0.1–0.3)	GL	0.25 (0.1–0.4)	GM	0.3 (0.2–0.5)	GH
P	碳钢、合金钢 Carbon Steel、Alloy Steel	HB180–280	GA4225 GA4230	200 (150–280)	0.2 (0.1–0.3)	GL	0.25 (0.1–0.4)	GM	0.3 (0.2–0.5)	GH
P	碳钢、合金钢 Carbon Steel、Alloy Steel	HB280–350	GA4225 GA4230	150 (120–250)	0.2 (0.1–0.3)	GL	0.25 (0.1–0.4)	GM	0.3 (0.2–0.5)	GH
M	不锈钢 Stainless Steel	≤HB275	GA4225 GA4230	160 (100–250)	0.15 (0.1–0.3)	GL	0.2 (0.1–0.3)	GM	0.25 (0.2–0.4)	GH
K	铸铁、球墨铸铁 Gray Cast Iron Nodular Cast Iron (eg：FC250、FCD400)	≤HB350	GA4230 GK4125	180 (120–250)	0.2 (0.1–0.3)	GL	0.25 (0.1–0.4)	GM	0.3 (0.2–0.5)	GH
N	有色金属 Nonferrous Metal	HB60–210	GN9125	≥300	0.15 (0.1–0.2)	AL	0.2 (0.1–0.3)	AL	0.25 (0.2–0.4)	AL
S	耐热合金、钛合金 Heat–resistant Alloy and Titanium Alloy	HRC25–35	GA4230	40 (30–60)	0.15 (0.1–0.2)	GL	0.2 (0.1–0.3)	GM	––	––

★ 刀具转速 (min^{-1}) = (1000x切削速度) ÷ (3.14x刀具切削刃直径)
Tool RPM (min^{-1}) = (1000xCutting Speed) ÷ (3.14x Diameters of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量x刀具刃数x刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth x Number of Tooth x Tool RPM

面铣 • 常规面铣
Face Milling • General Face Milling

通用45° 面铣削 –MFA145
45° Double Positive Face Milling—MFA145

MFA145

心轴式
Arbor



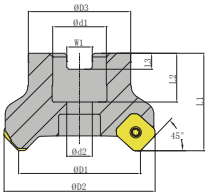


Fig1



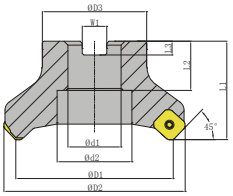


Fig2

疏齿型
Coarse Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φd1	L1	W1	L3			刀垫 Shim	螺钉 Screw	扳手 Wrench		
MFA145050R03A22SE13	50	3	50	22	40	10.4	6.3	6	SEET13T3	–	730100961110	720300960510	Fig1	●
MFA145063R04A22SE13	63	4	50	22	40	10.4	6.3	6	SEET13T3	–	730100961110	720300960510	Fig1	●

密齿型
Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φd1	L1	W1	L3			刀垫 Shim	螺钉 Screw	扳手 Wrench		
MFA145050R04A22SE13	50	4	50	22	40	10.4	6.3	6	SEET13T3	-	730100961110	720300960510	Fig1	●
MFA145063R05A22SE13	63	5	63	22	40	10.4	6.3	6	SEET13T3	-	730100961110	720300960510	Fig1	●
MFA145080R06B27SE13	80	6	80	27	50	12.4	7	6	SEET13T3	720500763049	730100961110	720300960510	Fig2	●
MFA145100R07B32SE13	100	7	100	32	50	14.4	8.3	6	SEET13T3	720500763049	730100961110	720300960510	Fig2	●
MFA145125R08B40SE13	125	8	125	40	50	16.4	8.3	6	SEET13T3	720500763049	730100961110	720300960510	Fig2	●

●标准库存 Stock ○需预定 Available upon Order

面铣 • 常规面铣
Face Milling • General Face Milling

通用45° 面铣削 – MFA145
45° Double Positive Face Milling — MFA145

MFA145

圆柱直柄式
Shank



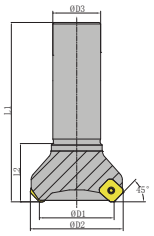


Fig3

疏齿型
Coarse Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	ΦD2	ΦD3	L1	L2			螺钉 Screw	扳手 Wrench		
MFA145050R03P32SE13	50	3	50	63	32	120	39	6	SEET13T3	730100961110	720300960510	Fig3	●
MFA145063R04P32SE13	63	4	63	76	32	120	39	6	SEET13T3	730100961110	720300960510	Fig3	●

密齿型
Close Pitch

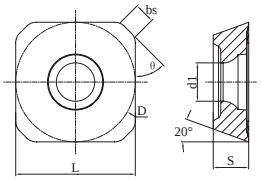
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			ΦD1	ΦD2	ΦD3	L1	L2			螺钉 Screw	扳手 Wrench		
MFA145050R04P32SE13	50	4	50	63	32	120	39	6	SEET13T3	730100961110	720300960510	Fig3	●
MFA145063R05P32SE13	63	5	63	76	32	120	39	6	SEET13T3	730100961110	720300960510	Fig3	●

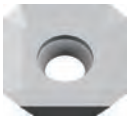
●标准库存 Stock ○需预定 Available upon Order

面铣 • 常规面铣
Face Milling • General Face Milling

刀片
Insert

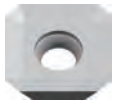
SEET



订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK2115	GN9125	GP01TM
	SEET13T3AGEN-PL	13.4	13.4	3.97	4.4	45°	1.7	●	●								
	SEET13T3AGEN-PM	13.4	13.4	3.97	4.4	45°	1.2	●	●								○
	SEET13T3AGSN-KM	13.4	13.4	3.97	4.4	45°	1.3	○	●			●					
	SEET13T3AGSN-PH	13.4	13.4	3.97	4.4	45°	1.3	○	●								
	SEET13T3AGSN-KH	13.4	13.4	3.97	4.4	45°	1.3	●	○			●					
	SEET13T3AGFN-AL	13.4	13.4	3.97	4.4	45°	2.2						○				
	SEET13T3AGEN-WB	13.4	13.4	4.76	3.97	45°	13.4	○	●								

●标准库存 Stock ○需预定 Available upon Order

SEET13T3 系列槽型
SEET13T3 Series Geometry

PL槽型 PL Geometry	PM槽型 PM Geometry	PH槽型 PH Geometry	KM槽型 KM Geometry	KH槽型 KH Geometry	AL槽型 AL Geometry	WB槽型 WB Geometry
						
						
通用材料 轻载切削 Light cutting for general material	通用材料 中载切削 Medium cutting for general material	通用材料 重载切削 Rough cutting for general material	铸 铁 中载切削 Medium cutting for cast iron	铸 铁 重载切削 Rough cutting for cast iron	铝合金 通用切削 General cutting for aluminum alloys	修光刃刀片 Wiper insert
大前角窄刃宽设计， 最适于低切削力、低进给率的轻载加工 Large rake angle with narrow edge width. Suit for Light milling of low cutting speed and low feed.	大前角设计， 切削轻快， 大多数一般工况下可实现 高稳定性加工 Smoothly cutting. High stability milling can be achieved under general cutting conditions.	高强度刃口， 断续切削、去黑皮加工时性能优异 Strong cutting edge for intermittent cutting condition.	铸铁一般工况专用槽型，可应对绝大多数的铸铁中载切削 The chipbreaker specially applicable for cast iron under general cutting conditions. Most medium Milling can be Achieved.	铸铁重载切削专用槽型， 断续、带黑皮粗加工时表现优越 Special Geometry for cast iron cutting and heavy cutting. Suitable for rough cutting.	大前角锋利刃， 切削轻快， 镜面抛光处理，排屑良好。 亦适用高进给加工 Large rake angle, sharp cutting edge with smoothly cutting. Suitable for high feed cutting.	大圆弧修光刃，提高表面质量 Wiper edge with big circle shape to improve the quality of finish surface.

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		材料硬度 Materials Hardness	牌号 Grade	切削速度 (mm/min) Recommended Cutting Speed	轻载切削 Light Cutting		中载切削 Medium Cutting		重载切削 Heavy Cutting	
					进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry
P	软 钢 Low Carbon Steel (SS400、S10C等)	≤HB180	GA4225 GA4230	250 (210–350)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	PM	0.3 (0.2–0.4)	PH
P	碳钢、合金钢 Carbon Steel Alloy Steel (S45C、SCM440等)	HB180–280	GA4225 GA4230	220 (170–270)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	PM	0.3 (0.2–0.4)	PH
P	碳钢、合金钢 Carbon Steel Alloy Steel (S45C、SCM440等)	HB280–350	GA4230	140 (100–180)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	PM	0.3 (0.2–0.4)	PH
M	不锈钢 Stainless Steel (SUS304等)	≤HB275	GA4225 GA4230	180 (130–250)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	PM	0.3 (0.2–0.4)	PH
K	铸铁、球磨铸铁 Gray Cast Iron Nodular Cast Iron (FC250、FCD400等)	≤HB350	GA4225 GA4230	180 (130–250)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	KM	0.3 (0.2–0.4)	KH
N	铝 材 Aluminum	HB60–210	GA0115	⩾300	0.15 (0.1–0.2)	AL	0.2 (0.1–0.3)	AL	0.3 (0.2–0.4)	AL
S	耐热合金 Heat–resistant Alloy	HRC25–35	GA4230	40 (20–50)	0.15 (0.1–0.2)	PL	0.2 (0.1–0.3)	PM	––	––
H	高硬度钢 High Hardness Steel	HRC48–55	GA4230	80 (60–100)	0.1 (0.05–0.15)	PL	0.15 (0.1–0.2)	PM	––	––

★ 刀具转速 (min^{-1}) = (1000x切削速度) ÷ (3.14x刀具切削刃直径)
Tool RPM (min^{-1}) = (1000xCutting Speed) ÷ (3.14x Diameters of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量x刀具刃数x刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth x Number of Tooth x Tool RPM

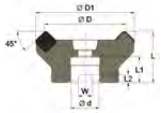
面铣 • 常规面铣
Face Milling • General Face Milling

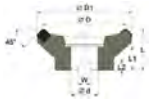
通用双面45° 面铣削–MFB145/245
Double–sided 45° General Face Milling–MFB145/245

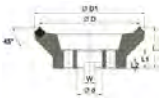
MFB145

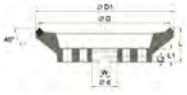
心轴式
Arbor




Fig1


Fig2


Fig3


Fig4

疏齿型
Coarse Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB145050R03A22SN12	50	3	50	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145063R04A22SN12	63	4	63	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145080R05A27SN12	80	5	80	50	27	12.4	7.0	5	SNEU1206	√	√	Fig1	●
MFB145100R06B32SN12	100	6	100	50	32	14.4	8.0	5	SNEU1206	√	x	Fig2	●
MFB145125R07B40SN12	125	7	125	63	40	16.4	9.0	5	SNEU1206	√	x	Fig2	○
MFB145160R08C40SN12	160	8	160	63	40	16.4	9.0	5	SNEU1206	√	x	Fig3	○
MFB145200R10C60SN12	200	10	200	63	60	25.7	14	5	SNEU1206	√	x	Fig3	○
MFB145250R12C60SN12	250	12	250	63	60	25.7	14	5	SNEU1206	√	x	Fig3	○
MFB145315R15D60SN12	315	15	315	63	60	25.7	14	5	SNEU1206	√	x	Fig4	○

●标准库存 Stock ○需预定 Available upon Order

密齿型
Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB145050R04A22SN12	50	4	50	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145063R05A22SN12	63	5	63	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145080R07A27SN12	80	7	80	50	27	12.4	7.0	5	SNEU1206	√	√	Fig1	●
MFB145100R08B32SN12	100	8	100	50	32	14.4	8.0	5	SNEU1206	√	x	Fig2	●
MFB145125R10B40SN12	125	10	125	63	40	16.4	9.0	5	SNEU1206	√	x	Fig2	●
MFB145160R12C40SN12	160	12	160	63	40	16.4	9.0	5	SNEU1206	√	x	Fig3	●
MFB145200R14C60SN12	200	14	200	63	60	25.7	14	5	SNEU1206	√	x	Fig3	●
MFB145250R16C60SN12	250	16	250	63	60	25.7	14	5	SNEU1206	√	x	Fig3	●
MFB145315R20D60SN12	315	20	315	63	60	25.7	14	5	SNEU1206	√	x	Fig4	●

●标准库存 Stock ○需预定 Available upon Order
续/continued on next page

面铣 • 常规面铣
Face Milling • General Face Milling

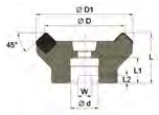
通用双面45° 面铣削–MFB145/245
Double–sided 45° General Face Milling–MFB145/245

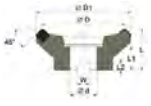
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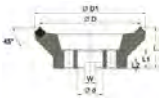
心轴式
Arbor

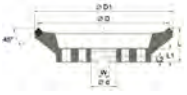






Fig1


Fig2


Fig3

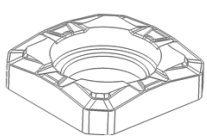

Fig4

超密齿型
Extra Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB145050R05A22SN12	50	5	50	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145063R06A22SN12	63	6	63	40	22	10.4	6.3	5	SNEU1206	√	√	Fig1	●
MFB145080R08A27SN12	80	8	80	50	27	12.4	7.0	5	SNEU1206	√	√	Fig1	●
MFB145100R10B32SN12	100	10	100	50	32	14.4	8.0	5	SNEU1206	√	x	Fig2	●
MFB145125R12B40SN12	125	12	125	63	40	16.4	9.0	5	SNEU1206	√	x	Fig2	○
MFB145160R15C40SN12	160	15	160	63	40	16.4	9.0	5	SNEU1206	√	x	Fig3	○
MFB145200R18C60SN12	200	18	200	63	60	25.7	14	5	SNEU1206	√	x	Fig3	○
MFB145250R21C60SN12	250	21	250	63	60	25.7	14	5	SNEU1206	√	x	Fig3	○
MFB145315R24D60SN12	315	24	315	63	60	25.7	14	5	SNEU1206	√	x	Fig4	○

●标准库存 Stock ○需预定 Available upon Order

系列配件表
Spare Parts

刀垫 Shim（DSN1206M）	刀垫用螺钉 Shim Screw（SSAM6X8F）	刀垫螺钉扳手 L Type Wrench（TH40L）	刀片螺钉 Insert Screw（SI60M4X15）	刀片螺钉扳手 Insert Spanner（TT15P）
				
H0K40SSN12	730100910075	720301260456	730100961150	720300960510

面铣 • 常规面铣
Face Milling • General Face Milling

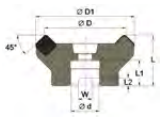
通用双面45° 面铣削–MFB145/245
Double–sided 45° General Face Milling–MFB145/245

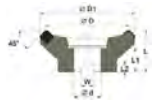
MFB245

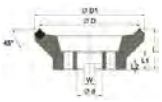
心轴式
Arbor

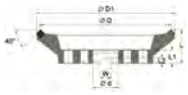






Fig1


Fig2


Fig3


Fig4

疏齿型
Coarse Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB245050R03A22SN12	50	3	50	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245063R04A22SN12	63	4	63	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245080R05A27SN12	80	5	80	50	27	12.4	7.0	5	SNEU1206	x	√	Fig1	●
MFB245100R06B32SN12	100	6	100	50	32	14.4	8.0	5	SNEU1206	x	x	Fig2	●
MFB245125R07B40SN12	125	7	125	63	40	16.4	9.0	5	SNEU1206	x	x	Fig2	○
MFB245160R08C40SN12	160	8	160	63	40	16.4	9.0	5	SNEU1206	x	x	Fig3	○
MFB245200R10C60SN12	200	10	200	63	60	25.7	14	5	SNEU1206	x	x	Fig3	○
MFB245250R12C60SN12	250	12	250	63	60	25.7	14	5	SNEU1206	x	x	Fig3	○
MFB245315R15D60SN12	315	15	315	63	60	25.7	14	5	SNEU1206	x	x	Fig4	○

●标准库存 Stock ○需预定 Available upon Order

密齿型
Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB245050R04A22SN12	50	4	50	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245063R05A22SN12	63	5	63	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245080R07A27SN12	80	7	80	50	27	12.4	7.0	5	SNEU1206	x	√	Fig1	●
MFB245100R08B32SN12	100	8	100	50	32	14.4	8.0	5	SNEU1206	x	x	Fig2	●
MFB245125R10B40SN12	125	10	125	63	40	16.4	9.0	5	SNEU1206	x	x	Fig2	●
MFB245160R12C40SN12	160	12	160	63	40	16.4	9.0	5	SNEU1206	x	x	Fig3	●
MFB245200R14C60SN12	200	14	200	63	60	25.7	14	5	SNEU1206	x	x	Fig3	●
MFB245250R16C60SN12	250	16	250	63	60	25.7	14	5	SNEU1206	x	x	Fig3	●
MFB245315R20D60SN12	315	20	315	63	60	25.7	14	5	SNEU1206	x	x	Fig4	●

●标准库存 Stock ○需预定 Available upon Order

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面铣 • 常规面铣
Face Milling • General Face Milling

通用双面45° 面铣削–MFB145/245
Double–sided 45° General Face Milling–MFB145/245

MFB245

心轴式
Arbor

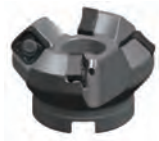





Fig1

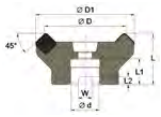


Fig2

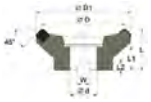


Fig3

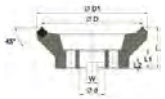
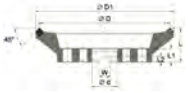


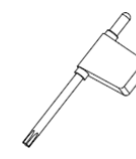
Fig4



超密齿型
Extra Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀垫 Shim	内冷 Inner–cooling	图示 Shape	库存 Stock
			ΦD	L	Φd	W	L2						
MFB245050R05A22SN12	50	5	50	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245063R06A22SN12	63	6	63	40	22	10.4	6.3	5	SNEU1206	x	√	Fig1	●
MFB245080R08A27SN12	80	8	80	50	27	12.4	7.0	5	SNEU1206	x	√	Fig1	●
MFB245100R10B32SN12	100	10	100	50	32	14.4	8.0	5	SNEU1206	x	x	Fig2	●
MFB245125R12B40SN12	125	12	125	63	40	16.4	9.0	5	SNEU1206	x	x	Fig2	○
MFB245160R15C40SN12	160	15	160	63	40	16.4	9.0	5	SNEU1206	x	x	Fig3	○
MFB245200R18C60SN12	200	18	200	63	60	25.7	14	5	SNEU1206	x	x	Fig3	○
MFB245250R21C60SN12	250	21	250	63	60	25.7	14	5	SNEU1206	x	x	Fig3	○
MFB245315R24D60SN12	315	24	315	63	60	25.7	14	5	SNEU1206	x	x	Fig4	○

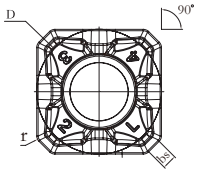
●标准库存 Stock ○需预定 Available upon Order

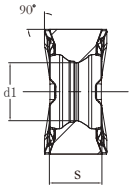
系列配件表 Spare Parts	
刀片螺钉 Insert Screw (SI60M5X14)	刀片螺钉扳手 Insert Spanner (TT20P)
	
730100961212	720300960515

面铣 • 常规面铣
Face Milling • General Face Milling

刀片
Insert

SNEU

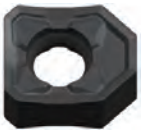




订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	bs	d1	r	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
NEW	SNEU1206ANEN-GL	12.7	6.35	2.2	6.0	0.8	●	●	○	●	●					
NEW	SNEU1206ANEN-GM	12.7	6.35	2.2	6.0	0.8	●	●	○	●	●					
NEW	SNEU1206ANSN-GH	12.7	6.35	2.2	6.0	0.8	●	●		●	●					
NEW	SNEU1206ANFN-NL	12.7	6.35	2.2	6.0	0.8									●	
NEW	SNEU1206ANEN-GW	12.7	6.35	5.6	6.0	0.8	●	●		●	●					

●标准库存 Stock ○需预定 Available upon Order

SNEU系列槽型
SNEU Series Geometry

GL槽型 GL Geometry	GM槽型 GM Geometry	GH槽型 GH Geometry	NL槽型 NL Geometry	GW槽型 GW
				
				
通用材料 轻载切削 Light Cutting for General material	通用材料 中载切削 Medium Cutting for General material	通用材料 重载切削 Rough Cutting for general material	铝合金 通用切削 General cutting for aluminum alloys	修光刃刀片 Wiper insert
特殊刃型搭配大前角、窄刃宽设计；最适合于低切削力、低进给的通用材料轻载加工。 Special edge shape with big rake angle and narrow edge width. Machining general material with low force and low feed.	特殊刃型与中等前角、刃宽组合，锋利性与强度兼并；最适合于一般工况需求的通用材料中载加工。 Design with medium rake angle and edge width. Combine Sharp with strength.Medium machining general material under general working conditions.	小前角、大刃宽搭配负倒棱优化，刃型强度极高；最适合于大切深的通用材料重载加工，亦能满足强断续加工。 Small rake and big edge width with negative chamfer land improve edge strength. Heavy machining general material with big depth of cut , available for strong interruption machining too.	锋利刃、大前角、镜面抛光，降低切削阻力、排屑顺畅；最适合于铝材、铜等N类有色金属通用加工。 Sharp edge, larger rake angle and mirror polishing contribute to low cutting force and evacuation of chip. Suitable for general milling of Non–Ferrous Metal, such as aluminum, copper，etc.	独特修光刃型，可提高工件表面光洁度和工作进给；最适合于对被加工件表面光洁度要求极高的应用工况。 Unique wiper edge contributes to high quality of surface finish and the improvement of feed.Highquality surface finish can be achieved.

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		材料硬度 Materials Hardness	牌号 Grade	切削速度（mm/min）Recommended Cutting Speed	轻载切削 Light Cutting		中载切削 Medium Cutting		重载切削 Heavy Cutting	
					进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry
P	软 钢 Low Carbon Steel (SS400、S10C等)	≤HB180	首选：GA4230 备选：GA4225	250 (200–300)	0.15 (0.1–0.2)	GL	0.2 (0.1–0.3)	GM	0.3 (0.2–0.4)	GH
P	碳钢、合金钢 Carbon Steel Alloy Steel (S45C、SCM440等)	HB180–280	首选：GA4230 备选：GA4225	220 (170–270)	0.15 (0.1–0.2)	GL	0.2 (0.1–0.3)	GM	0.3 (0.2–0.4)	GH
P	碳钢、合金钢 Carbon Steel Alloy Steel (S45C、SCM440等)	HB280–350	GA4230	150 (100–200)	0.12 (0.1–0.15)	GL	0.15 (0.1–0.2)	GM	0.2 (0.15–0.25)	GH
M	不锈钢 Stainless Steel（SUS304等）	≤HB280	首选：GA4230 备选：GA4225	180 (130–250)	0.15 (0.1–0.2)	GL	0.2 (0.1–0.3)	GM	––	––
K	铸铁、球磨铸铁 Gray Cast Iron Nodular Cast Iron (FC250、FCD400等)	≤HB350	首选：GA4230 备选：GA4225	180 (130–250)	0.15 (0.1–0.2)	GL	0.2 (0.1–0.3)	GM	0.3 (0.2–0.4)	GH
N	铝 材 Aluminum	HB60–210	GN9125	800 (300–1000)	0.15 (0.1–0.2)	NL	0.2 (0.1–0.3)	NL	––	––
S	耐热合金 Heat–resistant Alloy	HRC25–35	GA4230	40 (20–50)	0.05 (0.05–0.1)	GL	0.1 (0.05–0.15)	GM	––	––

★ 刀具转速（min^{-1}）=（1000x切削速度）÷（3.14x刀具切削刃直径）
Tool RPM（min^{-1}）=（1000xCutting Speed）÷（3.14x Diameters of Cutter）
★ 机床工作台进给量（mm/min）=每刃进给量x刀具刃数x刀具转速
Workpiece Feed（mm/min）=Feed Per Tooth x Number of Tooth x Tool RPM

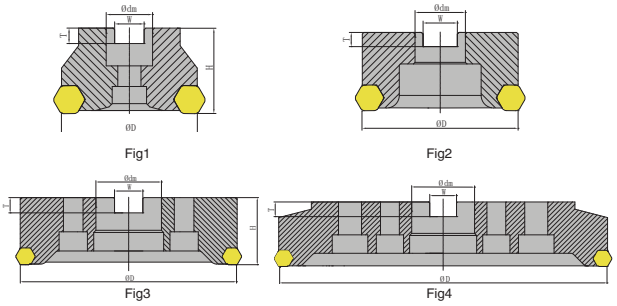
面铣 • 常规面铣
Face Milling • General Face Milling

铸铁专用60° 面铣削 --MFB160
60° Face Milling for Cast Iron—MFB160

MFB160

心轴式
Arbor





密齿型
Close Pitch

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	刀夹 Cartridge	图示 Shape	库存 Stock
			ΦD	Φdm	H	W	T					
MFB160080R08A27HN09	80	8	80	27	50	1.24	7	8	HNEX09	–	Fig.1	●
MFB160100R10B32HN09	100	10	100	32	50	14.4	8	8	HNEX09	–	Fig.2	●
MFB160125R15B40HN09	125	15	125	40	63	16.4	9	8	HNEX09	3	Fig.2	●
MFB160160R20C40HN09	160	20	160	40	63	16.4	9	8	HNEX09	4	Fig.3	●
MFB160200R25C60HN09	200	25	200	60	63	25.7	14	8	HNEX09	5	Fig.3	●
MFB160250R30C60HN09	250	30	250	60	80	25.7	14	8	HNEX09	6	Fig.3	●
MFB160315R40D60HN09	315	40	315	60	80	25.7	14	8	HNEX09	8	Fig.4	●

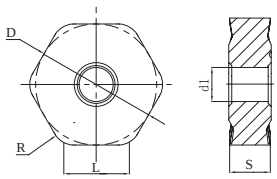
●标准库存 Stock ○需预定 Available upon Order

刀体配件 Spare Parts		
配件名称 Name	订货号 Ordering Code	图示 Shape
调整楔块 Axial Adjustment Wedge	731309009056	
压紧楔块 Clamp Wedge	731309009055	
压紧双头螺钉 Screw	730100460059	
调整双头螺钉 Screw	730100460067	
可调刀夹 Cartridge	731300363291	
扳手TH30L Wrench	720301260455	
扳手TH40L Wrench	720301260456	

面铣 • 常规面铣
Face Milling • General Face Milling

刀片
Insert

HNEX



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	HNEX090520–KF	9.5	16.2	5.56	–	2.0				○	●					
	HNEX090510–KF	9.5	16.2	5.56	–	1.0				○	●					
	HNEX090520–KM	9.5	16.2	5.56	–	2.0				○	●					
	HNEX090516–KR	9.5	16.2	5.56	–	1.6				○	●					
	HNEX090530–KR	9.5	16.2	5.56	–	3.0				○	●					
	HNEX090502–WC	9.5	15.875	5.56	–	0.2				●	●					

●标准库存 Stock ○需预定 Available upon Order

HNEX 系列槽型
HNEX Series Geometry

修光刃刀片 Wiper Insert	轻载切削 Light Cutting	中载切削 Medium Cutting	重载切削 Heavy Cutting
			
WC	KF	KM	KR
			
专用修光刃刀片； 配合可调式刀夹使用获取高表面质量及稳定性 Wiper insert. Obtained high surface quality and stability with cartridge.	轻载加工专用槽型； 大前角小棱宽小槽宽通槽设计 Light cutting geometry. Large rake angle through a small ridge width and smaller width slot design.	中载加工专用槽型； 采用扇形反屑面设计 独特的棱宽配比 Medium cutting geometry. Sector shape anti–litter surface designing with unique edge width ratio.	重载加工专用槽型； 大槽宽配合独特形貌前刀面设计 Heavy cutting geometry. Large flank width design with a unique rake face designing.

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		牌号 Grade	切削速度 (mm/min) Recommended Cutting Speed	轻载切削 Light Cutting		中载切削 Medium Cutting		重载切削 Heavy Cutting	
			Vc (m/min)	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry
K	铸铁、球墨铸铁 Gray Cast Iron Nodular Cast Iron (eg：FC250、FCD400)	GK2115 GK4125	280 (180–400)	0.15 (0.1–0.2)	KF	0.2 (0.1–0.3)	KM	0.3 (0.2–0.4)	KR

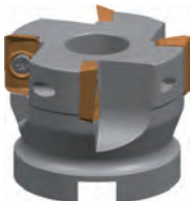
★ 刀具转速 (min^{-1}) = (1000x切削速度) ÷ (3.14x刀具切削刃直径)
Tool RPM (min^{-1}) = (1000xCutting Speed) ÷ (3.14x Diameters of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量x刀具刃数x刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth x Number of Tooth x Tool RPM

方肩铣 • 常规方肩铣
Shoulder Milling • General Shoulder Milling

通用方肩铣削--MEA190
General Shoulder Milling—MEA190

MEA190

心轴式
Arbor



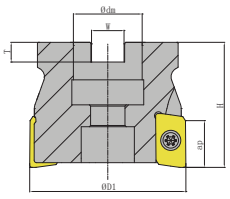


Fig1

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	H	W	T			螺钉 Screw	扳手 Wrench		
MEA190050R04A22AP16	50	4	50	22	50	10.4	6.3	14	AP*T1604	730100961135	720300960510	Fig1	●
MEA190063R05A22AP16	63	5	63	22	50	10.4	6.3	14	AP*T1604	730100961135	720300960510	Fig1	●

●标准库存 Stock ○需预定 Available upon Order

MEA190

圆柱直柄式
Shank



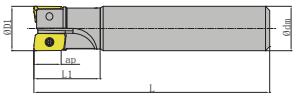


Fig2

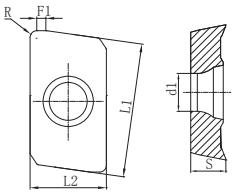
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	L	L1	–			螺钉 Screw	扳手 Wrench		
MEA190016R02P16AP11	16	2	16	16	120	40	–	9	AP*T1135	730100961040	720300960508	Fig2	●
MEA190020R03P20AP11	20	3	20	20	160	50	–	9	AP*T1135	730100961040	720300960508	Fig2	●
MEA190025R03P25AP11	25	3	25	25	160	50	–	9	AP*T1135	730100961040	720300960508	Fig2	●
MEA190025R02P25AP16	25	2	25	25	160	50	–	14	AP*T1604	730100961135	720300960510	Fig2	●
MEA190032R03P32AP16	32	3	32	32	160	80	–	14	AP*T1604	730100961135	720300960510	Fig2	●

●标准库存 Stock ○需预定 Available upon Order

方肩铣 • 常规方肩铣
Shoulder Milling • General Shoulder Milling

通用方肩铣削--MEA190
General Shoulder Milling—MEA190

APMT/APGT



订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L1	L2	S	F1	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	APMT1135PDER-PL	10.83	6.16	3.5	1.92	2.8	0.8	○	●								
	APMT1604PDER-PL	16.26	9.26	4.76	2	4.6	0.8	●	●								
	APMT1135PDER-PM	10.83	6.16	3.5	1.92	2.8	0.8	●	●			○					○
	APMT1604PDER-PM	16.26	9.26	4.76	2	4.6	0.8	●	●			○					○
	APMT1135PDER-PR	10.84	6.15	3.5	1.87	2.8	0.8	●	●			○					○
	APMT1604PDER-PR	16.26	9.24	4.76	2.2	4.4	0.8	●	●			●					○
	APGT1135PDFR-AL	10.83	6.16	3.5	1.92	2.8	0.8									○	
	APGT1604PDFR-AL	16.26	9.24	4.76	2.2	4.4	0.8									○	

●标准库存 Stock ○需预定 Available upon Order

APMT 系列槽型
APMT Series Geometry

轻载切削 Light Cutting	中载切削 Medium Cutting	重载切削 Heavy Cutting	铝切削 Aluminum Cutting
			
PL	PM	PR	AL
			
低切削阻力的轻载切削，获得更好的加工质量 Light cutting with low force to achieve excellent performance.	大多数一般工况可实现高稳定性半精加工 Mostgeneral conditions can achieve high stability semi–finishing.	可以实现高效经济粗加工，具有高的强度 Roughingcan be achieved efficiently and economically, with high strength.	锋利刃配合镜面抛光适合铝合金材料的加工 Shape edge with excellent polishing to achieve the machining of Aluminum Alloy.

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		牌号 Grade	切削速度 Recommended Cutting Speed	轻载切削 Light Cutting		中载切削 Medium Cutting		重载切削 Heavy Cutting	
			Vc (m/min)	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry	进给/刃 (mm/tooth)	槽型 Geometry
P	软 钢 Low Carbon Steel ≤HB200	GA4225 GA4230	150–180–200	0.05–0.1–0.15	PL	0.1–0.15–0.2	PM	0.1–0.2–0.25	PR
P	碳钢、合金钢 Carbon Steel、Alloy Steel ≤HRC35	GA4225 GA4230	120–150–200	0.1–0.1–0.15	PL	0.1–0.15–0.2	PM	0.1–0.2–0.25	PR
P	碳钢、合金钢 Carbon Steel、Alloy Steel HRC35–45	GA4230	120–150–200	0.1–0.1–0.15	PL	0.1–0.15–0.2	PM	0.1–0.2–0.25	PR
M	不锈钢 Stainless Steel ≤HRC35	GA4225 GA4230	100–140–160	0.1–0.15–0.3	PL	0.1–0.15–0.2	PM	0.1–0.2–0.25	PR
K	铸铁、球墨铸铁 Gray Cast Iron Nodular Cast Iron (eg：FC250、FCD400) ≤HB350	GA4230	100–120–140	0.05–0.1–0.15	PL	0.1–0.15–0.2	PM	0.1–0.2–0.25	PR
N	铝合金 Aluminum Alloy HB60–210	GN9125	200–500–900	0.05–0.15–0.25	AL	0.05–0.15–0.25	AL	0.05–0.15–0.25	AL
S	耐热合金、钛合金 Heat–resistant Alloy and Titanium Alloy ≤HRC35	GA4230	50–60–100	0.05–0.1–0.15	PL	0.05–0.1–0.15	PM	0.1–0.15–0.15	PR
H	高硬度钢 Hardened Steel HRC45–55	GA4230	50–60–100	0.05–0.1–0.15	PL	0.05–0.1–0.15	PM	0.1–0.15–0.15	PR

★ 刀具转速 (min^{-1}) = (1000x切削速度) ÷ (3.14x刀具切削刃直径)
Tool RPM (min^{-1}) = (1000xCutting Speed) ÷ (3.14x Diameters of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量x刀具刃数x刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth x Number of Tooth x Tool RPM

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

通用仿形铣削--MPA100
General Profiling Milling—MPA100

MPA100

心轴式
Arbor



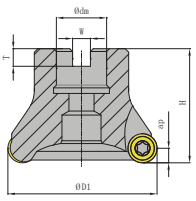


Fig1

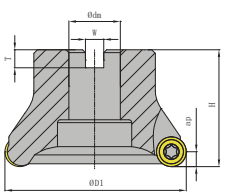


Fig2

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φdm	H	W	T			压板 Clamp	螺钉 Screw	扳手 Wrench		
MPA100040R05A16RD08	40	5	40	16	40	8.4	6.3	4	RD**0803	-	730100961040	720300960508	Fig1	○
MPA100050R04A22RD10	50	4	50	22	50	10.4	6.3	5	RD**10T3	720500762976	730100961131 730100961100	720300960510	Fig1	●
MPA100050R04A22RD12	50	4	50	22	50	10.4	6.3	6	RD**1204	720500762977	730100961135	720300960510	Fig1	●
MPA100063R05A22RD12	63	5	63	22	50	10.4	6.3	6	RD**1204	720500762977	730100961135	720300960510	Fig1	●
MPA100063R04A22RD16	63	4	63	22	50	10.4	6.3	8	RD**1604	-	730100961210	720300960515	Fig1	●
MPA100080R05A27RD16	80	5	80	27	50	12.4	7	8	RD**1604	-	730100961210	720300960515	Fig1	●
MPA100100R06B32RD16	100	6	100	32	50	14.4	9	8	RD**1604	-	730100961210	720300960515	Fig2	●
MPA100125R07B40RD16	125	7	125	40	63	16.4	9	8	RD**1604	-	730100961210	720300960515	Fig2	○

●标准库存 Stock ○需预定 Available upon Order

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

通用仿形铣削--MPA100
General Profiling Milling—MPA100

MPA100

圆柱直柄式
Shank



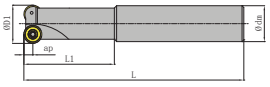


Fig3

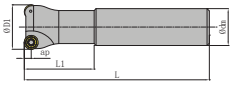


Fig4

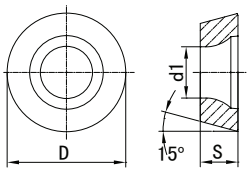
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φdm	L	L1	–			压板 Clamp	螺钉 Screw	扳手 Wrench		
MPA100010R02P16RD05	10	2	10	16	120	54	–	2.5	RD**0501	-	730100961020	720300960506	Fig3	○
MPA100012R02P16RD05	12	2	12	16	120	54	–	3.5	RD**0501	-	730100961020	720300960506	Fig3	○
MPA100016R02P16RD07	16	2	16	16	160	50	–	3.5	RD**0702	-	730100961040	720300960508	Fig3	●
MPA100017R02P16RD08	17	2	17	16	160	50	–	4	RD**0803	-	730100961040	720300960508	Fig4	●
MPA100020R02P20RD08	20	2	20	20	160	50	–	4	RD**0803	-	730100961040	720300960508	Fig3	○
MPA100020R02P20RD10	20	2	20	20	160	50	–	5	RD**10T3	720500762976	730100961131 730100961100	720300960510	Fig3	○
MPA100025R02P20RD10	25	2	25	20	160	50	–	5	RD**10T3	720500762976	730100961131 730100961100	720300960510	Fig4	●
MPA100032R02P32RD12	32	2	32	32	200	60	–	6	RD**1204	720500762977	730100961135	720300960510	Fig4	●
MPA100032R02P32RD16	32	2	32	32	200	65	–	8	RD**1604	-	730100961210	720300960515	Fig3	●
MPA100035R02P32RD16	35	2	35	32	200	65	–	8	RD**1604	-	730100961210	720300960515	Fig4	○

●标准库存 Stock ○需预定 Available upon Order

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

刀片
Insert

RDET/RDMT/RDEW/RDMW



订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RDET0803M0-BL	8	3.18	2.94	○	○								
	RDET10T3M0-BL	10	3.97	4.4	○	●								
	RDET1204M0-BL	12	4.76	4.4	○	●								
	RDET1604M0-BL	16	5.56	5.5	○	●								
	RDET0803M0-GM	8	3.18	2.94	○	○								
	RDET10T3M0-GM	10	3.97	4.4	●	●								○
	RDMT10T3M0-GM	10	3.97	4.4	●	●								
	RDET1204M0-GM	12	4.76	4.4	●	●								
	RDMT1204M0-GM	12	4.76	4.4	●	●								
	RDET1604M0-GM	16	5.56	5.5	○	●								
	RDEW0501M0	5	1.51	2.2	●	○								○
	RDEW0702M0	7	2.38	2.8	●	○								○
	RDEW0702M0T	7	2.38	2.8	○	○								
	RDEW0803M0T	8	3.18	2.94	●	○								
	RDEW10T3M0T	10	3.97	4.4	●	●								
	RDMW10T3M0T	10	3.97	4.4	●	●								
	RDEW1204M0T	12	4.76	4.4	●	●								
	RDEW1204M0T-BM	12	4.76	4.4	○	●								
	RDMW1204M0T-BM	12	4.76	4.4	●	●								
	RDEW1604M0T	16	5.56	5.5	●	●								
	RDMW1604M0T	16	5.56	5.5	○	●								

●标准库存 Stock ○需预定 Available upon Order

RD 系列槽型
RD Series Geometry

轻载切削 Light Cutting	中载切削 Medium Cutting	重载切削 Heavy Cutting
		 
BL	GM	None
		
BL:适用于P、M类材料的轻切削，20–22° 大前角设计 BL: Suitable for light cutting steel and stainless steel,big front rake angle of 20–22°.	GM: 适用于P、M、K类材料的中切削，前角14–18° GM: Suitable for medium cutting steel, stainless steel and cast iron, front rake angle of 14–18°.	None: 平板槽型，适用于P、M、K类材料的重切削，主要用于半精到粗加工 None: Flat chipbreaker, Suitable for heavy cutting steel and stainless steel, semi–finishing to roughing.

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

通用仿形铣削--MPB100
General Profiling Milling—MPB100

MPB100

心轴式
Arbor



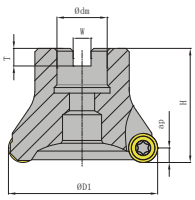


Fig1

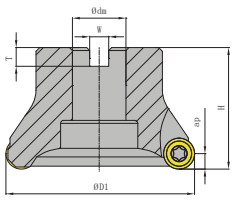


Fig2

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φdm	H	W	T			压板 Clamp	螺钉 Screw	扳手 Wrench		
MPB100040R05A16RP08	40	5	40	16	40	8.4	6.3	4	RP**08T2	-	730100961040	720300960508	Fig1	○
MPB100040R04A16RP10	40	4	40	16	40	8.4	6.3	5	RP**1003	720500762976	730100961131 730100961100	720300960510	Fig1	●
MPB100050R04A22RP10	50	4	50	22	50	10.4	6.3	5	RP**1003	720500762976	730100961131 730100961100	720300960510	Fig1	●
MPB100050R04A22RP12	50	4	50	22	50	10.4	6.3	6	RP**1204	720500762977	730100961135	720300960510	Fig1	●
MPB100063R05A22RP12	63	5	63	22	50	10.4	6.3	6	RP**1204	720500762977	730100961135	720300960510	Fig1	●
MPB100063R04A22RP16	63	4	63	22	40	10.4	6.3	8	RP**1606	-	730100961210	720300960515	Fig1	○
MPB100080R06A27RP16	80	6	80	27	50	12.4	7	8	RP**1606	-	730100961210	720300960515	Fig2	●
MPB100100R07B32RP16	100	7	100	32	50	14.4	8	8	RP**1606	-	730100961210	720300960515	Fig2	●
MPB100125R08B40RP16	125	8	125	40	63	16.4	9	8	RP**1606	-	730100961210	720300960515	Fig2	○

●标准库存 Stock ○需预定 Available upon Order

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

通用仿形铣削--MPB100
General Profiling Milling—MPB100

MPB100

圆柱直柄式
Shank



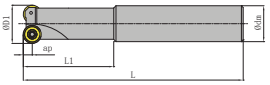


Fig3

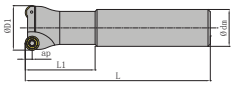


Fig4

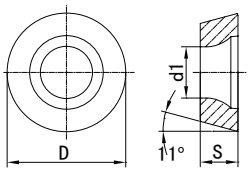
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts			图示 Shape	库存 Stock
			ΦD1	Φdm	L	L1	–			压板 Clamp	螺钉 Screw	扳手 Wrench		
MPB100016R02P16RP08S	16	2	16	16	120	40	–	4	RP**08T2	-	730100961040	720300960508	Fig3	○
MPB100016R02P16RP08	16	2	16	16	160	60	–	4	RP**08T2	-	730100961040	720300960508	Fig3	●
MPB100020R02P20RP08	20	2	20	20	160	50	–	4	RP**08T2	-	730100961040	720300960508	Fig3	●
MPB100025R03P25RP08	25	3	25	25	160	50	–	4	RP**08T2	-	730100961040	720300960508	Fig3	●
MPB100020R02P20RP10	20	2	20	20	160	50	–	5	RP**10T3	720500762976	730100961131 730100961100	720300960510	Fig3	○
MPB100025R02P20RP10	25	2	25	20	160	50	–	5	RP**10T3	720500762976	730100961131 730100961100	720300960510	Fig4	●
MPB100025R02P20RP10L	25	2	25	20	200	50	–	5	RP**10T3	720500762976	730100961131 730100961100	720300960510	Fig4	●
MPB100025R02P25RP12	25	2	25	25	160	50	–	6	RP**1204	720500762977	730100961135	720300960510	Fig3	●
MPB100032R02P25RP12	32	2	32	25	160	50	–	6	RP**1204	720500762977	730100961135	720300960510	Fig4	●
MPB100032R02P25RP12L	32	2	32	25	200	60	–	6	RP**1204	720500762977	730100961135	720300960510	Fig4	●
MPB100040R02P32RP16	40	2	40	32	200	65	–	8	RP**1606	-	730100961210	720300960515	Fig4	○

●标准库存 Stock ○需预定 Available upon Order

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

刀片
Insert

RPET/RPMT/RPEW/RPMW



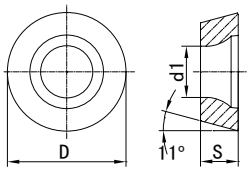
订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RPET1003M0-GL	10	3.18	4.4	○	●								
	RPET1204M0-GL	12	4.76	4.4	○	●								
	RPET08T2M0-GM	8	2.78	2.94	○	○	○							
	RPET1003M0T-GM	10	3.18	4.4	○	●								
	RPMT1003M0T-GM	10	3.18	4.4	●	●								
	RPET1204M0-GM	12	4.76	4.4	●	●	○							
	RPMT1204M0-GM	12	4.76	4.4	●	●								
	RPET1204M0T-GM	12	4.76	4.4	○	●	○							○
	RPET1606M0T-GM	16	6.35	5.5	○	●								
	RPET1606M0-SM	16	6.35	5.5			○							

●标准库存 Stock ○需预定 Available upon Order

仿形铣 • 仿形粗铣
Profile Milling • Rough Profile Milling

刀片
Insert

RPET/RPMT/RPEW/RPMW



订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RPET1606M0T-GH	16	6.35	5.5	○	●	○							
	RPEW08T2M0	8	2.78	2.94	○	○								
	RPEW1003M0	10	3.18	4.4	○	●								
	RPEW1003M0T	10	3.18	4.4	●	●								
	RPMW1003M0T	10	3.18	4.4	●	●								
	RPEW1204M0T	12	4.76	4.4	●	●								
	RPMW1204M0T	12	4.76	4.4	●	●								

RP 系列槽型
RP Series Geometry

轻载切削 Light Cutting	中载切削 Medium Cutting		重载切削 Heavy Cutting	
				
GL	GM	SM	GH	None
				
GL:适用于P、M类材料的轻切削， 20–22°大前角设计 GL: Suitable for light cutting steel and stainless steel, big front rake angle of 20–22°.	GM: 适用于P、M、K类材料的中切削， 前角14–18°; SM:适用于M、S类材料的中切削 GM: Suitable for medium cutting steel, stainless steel and cast iron, front rake angle of 14–18°. SM: Suitable for medium cuttingstainless steel and titanium alloy.		GH/None：适于P、M、K类材料的 重切削， 主要用于半精到粗加工 GH/None: Suitable for heavy cutting steel and stainless steel, semi–finishing to roughing.	

适用范围
Application Range

ISO	P 钢 Steel					M 不锈钢 Stainless Steel					K 铸铁 Cast Iron					S 耐热、钛合金 Heat–resistant Alloy Titanium Alloy					H 高硬材料 High–hardness Materia				
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	S01	S10	S20	S30	S40	H01	H10	H20	H30	H40
适用 领域 Range		GA4225					GA4225																		
			GA4230					GA4230					GA4230					GA4230					GA4230			

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		材料硬度 Materials Hardness	牌号 Grade	切削速度 (mm/min) Recommended Cutting Speed	刀片规格	进给/刃 mm/tooth		
						轻载切削 Light Cutting	中载切削 Medium Cutting	重载切削 Heavy Cutting
				Vc (m/min)		GL/BL	GM/SM	GH/T
P	软 钢 Low Carbon Steel	≤HB180	GA4225 GA4230	180 (150–220)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
	碳钢、合金钢 Carbon Steel、Alloy Steel	HB180–350	GA4225 GA4230	160 (140–200)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
	预硬钢 Per–hardened Steel	HRC35–45	GA4230	120 (100–160)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
M	不锈钢 (铁素体、马氏体) Stainless Steel (Ferrite、Martensite)	≤HB270	GA4225 GA4230 GM2125	140 (120–180)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
	不锈钢 (奥氏体、双相) Stainless Steel (Austenite、Diphasic)	≤HB270	GA4225 GA4230 GM2125	120 (100–160)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
K	灰铸铁 Grey Cast Iron	≤HB280	GA4230	180 (150–220)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
	球墨铸铁、蠕墨铸铁 Nodular Cast Iron Vermicular Cast Iron	≤HB350	GA4230	120 (100–180)	R2.5	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R3.5 R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)
S	耐热合金、钛合金 Heat–resistant Alloy and Titanium Alloy	HRC25–35	GA4230 GM2125	40 (30–60)	R4	0.08 (0.05–0.15)	0.12 (0.08–0.18)	0.15 (0.1–0.25)
					R5 R6	0.1 (0.05–0.15)	0.12 (0.08–0.2)	0.15 (0.1–0.25)
					R8	0.1 (0.05–0.15)	0.12 (0.08–0.2)	0.15 (0.1–0.25)
H	淬火钢 Quenching Steel	HRC48–55	GA4230	80 (60–120)	R4	0.08 (0.05–0.15)	0.1 (0.08–0.15)	0.12 (0.08–0.2)
					R5 R6	0.15 (0.1–0.25)	0.2 (0.15–0.3)	0.25 (0.2–0.35)
					R8	0.18 (0.1–0.25)	0.25 (0.1–0.35)	0.3 (0.1–0.45)

★ 刀具转速 (min^(–1)) = (1000X切削速度) / (3.14X刀具切削刃直径)
Tool RPM (min^(–1)) = (1000 XCutting Speed) / (3.14 X Diameter of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量X刀具刃数X刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth XNumber Of Tooth XTool RPM

RD/RP 刀片推荐进给量fz与切深ap关系

The Relationship of Recommended Feed and Deep of RD/RP Inserts

刀片IC Insert(mm)	工况 Condition	切深ap Deep(mm)							
		0.1	0.5	1	1.5	2	2.5	3	4
5	中切削（M） Medium Cutting	0.35 (0.22–0.63)	0.17 (0.08–0.26)	0.12 (0.06–0.21)	0.1 (0.05–0.17)				
	重切削（H） Heavy Cutting	0.45 (0.29–0.95)	0.2 (0.12–0.38)	0.16 (0.09–0.28)	0.14 (0.07–0.25)				
7/8	中切削（M） Medium Cutting	0.59 (0.23–0.90)	0.27 (0.10–0.41)	0.20 (0.08–0.30)	0.17 (0.06–0.26)	0.15 (0.03–0.23)			
	重切削（H） Heavy Cutting	0.68 (0.32–1.13)	0.31 (0.14–0.52)	0.23 (0.11–0.38)	0.19 (0.09–0.32)	0.17 (0.08–0.29)			
10	轻切削（L） Light Cutting	0.75 (0.25–0.90)	0.34 (0.11–0.41)	0.25 (0.08–0.30)	0.21 (0.07–0.25)	0.19 (0.06–0.23)	0.17 (0.05–0.21)		
	中切削（M） Medium Cutting	0.90 (0.25–1.26)	0.41 (0.11–0.57)	0.30 (0.08–0.42)	0.25 (0.07–0.35)	0.23 (0.06–0.31)	0.21 (0.05–0.28)		
	重切削（H） Heavy Cutting	1.01 (0.35–1.51)	0.46 (0.16–0.69)	0.33 (0.12–0.50)	0.28 (0.10–0.42)	0.25 (0.09–0.38)	0.23 (0.08–0.35)		
12	轻切削（L） Light Cutting	0.83 (0.28–1.10)	0.38 (0.13–0.50)	0.27 (0.09–0.36)	0.23 (0.08–0.30)	0.20 (0.07–0.27)	0.18 (0.06–0.25)	0.17 (0.06–0.23)	
	中切削（M） Medium Cutting	0.99 (0.28–1.38)	0.45 (0.13–0.63)	0.33 (0.09–0.45)	0.27 (0.08–0.38)	0.24 (0.07–0.34)	0.22 (0.06–0.31)	0.21 (0.06–0.29)	
	重切削（H） Heavy Cutting	1.10 (0.39–1.65)	0.50 (0.18–0.75)	0.36 (0.13–0.54)	0.30 (0.11–0.45)	0.27 (0.09–0.40)	0.25 (0.08–0.37)	0.23 (0.08–0.35)	
16	轻切削（L） Light Cutting	1.14 (0.32–1.59)	0.52 (0.14–0.72)	0.37 (0.10–0.52)	0.31 (0.09–0.43)	0.27 (0.08–0.38)	0.25 (0.07–0.35)	0.23 (0.06–0.32)	0.21 (0.06–0.29)
	中切削（M） Medium Cutting	1.27 (0.32–1.90)	0.57 (0.14–0.86)	0.41 (0.10–0.62)	0.34 (0.09–0.51)	0.30 (0.08–0.45)	0.28 (0.07–0.41)	0.26 (0.06–0.38)	0.23 (0.06–0.35)
	重切削（H） Heavy Cutting	1.59 (0.44–2.54)	0.72 (0.20–1.15)	0.52 (0.14–0.83)	0.43 (0.12–0.69)	0.38 (0.11–0.60)	0.35 (0.10–0.54)	0.32 (0.09–0.51)	0.29 (0.08–0.46)

备注： 圆刀片切削加工，一般情况ap<25%IC，当超过此切深时推荐用Kr=45° 的SEET系刀片
Remarks: In general, when the cutting depth is less than 25%IC using screw cutting tool.
If the cutting depth exceeds the Kr=45° series of SEET inserts are recommended.

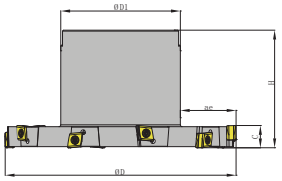
槽铣 • 三面刃槽铣
Slot Milling • Side and Face Milling

中等槽宽三面刃铣削--MSA(110~113)
Medium Slot Width Side and Face Milling--MSA(110~113)

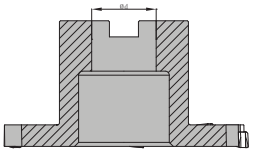
MSA(110~113)

心轴式
Arbor





前视图



剖视视图

Fig1

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions						匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD	C	Φd	ae	H	ΦD1		螺钉 Screw	扳手 Wrench		
MSA110080R06B27CN07	80	6	80	10	27	14	50	48	CN*U0705	730100961075	720300960511	Fig1	○
MSA110100R08B32CN07	100	8	100	10	32	19	50	58	CN*U0705	730100961075	720300960511	Fig1	○
MSA110125R10B32CN07	125	10	125	10	32	29.5	63	64	CN*U0705	730100961075	720300960511	Fig1	●
MSA110160R12B40CN07	160	12	160	10	40	43	63	70	CN*U0705	730100961075	720300960511	Fig1	○
MSA111080R06B27CN07	80	6	80	11	27	14	50	48	CN*U0705	730100961075	720300960511	Fig1	○
MSA111100R08B32CN07	100	8	100	11	32	19	50	58	CN*U0705	730100961075	720300960511	Fig1	○
MSA111125R10B32CN07	125	10	125	11	32	29.5	63	64	CN*U0705	730100961075	720300960511	Fig1	●
MSA111160R12B40CN07	160	12	160	11	40	43	63	70	CN*U0705	730100961075	720300960511	Fig1	○
MSA112080R06B27CN07	80	6	80	12	27	14	50	48	CN*U0705	730100961075	720300960511	Fig1	○
MSA112100R08B32CN07	100	8	100	12	32	19	50	58	CN*U0705	730100961075	720300960511	Fig1	○
MSA112125R10B32CN07	125	10	125	12	32	29.5	63	64	CN*U0705	730100961075	720300960511	Fig1	●
MSA112160R12B40CN07	160	12	160	12	40	43	63	70	CN*U0705	730100961075	720300960511	Fig1	○
MSA113080R06B27CN07	80	6	80	13	27	14	50	48	CN*U0705	730100961075	720300960511	Fig1	○
MSA113100R08B32CN07	100	8	100	13	32	19	50	58	CN*U0705	730100961075	720300960511	Fig1	○
MSA113125R10B32CN07	125	10	125	13	32	29.5	63	64	CN*U0705	730100961075	720300960511	Fig1	●
MSA113160R12B40CN07	160	12	160	13	40	43	63	70	CN*U0705	730100961075	720300960511	Fig1	○

●标准库存 Stock ○需预定 Available upon Order

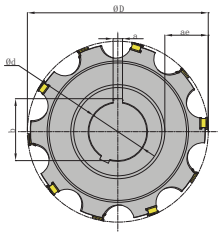
槽铣 • 三面刃槽铣
Slot Milling • Side and Face Milling

中等槽宽三面刃铣削--MSA(110~113)
Medium Slot Width Side and Face Milling--MSA(110~113)

MSA(110~113)

盘式
Shell





前视图　　剖视视图

Fig2

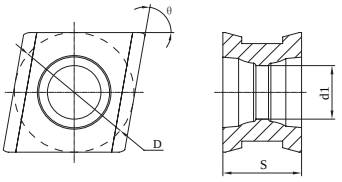
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions						匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD	C	Φd	ae	b1	Φd1		螺钉 Screw	扳手 Wrench		
MSA110080R06K27CN07	80	6	80	10	27	19	10	40	CN*U0705	730100961075	720300960511	Fig2	○
MSA110100R08K27CN07	100	8	100	10	27	26	10	46	CN*U0705	730100961075	720300960511	Fig2	○
MSA110125R10K40CN07	125	10	125	10	40	34	10	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA110160R12K40CN07	160	12	160	10	40	51	10	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA111080R06K27CN07	80	6	80	11	27	19	11	40	CN*U0705	730100961075	720300960511	Fig2	○
MSA111100R08K27CN07	100	8	100	11	27	26	11	46	CN*U0705	730100961075	720300960511	Fig2	○
MSA111125R10K40CN07	125	10	125	11	40	34	11	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA111160R12K40CN07	160	12	160	11	40	51	11	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA112080R06K27CN07	80	6	80	12	27	19	12	40	CN*U0705	730100961075	720300960511	Fig2	○
MSA112100R08K27CN07	100	8	100	12	27	26	12	46	CN*U0705	730100961075	720300960511	Fig2	○
MSA112125R10K40CN07	125	10	125	12	40	34	12	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA112160R12K40CN07	160	12	160	12	40	51	12	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA113080R06K27CN07	80	6	80	13	27	19	13	40	CN*U0705	730100961075	720300960511	Fig2	○
MSA113100R08K27CN07	100	8	100	13	27	26	13	46	CN*U0705	730100961075	720300960511	Fig2	○
MSA113125R10K40CN07	125	10	125	13	40	34	13	55	CN*U0705	730100961075	720300960511	Fig2	○
MSA113160R12K40CN07	160	12	160	13	40	51	13	55	CN*U0705	730100961075	720300960511	Fig2	○

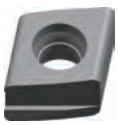
●标准库存 Stock　○需预定 Available upon Order

槽铣 • 三面刃槽铣
Slot Milling • Side and Face Milling

刀片
Insert

CNEU



订货号 Ordering Code		尺寸 Dimensions(mm)				涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	θ°	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	CNEU070508–PM	7.6	80	5	3.4	○	●			○					
	CNEU070508–KM	7.6	80	5	3.4	○	●			●					

●标准库存 Stock ○需预定 Available upon Order

推荐切削参数
Recommended Cutting Data

工件材料 Workpiece Materials		材料硬度 Material Hardness	牌号 Grade	切削速度 Recommended Cutting Speed	进给/刃 (mm/tooth)
				Vc (m/min)	中载切削 (M) Medium Cutting
P	普通结构钢 Mild Steel	≤HB200	GA4225 GA4230	180 (200–220)	0.1 (0.05–0.15)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	≤HRC35	GA4225 GA4230	160 (140–180)	0.08 (0.05–0.12)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	HRC35–45	GA4225 GA4230	140 (120–160)	0.08 (0.05–0.12)
M	不锈钢 (铁素体、马氏体) Stainless Steel (Ferrite、Martensite)	≤HRC35	GA4230	120 (100–140)	0.06 (0.08–0.10)
K	铸铁、球墨铸铁 Cast Iron Nodular Cast Iron	≤HB350	GK4125	200 (180–220)	0.1 (0.02–0.15)

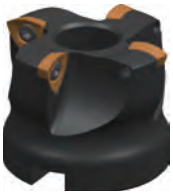
★ 刀具转速 (min^{-1}) = (1000x切削速度) ÷ (3.14x刀具切削刃直径)
Tool RPM (min^{-1}) = (1000xCutting Speed) ÷ (3.14x Diameters Of Cutter)
★ 机床工作台进给量 (mm/min) =每刃进给量x刀具刃数x刀具转速
Workpiece Feed (mm/min) =Feed Per Tooth x Number of Tooth x Tool RPM

其他 • 快进给铣削
Others • High Feed Milling

通用快进给铣削--MKA110
General High Feed Milling--MKA110

MKA110

心轴式
Arbor



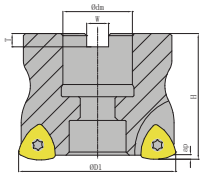


Fig1

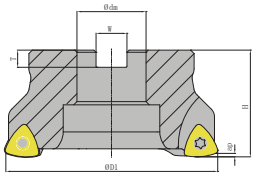


Fig2

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	H	W	T			螺钉 Screw	扳手 Wrench		
MKA110050R04A22UD12	50	4	50	22	50	10.4	6.3	1.5	UD**12T3	730100961131	720300960510	Fig1	●
MKA110063R05A22UD12	63	5	63	22	50	10.4	6.3	1.5	UD**12T3	730100961131	720300960510	Fig1	●
MKA110063R04A22UP17	63	4	63	22	50	10.4	6.3	2.0	UP**1705	730100961205	720300960515	Fig1	●
MKA110080R05A27UP17	80	5	80	27	50	12.4	7	2.0	UP**1705	730100961205	720300960515	Fig1	●
MKA110080R06A27UP17	80	6	80	32	50	12.4	7	2.0	UP**1705	730100961205	720300960515	Fig1	●
MKA110100R06B32UP17	100	6	100	40	63	14.4	8	2.0	UP**1705	730100961205	720300960515	Fig2	●

●标准库存 Stock ○需预定 Available upon Order

MKA110

圆柱直柄式
Shank



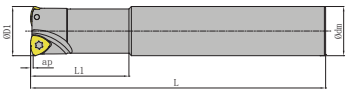


Fig3

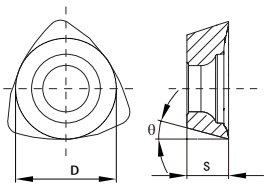
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	L	L1	–			螺钉 Screw	扳手 Wrench		
MKA110020R02P20UD08S	20	2	20	20	120	40	–	1.0	UD**0803	730100961043	720300960507	Fig3	●
MKA110020R02P20UD08	20	2	20	20	160	50	–	1.0	UD**0803	730100961043	720300960507	Fig3	○
MKA110020R02P20UD08L	20	2	20	20	200	65	–	1.0	UD**0803	730100961043	720300960507	Fig3	○
MKA110025R02P25UD08S	25	2	25	25	120	40	–	1.0	UD**0803	730100961043	720300960507	Fig3	○
MKA110025R02P25UD08	25	2	25	25	160	50	–	1.0	UD**0803	730100961043	720300960507	Fig3	●
MKA110035R05P32UD08	35	5	35	32	200	50	–	1.0	UD**0803	730100961043	720300960507	Fig3	●
MKA110025R02P25UD12	25	2	25	25	160	50	–	1.5	UD**12T3	730100961131	720300960510	Fig3	●
MKA110030R03P32UD12	30	3	30	32	200	50	–	1.5	UD**12T3	730100961131	720300960510	Fig3	●
MKA110032R03P32UD12	32	3	32	32	200	50	–	1.5	UD**12T3	730100961131	720300960510	Fig3	●
MKA110035R03P32UD12	35	3	35	32	200	50	–	1.5	UD**12T3	730100961131	720300960510	Fig3	●

●标准库存 Stock ○需预定 Available upon Order

其他 • 快进给铣削
Others • High Feed Milling

刀片
Insert

UD/UP



订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	θ	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	UDET080308–MM	6.8	3.18	15	●	●								
	UDET12T312–MM	9.6	3.97	15	●	●								
	UPET170520–PM	13	5.56	11	●	●								
	UDMT080308T–MH	6.8	3.18	15	●	●								
	UDMT12T312T–MH	9.6	3.97	15	●	●								
	UDMW12T312T	9.6	3.97	15	●	●								

●标准库存 Stock ○需预定 Available upon Order

UD/UP 系列槽型
UD/UP Series Geometry

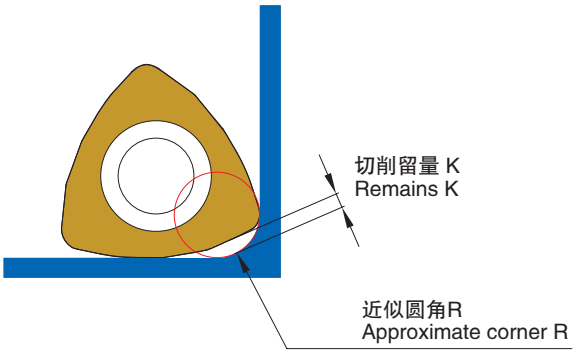
中载切削 Medium Cutting		重载切削 Heavy Cutting	
			
MM	PM	MH	None
			
较大的正前角， 切削刃锋利 Bigger rake angle makes cutting edge more sharply.	中等前角加倒棱设计， 适用于中载切削 Chamfered cutting edge with rake angle is suitable for medium cutting.	较小的前角， 切削刃强度高 Smaller rake angle makes stronger cutting edge.	平板设计， 切削刃强度更高 Flat insert design makes strongest cutting edge.

适用范围
Application Range

ISO	P 钢 Steel					M 不锈钢 Stainless Steel					K 铸铁 Cast Iron					N 有色金属 Nonferrous Metal					S 耐热、钛合金 Heat–resistant Alloy TitaniumAlloy				
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	N20	N30	N40	S01	S10	S20	S30	S40
适用领域 Range			GA4225					GA4225																	
			GA4230					GA4230					GA4230									GA4230			

加工程序参数
Parameters for Programing Calculations

刀片规格 Insert	近似编程圆角R(mm) Approximate Corner R	切削残留量K(mm) Remains K
UD**0803	1.8	0.58
UD**12T3	2.8	0.86
UP**1705	3.5	1.02



推荐切削参数
Recommended Cutting Data

被加工材料 Workpiece Materials		材料硬度 Material Hardness	牌号 Grade	切削速度 Recommended Cutting Speed	进给/刃 (mm/tooth)	
				Vc (m/min)	中载切削 (M) Medium Cutting	重载切削 (H) Heavy Cutting
P	普通结构钢 Mild Steel	≤HB200	GA4225 GA4230	180 (150–200)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	≤HRC35	GA4225 GA4230	150 (120–180)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	HRC35–45	GA4225 GA4230	120 (90–140)	1.0 (0.6–1.2)	1.2 (0.8–1.5)
M	不锈钢 (铁素体、马氏体) Stainless Steel (Ferrite、Martensite)	≤HRC35	GA4225 GA4230	120 (90–140)	0.8 (0.6–1.0)	1.0 (0.8–1.2)
K	铸铁、球墨铸铁 Cast Iron Nodular Cast Iron	≤HB350	GA4225 GA4230	180 (150–200)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
S	耐热合金、钛合金 Heat–resistant Alloy and Titanium Alloy	≤HRC35	GA4230	40 (30–60)	0.3 (0.15–0.4)	0.4 (0.2–0.6)
H	淬火钢 Hardened Steel	HRC45–55	GA4230	80 (60–100)	0.2 (0.1–0.3)	0.3 (0.15–0.4)

UD/UP刀片推荐进给量与切深关系

The Relationship of Recommended Feed and Depth of UD/UP Inserts

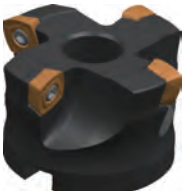
刀片规格 Insert Size	切深ap（mm）					
	0.5	1	1.5	2	2.5	3
08	0.8 (0.6–1.2)	0.5 (0.4–0.8)	–	–	–	–
12	1.5 (1.0–2.0)	1.2 (0.8–1.5)	0.8 (0.6–1.2)	–	–	–
17	2 (1.8–2.5)	1.5 (1.0–2.0)	1.2 (0.8–1.5)	0.8 (0.6–1.2)	–	–

其他 • 快进给铣削
Others • High Feed Milling

通用快进给铣削--MKB113
General High Feed Milling--MKB113

MKB113

心轴式
Arbor



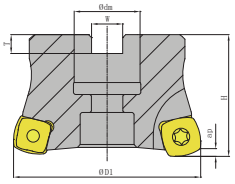


Fig1

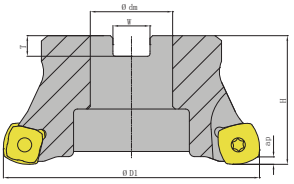


Fig2

订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	H	W	T			螺钉 Screw	扳手 Wrench		
MKB113050R04A22SD12	50	4	50	22	40	10.4	6.3	2.0	SD**1205	730100961141	720300960510	Fig1	●
MKB113063R04A22SD12	63	4	63	22	40	10.4	6.3	2.0	SD**1205	730100961141	720300960510	Fig1	●
MKB113063R05A22SD12	63	5	63	22	40	10.4	6.3	2.0	SD**1205	730100961141	720300960510	Fig1	●
MKB113080R06A27SD12	80	6	80	27	50	12.4	7	2.0	SD**1205	730100961141	720300960510	Fig1	○
MKB113063R04A22SD15	63	4	63	22	40	10.4	6.3	3.0	SD**1505	730100961201	720300960515	Fig1	●
MKB113080R05A27SD15	80	5	80	27	50	12.4	7	3.0	SD**1505	730100961201	720300960515	Fig1	●
MKB113100R06B32SD15	100	6	100	32	50	14.4	8	3.0	SD**1505	730100961201	720300960515	Fig2	○
MKB113125R07B40SD15	125	7	125	40	63	16.4	9	3.0	SD**1505	730100961201	720300960515	Fig2	○

●标准库存 Stock ○需预定 Available upon Order

其他 • 快进给铣削
Others • High Feed Milling

通用快进给铣削--MKB113
General High Feed Milling--MKB113

MKB113

圆柱直柄式
Shank



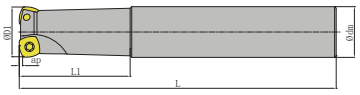


Fig3

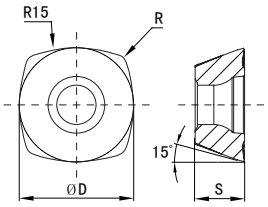
订货号 Ordering Code	直径 Diameters	刃数 Teeth	尺寸（mm） Dimensions					切深 Ap	匹配刀片 Gauge Insert	配件 Spare Parts		图示 Shape	库存 Stock
			ΦD1	Φdm	L	L1	–			螺钉 Screw	扳手 Wrench		
MKB113032R02P32SD12S	32	2	32	32	160	70	–	2.0	SD**1205	730100961141	720300960510	Fig3	●
MKB113032R02P32SD12	32	2	32	32	200	70	–	2.0	SD**1205	730100961141	720300960510	Fig3	●
MKB113035R03P32SD12	35	3	35	32	200	70	–	2.0	SD**1205	730100961141	720300960510	Fig3	○
MKB113040R03P32SD12	40	3	40	32	200	70	–	2.0	SD**1205	730100961141	720300960510	Fig3	○

●标准库存 Stock ○需预定 Available upon Order

其他 • 快进给铣削
Others • High Feed Milling

刀片
Insert

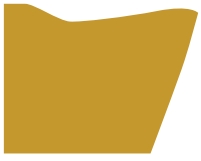
SDMT



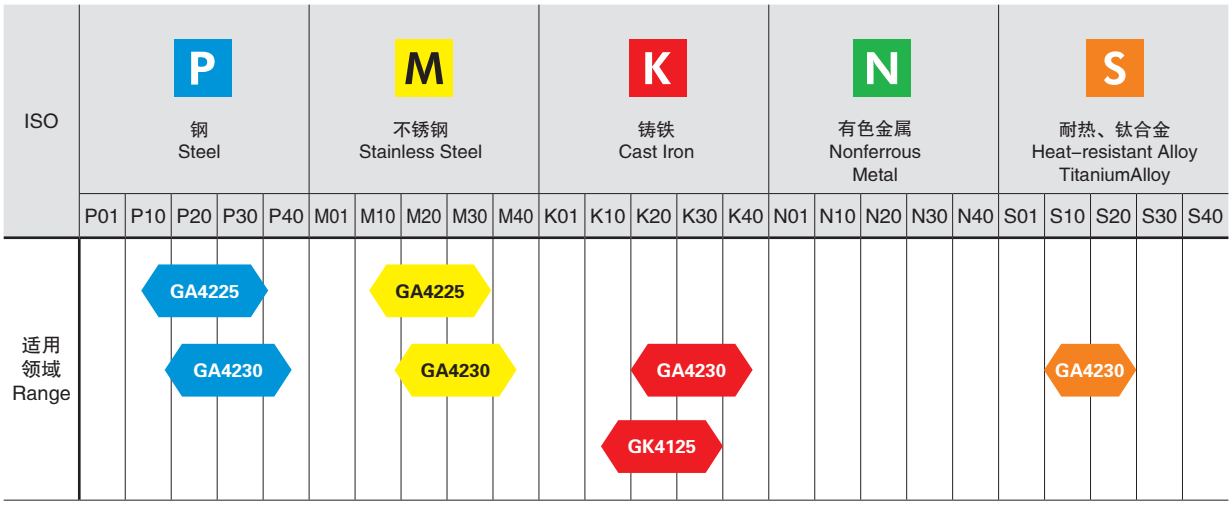
订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SDMT120512–GM	12.7	5.56	1.2	●	●		○	○					
	SDMT150512–GM	15.875	5.56	1.2	●	●								
	SDMT120512–GH	12.7	5.56	1.2	●	●								
	SDMT150512–GH	15.875	5.56	1.2	●	●								

●标准库存 Stock ○需预定 Available upon Order

SDMT 系列槽型
SDMT Series Geometry

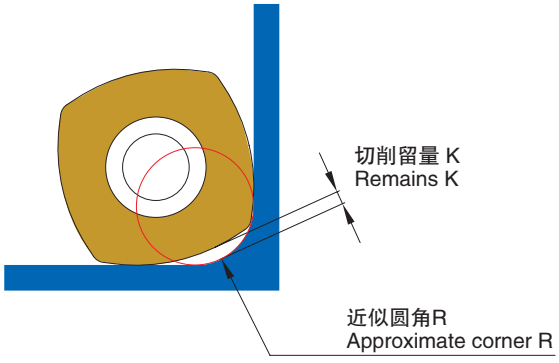
中载切削 Medium Cutting	重载切削 Heavy Cutting
	
GM	GH
	
变刃带变前角设计，兼备锋利性和耐破损性; 独特的排屑槽，良好的切屑控制能力 Special rake angle combine the advantage of sharpness and abrasion resistant. Unique geometry makes cutting more easily.	大刃宽小前角设计，强度与平板型相当， 但切削阻力更小; 渐变式大槽宽设计，利于切屑排出 The strength of insert as well as plat insert but low cutting force with special rake angle. Larger geometry design makes chip evacuation more easily.

适用范围
Application Range



加工程序参数
Parameters for Programing Calculations

刀片规格 Insert	近似编程圆角R(mm) Approximate Corner R	切削残留量K(mm) Remains K
SD**12	4.0	0.85
SD**15	5.0	1.05



推荐切削参数
Recommended Cutting Data

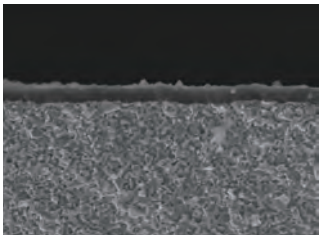
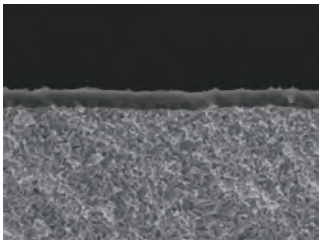
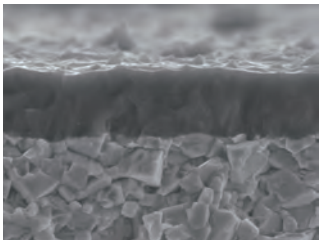
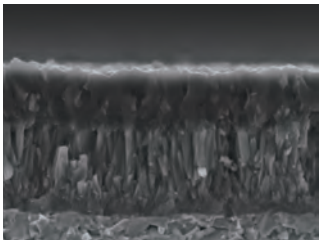
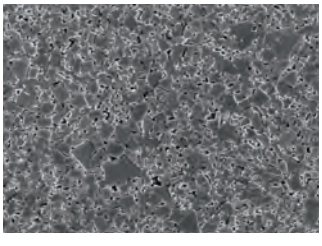
被加工材料 Workpiece Materials		材料硬度 Material Hardness	牌号 Grade	切削速度 Recommended Cutting Speed	进给/刃 (mm/tooth)	
				Vc (m/min)	中载切削 (M) Medium Cutting	重载切削 (H) Heavy Cutting
P	普通结构钢 Mild Steel	≤HB200	GA4225 GA4230	180 (150–200)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	≤HRC35	GA4225 GA4230	150 (120–180)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
P	碳素钢、合金钢 Carbon Steel Alloy Steel	HRC35–45	GA4225 GA4230	120 (90–140)	1.0 (0.6–1.2)	1.2 (0.8–1.5)
M	不锈钢 (铁素体、马氏体) Stainless Steel (Ferrite、Martensite)	≤HRC35	GA4225 GA4230	120 (90–140)	0.8 (0.6–1.0)	1.0 (0.8–1.2)
K	铸铁、球墨铸铁 Cast Iron Nodular Cast Iron	≤HB350	GK4125 GA4225 GA4230	180 (150–200)	1.2 (0.8–1.5)	1.5 (1.0–2.0)
S	耐热合金、钛合金 Heat–resistant Alloy and Titanium Alloy	≤HRC35	GA4230	40 (30–60)	0.3 (0.15–0.4)	0.4 (0.2–0.6)
H	淬火钢 Hardened Steel	HRC45–55	GA4230	80 (60–100)	0.2 (0.1–0.3)	0.3 (0.15–0.4)

SDMT刀片推荐进给量与切深关系

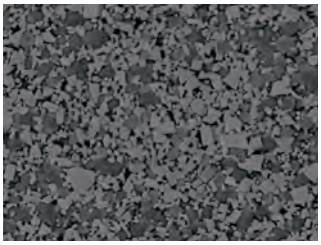
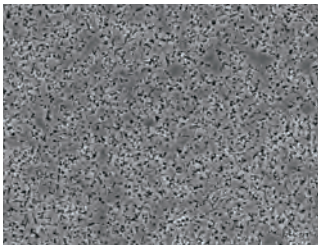
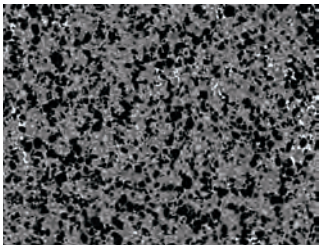
The Relationship of Recommended Feed and Depth of SDMT Inserts

刀片规格 Insert Size	切深ap（mm）					
	0.5	1	1.5	2	2.5	3
12	1.8 (1.5–2.0)	1.5 (1.0–1.8)	1.0 (0.6–1.5)	0.8 (0.4–1.0)	–	–
15	2.0 (1.8–3.0)	1.8 (1.5–2.0)	1.5 (1.0–1.8)	1.0 (0.6–1.5)	0.8 (0.4–1.0)	0.6 (0.4–0.8)

铣削刀片牌号简介
Milling Insert Grades

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GA4230	半精、粗加工 Semi–finishing and Roughing		全新升级TiALN⁺涂层具有优异的耐热性和耐氧化性，与高耐磨损性与耐破损性的硬质合金基体结合强度高，实现不同工况下的稳定加工。 • The new upgrade TiALN⁺ coating has excellent heat resistance and oxidation resistance. • Due to the high adhesion strength to the substrate, GA4230 can achieve a reliable tool life in various cutting conditions.
GA4225	半精、 轻微粗加工 Semi–finishing to Light Roughing		纳米结构的AlCrN涂层与微细晶粒硬质合金基体相结合，适合中等到低速工况下，钢材、铸铁等材料加工。 • Nano–structure AlCrN coating on super micro–grain carbide. • Application: Suitable for medium milling of P&K materials under dry and wet cutting conditions.
GK4125	半精、粗加工 Semi–finishing and Roughing		最新TiAlN涂层与细晶粒硬质合金基体结合强度高，兼备良好的耐磨性与韧性，能够实现干湿工况下灰口铸铁与球墨铸铁的中到粗加工铣削。 • The latest TiAlNcoating on micro–grain carbide substrate has high adhesion strength，excellent wear resistance and toughness. • Application:Suitable for general purpose cutting of nodular iron and gray iron in Semi–finishing and interrupte conditions under wet and try.
NEW GK2115	半精加工 Semi–finishing		全新铸铁铣削用中厚MT–TiCN+Al_2O_3涂层搭配专用细晶硬质合金基体，强韧性与耐磨性兼备，保证加工的稳定性与高效性，适用于中等到高速条件下铸铁的精到半精加工铣削 • MT–TiCN+Al_2O_3coated on toughness micro–grain carbide substrate, keeping superior toughnessand greatly improved wear resistance. • Application:Suitable for nodular iron and gray iron in continuous and light interrupte conditions.
GK0115	半精加工 Semi–finishing		非涂层硬质合金牌号，具有良好的耐磨性和韧性，适合于中等到低速工况下各类工件的铣削加工 • Uncoated cemented carbides grade for milling. • Application: Suitable for general purpose cutting of various types of workpiece material.

铣削刀片牌号简介
Milling Insert Grades

牌号 Grade	加工类型 Cutting Range	涂层构成 Coating	特点 Advantages
GP0135	半精、粗加工 Semi–finishing and Roughing		非涂层硬质合金牌号，富含添加剂，具有良好的耐磨性和韧性，适合于中等到低速工况下钢材的铣削加工。 • Uncoated cemented carbides grade for milling. • Application: Suitable for general purpose cutting of steel workpiece material.
GA0115	半精加工 Semi–finishing		非涂层细晶粒硬质合金牌号，耐磨性优异，主要适用于锋利刃的铝合金铣以及部分钢材的铣削加工。 • Uncoated cemented carbides grade for milling. • Application: Suitable for general purpose cutting of AL workpiece material and steel workpiece material.
GP01TM	精、半精加工 Finishing and Semi–finishing		无涂层金属陶瓷铣削牌号，优良的工艺处理后，具备高韧性、高耐磨性以及优异的抗崩刃性，适用于各类材料的的铣削加工，主推钢材加工。 • Uncoated cemented grade for milling • Application: Suitable for general purpose cutting of various types of workpiece material.

铣削牌号应用一览表
Application Summary of Milling Grades

工件材质 Workpiece	ISO	涂层硬质合金 Coated		硬质合金 Uncoated	金属陶瓷 Cermet
		CVD	PVD		
P 钢 Steel	01				
	10		GA4225	GA0115	GP01TM
	20		GA4230		
	30			GP0135	
	40				
	50				
M 不锈钢 Stainless Steel	01				
	10	GM2125	GA4225		GP01TM
	20		GA4230		
	30				
	40				
	50				
K 铸铁 Cast Iron	01				
	10			GK0115	GP01TM
	20	GK2115	GK4125		
	30		GA4230		
	40				
N 有色金属 Nonferrous Metal	01				
	10			GA0115	
	20			GN9125	
	30				
	40				
S 耐热合金、钛合金 Heat-resistant Alloy and Titanium Alloy	01				
	10	GM2125			
	20		GA4230		
	30				
	40				
H 高硬度材料 High Hardness Material	01				
	10				
	20		GA4230		
	30				

ISO铣削刀片型号表示规则
ISO Milling Indexable Inserts Identification System

代号 Symbol	形状 Shape	刀尖角（度） Corner Angle	图形 Figure
H	正六边形 Hexagon	120°	
O	正八边形 Octagon	135°	
P	正五边形 Pentagon	108°	
S	正方形 Square	90°	
T	正三角形 Triangle	60°	
C	菱形 Rhombic	80°	
D		55°	
E		75°	
F		50°	
M		86°	
V		35°	
W	六边形 Trigon	80°	
L	长方形 Rectangle	90°	
A	平行四边形 Parellelogram	85°	
B		82°	
K		55°	
R	圆形 Round	——	

①形状代号 Inserts Shape

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



②后角代号 Major Cutting Edge Clerance Angle

代号 Symbol (级)	公差 Tolerance (mm)			公差.英寸 Tolerances in inches		
	刀尖高 Corner Height(m)	厚度 Thickness(s)	内切圆 I.C.Size(Ød)	刀尖高 Corner Height(m)	厚度 Thickness(s)	内切圆 I.C.Size(Ød)
A	±0.005	±0.025	±0.025	±0.0002	±0.001	±0.001
F	±0.005	±0.025	±0.013	±0.0002	±0.001	±0.0005
C	±0.013	±0.025	±0.025	±0.0005	±0.001	±0.001
H	±0.013	±0.025	±0.013	±0.0005	±0.001	±0.0005
E	±0.025	±0.025	±0.025	±0.001	±0.001	±0.001
G	±0.025	±0.13	±0.025	±0.001	±0.005	±0.001
J	±0.005	±0.025	±0.05~±0.13	±0.0002	±0.001	±0.002~±0.005
K	±0.013	±0.025	±0.05~±0.13	±0.0005	±0.001	±0.002~±0.005
L	±0.025	±0.025	±0.05~±0.13	±0.001	±0.001	±0.002~±0.005
M	±0.08~±0.18	±0.13	±0.05~±0.13	±0.003~±0.007	±0.005	±0.002~±0.005
N	±0.08~±0.18	±0.025	±0.05~±0.13	±0.003~±0.007	±0.001	±0.002~±0.005
U	±0.13~±0.38	±0.13	±0.08~±0.25	±0.005~±0.015	±0.005	±0.003~±0.01

③精度代号 Tolerances, mm inch

①	②	③	④	⑤
S	E	E	T	13
R	D	E	T	12

④断屑槽・孔代号 Chipbreaker and / for fixing type

代号 Symbol	有无孔 Hole	孔的形状 Hole Shape	断屑槽 Chipbreaker	形状 Shape
N	无 Without	—	无 Without	
R			单面 Single-sided	
F			双面 Double-sided	
A	有 With	圆柱孔 With Hole	无 Without	
M			单面 Single-sided	
G			双面 Double-sided	
W		部分圆柱孔单面40°~60° With hole and one countersink 40°~60°	无 Without	
T			单面 Single-sided	
Q		部分圆柱孔双面40°~60° With hole and two countersinks 40°~60°	无 Without	
U			双面 Double-sided	
B		部分圆柱孔单面70°~90° With hole and one countersink 70°~90°	无 Without	
H			单面 Single-sided	
C		部分圆柱孔双面70°~90° With hole and two countersinks 70°~90°	无 Without	
J			双面 Double-sided	
X	—	—	—	

⑤切屑刃长度代号 Cutting Edge Length (mm)

R		S		C		W		T		D		V		K		内切圆直径 I.C.Size (mm)
代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	代号 Symbol	尺寸 Length	
		03	3.97	03	4.0			06	6.9	4	4.8					3.97
		04	4.76	04	4.8			08	8.2	5	5.8					4.76
05	5	——	——	——	——	——	——	——	——	——	——	——	——	——	——	5
		05	5.56	05	5.6	03	3.8	09	9.6	6	6.8					5.56
06	6	——	——	——	——	——	——	——	——	——	——	——	——	——	——	6
		06	6.35	06	6.5	04	4.3	11	11	7	7.8	11	11.2			6.35
		07	7.94	08	8.1	05	5.4	13	13.8	9	9.7					7.94
08	8	——	——	——	——	——	——	——	——	——	——	——	——	——	——	8
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10	——	——	——	——	——	——	——	——	——	——	——	——	——	——	10
12	12	——	——	——	——	——	——	——	——	——	——	——	——	——	——	12
12	12.7	12	12.7	12	12.9	08	8.7	22	22	15	15.5	22	22.1			12.7
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4					15.875
16	16	——	——	——	——	——	——	——	——	——	——	——	——	——	——	16
19	19.05	19	19.05	19	19.3	13	13	33	33	23	23.3					19.05
20	20	——	——	——	——	——	——	——	——	——	——	——	——	——	——	20
		22	22.225	22	22.6			38	38.5	27	27.1					22.225
25	25	——	——	——	——	——	——	——	——	——	——	——	——	——	——	25
25	25.4	25	25.4	25	15.8			44	44	31	31					25.4
31	31.75	31	31.75	32	32.2			55	55	38	38.8					31.75
31	32	——	——	——	——	——	——	——	——	——	——	——	——	——	——	32

适用刀片形状：H,O,P,S,T,C,E,M,W,R Insert Shape:H,O,P,S,T,C,E,M,W,R									
标准内切圆 I.C.Size (mm)	内切圆(Ød)的公差 Tolerance of I.C.Size(Ød)(mm)		刀尖高(m)的公差 Tolerance of Corner Height(m)(mm)		标准内切圆 I.C.Size (inch)	内切圆(Ød)的公差 Tolerance of I.C.Size(Ød)(inch)		刀尖高(m)的公差 Tolerance of Corner Height(m)(inch)	
	J,K,L, M,N(级)	U (级)	M,N(级)	U (级)		ClassJ,K, L,M,N	Class U	ClassJ,K, L,M,N	Class U
6.35	±0.05	±0.08	±0.08	±0.13	0.250	±0.002	±0.003	±0.003	±0.005
9.525					0.375				
12.7	±0.08	±0.13	±0.13	±0.2	0.500	±0.003	±0.005	±0.005	±0.008
15.875	±0.1	±0.18	±0.15	±0.27	0.625	±0.004	±0.007	±0.006	±0.011
19.05					0.750				
25.4	±0.13	±0.25	±0.18	±0.38	1.000	±0.005	±0.010	±0.007	±0.015
31.75	±0.15	±0.25	±0.2	±0.38	1.250	±0.006	±0.010	±0.008	±0.015
32					1.260				

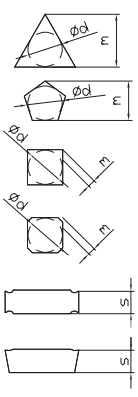
适用刀片形状：D Insert Shape：D					
内切圆直径 Inscribed Circle Size		内切圆的公差 Tolerance of I.C.Size		刀尖高的公差 Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.11	±0.004
9.525	0.375	±0.05	±0.002	±0.11	±0.004
12.7	0.500	±0.08	±0.003	±0.15	±0.006
15.875	0.625	±0.10	±0.004	±0.18	±0.007
19.05	0.750	±0.10	±0.004	±0.18	±0.007

适用刀片形状：V Insert Shape：V					
内切圆Ød Inscribed Circle Size		内切圆的公差 Tolerance of I.C.Size		刀尖高的公差 Tolerance of Corner Height	
mm	in	mm	in	mm	in
6.35	0.250	±0.05	±0.002	±0.15	±0.006
9.525	0.375	±0.05	±0.002	±0.15	±0.006
12.7	0.500	±0.08	±0.003	±0.20	±0.008
15.875	0.625	±0.10	±0.004	±0.27	±0.011
19.05	0.750	±0.10	±0.004	±0.27	±0.011

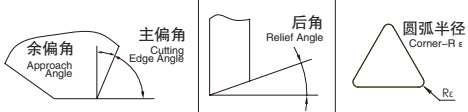
代号 Symbol	厚度 Thickness(mm)
01	1.59
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52
⑥厚度代号 Insert Thickness	

⑥	⑦	⑧	⑨	⑩
T3	AG	E	N	–PM
04	M0	T		–MM

d.内切圆直径 D.Theoretical diameter of inscribed circle
s.刀片厚度 s. insert thickness
M.见图例 m.see Fig.



⑦修光刃角度或形状刀尖号 Wiper Angle or Nose Radius

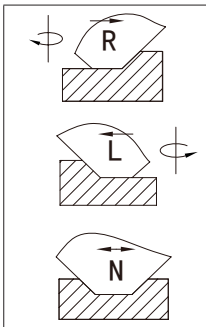


Ⅰ					Ⅱ	
代号 Symbol	余偏角 Approach Angle	主偏角 Cutting Edge Angle	代号 Symbol	修光刃后角 Relief Angle of Wiper	代号 Symbol	圆弧半径 Corner–R ε (mm)
A	45°	45°	D	15°	00	0.03
D	30°	60°	E	20°	02	0.2
E	15°	75°	F	25°	04	0.4
F	5°	85°	G	30°	08	0.8
P	0°	90°	P	11°	12	1.2
Z	其他角度 Others		Z	其他角度 Others	16	1.6
修光刃类型 Wiper					20	2.0
					24	2.4
WA	直线型 Linear			A	28	2.8
WB	大圆弧型 Largearc–shaped			B	32	3.2
WC	大圆弧型 Convexarc–shaped			C	圆刀片圆弧半径 Nose Radius for Insert	
WZ	其他修光刃型 Others				00 英制尺寸 Inch Size M0 公制尺寸 Metric Size	

⑧主切削刃代号 Major cutting edge		
代号 Symbol	切削刃形状 Description	形状 Shape
F	锋利刃 Sharp Edge	
E	圆弧刃 R–Honed	
T	负倒棱角 Chamfer	
S	复合钝化刃 Chamfer and R–Honed	

⑩断屑槽代号 Chipbreaker Symbol	
代号 Symbol	工况 Machining Condition
PL	钢材轻切削 Light Cutting for Steel
PM	钢材中切削 Medium Cutting for Steel
PR	钢材准重切削 Rough Cutting for Steel
KM	铸铁中切削 Medium Cutting for Cast Iron
KR	铸铁准重切削 Rough Cutting for Cast Iron
MM	不锈钢中切削 Medium Cutting for Stainless Steel
详细参见 Detailed Reference : 铣削断屑槽命名规则 Designation System for Milling Chipbreaker	

⑨切削方向代号 Direction	
代号 Symbol	方向 Hand
R	右 Right
L	左 Left
N	无 Neutral



铣削刀片加工工况汇总
Summary for the Working Conditions of Milling Inserts

工件材质 Workpiece	槽型 Geometry	加工工况 Working Condition		
		●	◔	✣
		稳定切削 Continuous	一般切削 Light Interrupted	不稳定切削 Interrupted
P	PL(SEET)*		GA4225/GA4230/GA0115/ GP0135/GP01TM	
	PL(SEET)		GA4225/GA4230/GA0115/ GP0135/GP01TM	
	PM(SEET)		GA4225/GA4230/GA0115/ GP0135/GP01TM	GA4225/GA4230
	PH(SEET)		GA4225/GA4230/GA0115/ GP0135	GA4225/GA4230
	KM(SEET)		GA4225/GA4230/GA0115/ GP0135	GA4225/GA4230
	KH(SEET)		GA4225/GA4230	GA4225/GA4230
	WB(SEET)	GA4225/GA4230	GA4225/GA4230	
	GL(SNEU)		GA4225/GA4230/GA0115/ GP0135/GPO1TM	
	GM(SNEU)		GA4225/GA4230/GA0115/ GP0135/GPO1TM	GA4225/GA4230
	GH(SNEU)		GA4225/GA4230/GA0115/ GP0135	GA4225/GA4230
	GW(SNEU)	GA4225/GA4230	GA4225/GA4230	
	DM(OFKT)		GA4225/GA4230	GA4225/GA4230
	BL(RDET)	GA4225/GA4230		
	GM(RDET)		GA4225/GA4230	GA4225/GA4230
	MM(RDET)		GA4225/GA4230	GA4225/GA4230
	BM(RDET)			GA4225/GA4230
	PM(RDET)			GA4225/GA4230
	GL(RPET)	GA4225/GA4230		
	GM(RPET)		GA4225/GA4230/GM2125	GA4225/GA4230/GM2125
	MM(UDET)		GA4225/GA4230	GA4225/GA4230
	PM(UPET)		GA4225/GA4230	GA4225/GA4230
	MH(UDMT)		GA4225/GA4230	GA4225/GA4230
	GM(SDMT)		GA4225/GA4230	GA4225/GA4230
	GH(SDMT)		GA4225/GA4230	GA4225/GA4230
	PL(APMT)	GA4225/GA4230	GA4225/GA4230	
	PM(APMT)		GA4225/GA4230/GP01TM	GA4225/GA4230
	PR(APMT)		GA4225/GA4230	GA4225/GA4230
	PM(CNEU)		GA4225/GA4230	GA4225/GA4230
	PK(CNEU)		GA4225/GA4230	GA4225/GA4230
M	PL(SEET) *		GA4225/GA4230/GM2125	
	PL(SEET)		GA4225/GA4230/GM2125	
	PM(SEET)		GA4225/GA4230/GM2125	
	WB(SEET)	GA4225/GA4230	GA4225/GA4230	
	GL(SNEU)		GA4225/GA4230/GM2125	
	GM(SNEU)		GA4225/GA4230/GM2125	

铣削刀片加工工况汇总
Summary for the Working Conditions of Milling Inserts

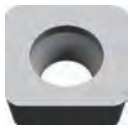
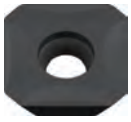
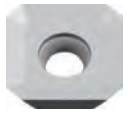
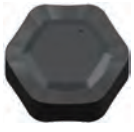
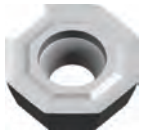
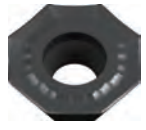
工件材质 Workpiece	槽型 Geometry	加工工况 Working Condition		
		●	◔	✣
		稳定切削 Continuous	一般切削 Light Interrupted	不稳定切削 Interrupted
M	GW(SNEU)	GA4225/GA4230	GA4225/GA4230	
	MR(TPER)		GM2125	
	EM(RCET)		GA4225/GA4230/GM2125/GP01TM	GA4225/GA4230/GM2125
	MM(RCET)		GA4225/GA4230/GM2125/GP01TM	GA4225/GA4230/GM2125
	KM(RCET)		GA4225/GA4230/GM2125	
	KH(RCET)		GA4225/GA4230/GM2125	
	GL(ODKT)	GA4225/GA4230	GA4225/GA4230	
	GM(ODKT)		GA4225/GA4230	GA4225/GA4230
	GH(ODKT)		GA4225/GA4230	GA4225/GA4230
	WB(ODKT)	GA4225/GA4230	GA4225/GA4230	
	DM(OFKT)		GA4225/GA4230	GA4225/GA4230
	BL(RDET)	GA4225/GA4230		
	GL(RPET)	GA4225/GA4230		
K	PL(SEET)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	
	PM(SEET)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	GK4125/GA4230
	PH(SEET)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	GK4125/GA4230
	KM(SEET)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	GK4125/GA4230
	KH(SEET)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	GK4125/GA4230
	WB(SEET)	GA4225/GA4230	GA4225/GA4230	
	GL(SNEU)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK0115	
	GM(SNEU)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK2115	GK4125/GA4230
	GH(SNEU)	GPO1TM/GK1105	GA4225/GA4230/GA0115/ GK4125/GK2115	GK4125/GA4230
	GW(SNEU)	GK2115/GA4230	GA4225/GA4230/GK4125/GK2115	
	KF(HNEX)	GK1105	GK4125	GK4125
	KM(HNEX)	GK1105	GK4125	GK4125
	KR(HNEX)	GK1105	GK4125	GK4125
	WC(HNEX)	GK1105	GK4125	GK4125
	GL(ODKT)	GA4225/GA4230	GA4225/GA4230	
	GM(ODKT)		GA4225/GA4230/GK4125	GA4225/GA4230/GK4125
	GH(ODKT)		GA4225/GA4230	GA4225/GA4230
	WB(ODKT)	GA4225/GA4230	GA4225/GA4230	
	DM(OFKT)		GA4225/GA4230	GA4225/GA4230
N	AL(SEET)	GA0115/GN9125		
	PL * (SEET)	GA0115/GN9125		
	NL(SNEU)	GN9125		
	AL(ODKT)	GN9125		
	PL(APMT)	GN9125		

铣削刀片加工工况汇总
Summary for the Working Conditions of Milling Inserts

工件材质 Workpiece	槽型 Geometry	加工工况 Working Condition		
		●	◔	✣
		稳定切削 Continuous	一般切削 Light Interrupted	不稳定切削 Interrupted
S	PL(SEET)		GA4230/GM2125	
	PM(SEET)		GA4230/GM2125	
	PH(SEET)		GA4230/GM2125	
	KM(SEET)		GA4230/GM2125	
	WB(SEET)	GA4225/GA4230	GA4225/GA4230	
	GL(SNEU)		GA4230/GM2125	
	GM(SNEU)		GA4230/GM2125	
	GH(SNEU)		GA4230/GM2125	
	GW(SNEU)	GA4225/GA4230	GA4225/GA4230	
	MR(TPER)		GM2125	
	EM(RCET)		GA4225/GA4230/GM2125/ GP01TM	GA4225/GA4230/GM2125
	MM(RCET)		GA4225/GA4230/GM2125/ GP01TM	GA4225/GA4230/GM2125
	KM(RCET)		GA4225/GA4230/GM2125	GA4225/GA4230/GM2125
	KH(RCET)		GA4225/GA4230/GM2125	GA4225/GA4230/GM2125
	(GL)ODKT	GA4230	GA4230	
	GM(RPET)		GA4225/GA4230/GM2125	GA4225/GA4230/GM2125
	SM(RPET)		GM2125	

铣削刀片一览表
Features of Milling Inserts

面铣刀片
Face Milling Inserts

						
SBEX	SEEN	SEEX				
Page216	Page216	Page217				
						
SPEN	SPEN–WC	SPKN SPMN	SPEN–W	SPER–MR	SPNR	SPCW
Page217	Page217	Page218	Page218	Page219	Page220	Page220
						
SEET–PL*	SEET–PL	SEET–PM	SEET–KM	SEET–PH	SEET–KH	SEET–AL
Page221	Page221	Page221	Page221	Page221	Page221	Page221
						
SNEU–GL	SNEU–GM	SNEU–GH	SNEU–NL	SNEU–GW		
Page223	Page223	Page223	Page223	Page223		
						
HNEX–KF	HNEX–KM	HNEX–KR	HNEX–WC			
Page224	Page224	Page224	Page224			
						
ODKT–GL	ODKT–GM	ODKT–GH	ODKT–AL	ODKT–NL	ODKW–WB	OFKT–DM
Page225	Page225	Page225	Page225	Page225	Page225	Page226

						
TPKN	TPER–MR	TPNR	TPKR			
Page226	Page227	Page227	Page228			

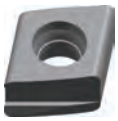
方肩铣刀片
Shouldering Inserts

						
APMT–PL	APMT–PM	APMT–PR	APGT–AL	XPHT		
Page229	Page229	Page229	Page229	Page230		

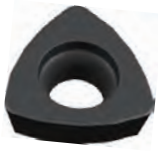
仿形铣刀片
Profiling Milling Inserts

						
RCET–EM	RCET–EM	RCET–MM	RCET–KH			
Page231	Page231	Page231	Page231			
						
RDET–BL	RDET–GM RDMT–GM	RDET–MM	RDEW–BM RDMW–BM	RDEW	RDEW RDMW	
Page232	Page232	Page232	Page233	Page233	Page233	
						
RPET–GL	RPET–GM RPMT–GM	RPMT–GM*	RPET–GM	RPET–SM	RPET–GH	RPEW RPMW
Page234	Page234	Page234	Page234	Page234	Page234	Page235

三面刃槽铣刀片
Side and Face Milling Inserts

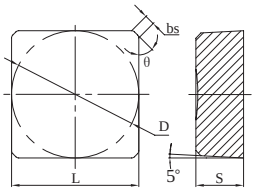
						
CNEU–PM	CNEU–KM					
Page236	Page236					

快进给铣刀片
High Feed Milling Inserts

						
UDET–MM	UPET–PM	UDMT–MH	UDMW			
Page237	Page237	Page237	Page237			
						
SDMT–GM	SDMT–GH					
Page238	Page238					

面铣削刀片
Face Milling Inserts

SBEX

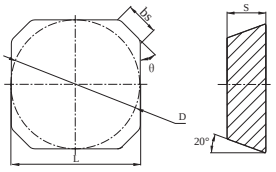


订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SBEX1204ZZFN	12.7	12.7	4.76	45°	0.8					○	○				



●标准库存 Stock ○需预定 Available upon Order

SEEN



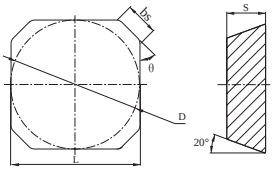
订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SEEN1203AFTN	12.7	12.7	3.18	45°	2.3	○	○						○		○
SEEN1204AFTN	12.7	12.7	4.76	45°	2.4	○	○				○				○
SEEN1504AFTN	15.875	15.875	4.76	45°	2.4	○	○				○				○



●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

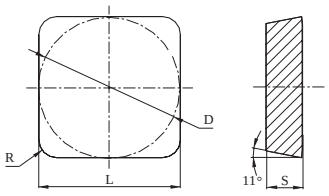
SEEX



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SEEX1203AFTN	12.7	12.7	3.18	45°	3		○			○					

●标准库存 Stock ○需预定 Available upon Order

SPEN

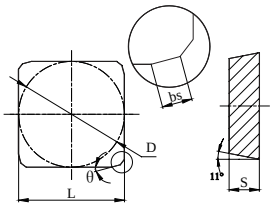


订货号 Ordering Code		尺寸 Dimensions(mm)				涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SPEN150420T	15.875	15.875	4.76	2.0						○				
	SPEN150430T	15.875	15.875	4.76	3.0						○				
	SPEN190424T	19.05	19.05	4.76	2.4						○				
	SPEN250730T	25.4	25.4	7.94	3.0						○	○			
	SPEN190424–WC	19.05	19.05	4.76	2.4						○				

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

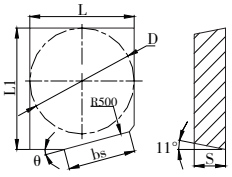
SPKN



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SPKN1203EDL	12.7	12.7	3.18	15°	1.4						○	○	○		
	SPKN1203EDTL	12.7	12.7	3.18	15°	1.4						○	○	○		
	SPKN1203EDR	12.7	12.7	3.18	15°	1.4						○	○	○		○
	SPKN1203EDTR	12.7	12.7	3.18	15°	1.4						○	○	○		
	SPKN1504EDL	15.875	15.875	4.76	15°	1.4						○	○	●		
	SPKN1504EDTL	15.875	15.875	4.76	15°	1.4						○	○	○		
	SPKN1504EDR	15.875	15.875	4.76	15°	1.4						●	○	●		○
	SPKN1504EDTR	15.875	15.875	4.76	15°	1.4						○	○	●		○
	SPKN1905EDL	19.05	19.05	5.56	15°	2.7						○	○	○		
	SPKN1905EDTL	19.05	19.05	5.56	15°	2.7						○	○	○		
	SPKN1905EDR	19.05	19.05	5.56	15°	2.7						○	○	○		
	SPKN1905EDTR	19.05	19.05	5.56	15°	2.7						○	○	○		

●标准库存 Stock ○需预定 Available upon Order

SPEN–W

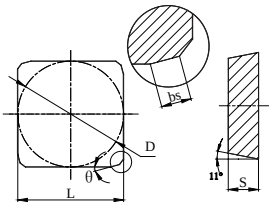


订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	L1	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SPEN1504EDR–W	15.875	18.2	15.875	4.76	15°	10.2								○		
	SPEN1504EDL–W	15.875	18.2	15.875	4.76	15°	10.2								○		

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

SPMN

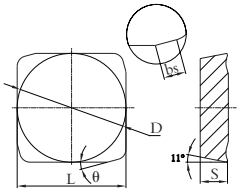


订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SPMN1504EDR	15.875	15.875	4.76	15°	1.4								○		
SPMN1504EDL	15.875	15.875	4.76	15°	1.4								○		



●标准库存 Stock ○需预定 Available upon Order

SPER



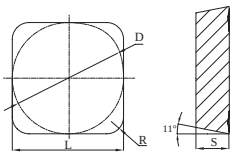
订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SPER1203EDTR-MR	12.7	12.7	3.18	15°	1.3		○	○							
SPER1203EDTL-MR	12.7	12.7	3.18	15°	1.3			○							



●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

SPNR

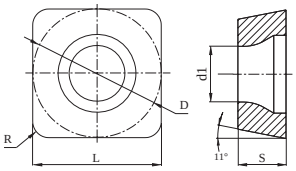


订货号 Ordering Code	尺寸 Dimensions(mm)				涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SPNR150424T	15.875	15.875	4.76	2.4			○							

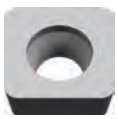


●标准库存 Stock ○需预定 Available upon Order

SPCW



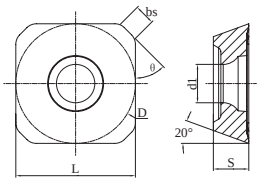
订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
SPCW120412	12.7	12.7	4.76	5.5	1.2						○				○
SPCW120416	12.7	12.7	4.76	5.5	1.6						○				○
SPCW150516	15.875	15.875	5.56	5.5	1.6						○				



●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

SEET

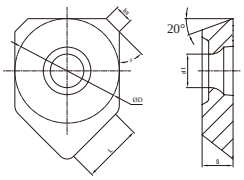


订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SEET1204AFEN-PL*	12.7	12.7	4.76	5.5	45°	2.5	●	○							○	○
	SEET13T3AGEN-PL	13.4	13.4	3.97	4.4	45°	1.7	●	●								
	SEET13T3AGEN-PM	13.4	13.4	3.97	4.4	45°	1.2	●	●								○
	SEET13T3AGSN-KM	13.4	13.4	3.97	4.4	45°	1.3	○	●			●					
	SEET13T3AGSN-PH	13.4	13.4	3.97	4.4	45°	1.3	○	●								
	SEET13T3AGSN-KH	13.4	13.4	3.97	4.4	45°	1.3	●	○			●					
	SEET13T3AGFN-AL	13.4	13.4	3.97	4.4	45°	2.2						○				

●标准库存 Stock ○需预定 Available upon Order
★非标规格Tailormade

面铣削刀片
Face Milling Inserts

SEET-WB

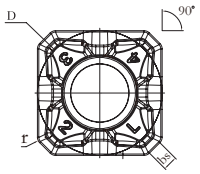


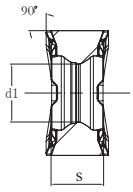
订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	SEET13T3AGEN-WB	7.69	13.4	4.76	3.97	45°	2.37	○	●								

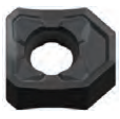
●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

SNEU



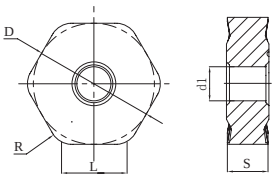


订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	bs	d1	r	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
NEW	SNEU1206ANEN-GL	12.7	6.35	2.2	6.0	0.8	●	●	○	●	●					
																
NEW	SNEU1206ANEN-GM	12.7	6.35	2.2	6.0	0.8	●	●	○	●	●					
																
NEW	SNEU1206ANSN-GH	12.7	6.35	2.2	6.0	0.8	●	●		●	●					
																
NEW	SNEU1206ANFN-NL	12.7	6.35	2.2	6.0	0.8									●	
																
NEW	SNEU1206ANEN-GW	12.7	6.35	5.6	6.0	0.8	●	●		●	●					
																

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

HNEX

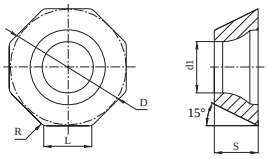


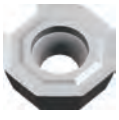
订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	HNEX090520–KF	9.5	16.2	5.56	–	2.0				○	●					
	HNEX090510–KF	9.5	16.2	5.56	–	1.0				○	●					
	HNEX090520–KM	9.5	16.2	5.56	–	2.0				○	●					
	HNEX090516–KR	9.5	16.2	5.56	–	1.6				○	●					
	HNEX090530–KR	9.5	16.2	5.56	–	3.0				○	●					
	HNEX090502–WC	9.5	15.875	5.56	–	0.2				○	●					

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

ODKT

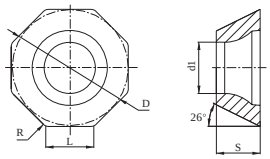


订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	ODKT060508–GL	6.5	15.875	5.56	5.56	0.8	○	●								
	ODKT060508–GM	6.5	15.875	5.56	5.56	0.8	○	●			●					
	ODKT060508–GH	6.5	15.875	5.56	5.56	0.8	○	●								
	ODKT060508–AL	6.5	15.875	5.56	5.56	0.8									●	
	ODKT060508–NL	6.5	15.875	5.56	5.56	0.8								○		
	ODKW060508–WB	6.5	15.875	5.56	5.56	0.8	○	●								

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

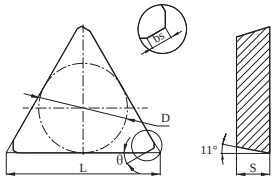
OFKT



订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	OFKT05T3AFTN-DM	5.2	12.7	3.97	4.4	0.5	○	○								

●标准库存 Stock ○需预定 Available upon Order

TPKN

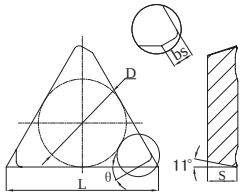


订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	TPKN1603PDL	16.5	9.525	3.18	30°	1.3						○	○	○		
	TPKN1603PDTL	16.5	9.525	3.18	30°	1.3						○	○	○		
	TPKN1603PDR	16.5	9.525	3.18	30°	1.3						○	○	○		
	TPKN1603PDTR	16.5	9.525	3.18	30°	1.3						○	○	○		
	TPKN2204PDL	22	12.7	4.76	30°	1.4						○	○	○		
	TPKN2204PDTL	22	12.7	4.76	30°	1.4						○	○	○		
	TPKN2204PDR	22	12.7	4.76	30°	1.4						○	○	○		
	TPKN2204PDTR	22	12.7	4.76	30°	1.4						○	○	○		

●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

TPER

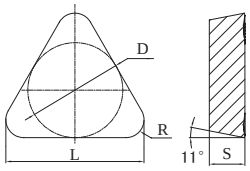


订货号 Ordering Code	尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
TPER1603PDTR-MR	16.5	9.525	3.18	30°	1.3		○	○							
TPER1603PDTL-MR	16.5	9.525	3.18	30°	1.3			○							



●标准库存 Stock ○需预定 Available upon Order

TPNR



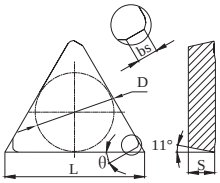
订货号 Ordering Code	尺寸 Dimensions(mm)				涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
	L	D	S	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
TPNR220424T	18.5	12.7	4.76	2.4			○							



●标准库存 Stock ○需预定 Available upon Order

面铣削刀片
Face Milling Inserts

TPKR

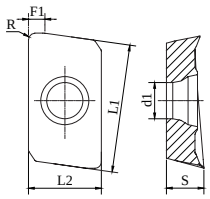


订货号 Ordering Code		尺寸 Dimensions(mm)					涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L	D	S	θ	bs	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	TPKR1603PPTR	16.4	9.48	3.18	30°	1.2	○									

●标准库存 Stock ○需预定 Available upon Order

方肩铣削刀片
Shoulder Milling Inserts

APMT/APGT

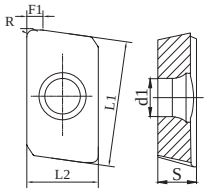


	订货号 Ordering Code	尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L1	L2	S	F1	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	APMT1135PDER-PL	10.83	6.16	3.5	1.92	2.8	0.8	●	●								
	APMT1604PDER-PL	16.26	9.26	4.76	2	4.6	0.8	●	●								
	APMT1135PDER-PM	10.83	6.16	3.5	1.92	2.8	0.8	●	●			●					○
	APMT1604PDER-PM	16.26	9.26	4.76	2	4.6	0.8	●	●			●					○
	APMT1135PDER-PR	10.84	6.15	3.5	1.87	2.8	0.8	●	●			○					○
	APMT1604PDER-PR	16.26	9.24	4.76	2.2	4.4	0.8	●	●			○					○
	APGT1135PDFR-AL	10.83	6.16	3.5	1.92	2.8	0.8									●	
	APGT1604PDFR-AL	16.26	9.24	4.76	2.2	4.4	0.8									●	

●标准库存 Stock ○需预定 Available upon Order

方肩铣削刀片
Shoulder Milling Inserts

XPHT

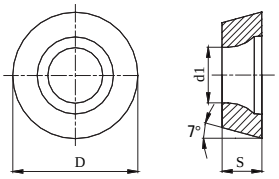


订货号 Ordering Code		尺寸 Dimensions(mm)						涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		L1	L2	S	F1	d1	R	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	XPHT160408T	15.6	9.525	4.76	2	4.65	0.8					○					
	XPHT160412T	15.6	9.525	4.76	2	4.65	1.2					○					

●标准库存 Stock ○需预定 Available upon Order

仿形铣削刀片
Profiling Milling Inserts

RCET

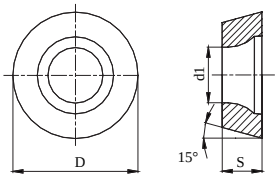


订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RCET10T3M0-EM	10	3.97	4.4	●	●	○							○
	RCET1204M0-EM	12	4.76	4	○	●	○							○
	RCET1204M0-MM	12	4.76	4	●	○	○							○
	RCET1606M0T-KH	16	6.35	5.5	○	○								

●标准库存 Stock ○需预定 Available upon Order

仿形铣削刀片
Profiling Milling Inserts

RDET/RDMT

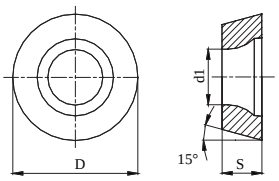


订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RDET0803M0-BL	8	3.18	2.94	○	○								
	RDET10T3M0-BL	10	3.97	4.4	○	●								
	RDET1204M0-BL	12	4.76	4.4	○	●								
	RDET1604M0-BL	16	4.76	5.5	○	●								
	RDET0802M0-GM*	8	2.38	2.94	●									
	RDET0803M0-GM	8	3.18	2.94	○	○								
	RDET10T3M0-GM	10	3.97	4.4	●	●								○
	RDET1204M0-GM	12	4.76	4.4	●	●								
	RDET1604M0-GM	16	4.76	5.5	○	●								
	RDET1204M0T-MM	12	4.76	4.4	●									
	RDMT10T3M0-GM	10	3.97	4.4	●	●								
	RDMT1204M0-GM	12	4.76	4.4	●	●								

●标准库存 Stock ○需预定 Available upon Order
★非标规格Tailormade

仿形铣削刀片
Profiling Milling Inserts

RDEW/RDMW

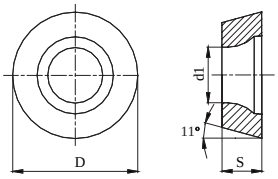


订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RDEW0501M0	5	1.51	2.2	●	○								○
	RDEW0702M0	7	2.38	2.8	●	○								○
	RDEW1003M0*	10	3.18	4.4	○									○
	RDEW0702M0T	7	2.38	2.8	○	○								
	RDEW0803M0T	8	3.18	2.94	●	○								
	RDEW10T3M0T	10	3.97	4.4	●	●								
	RDEW1204M0T	12	4.76	4.4	●	●								
	RDEW1604M0T	16	4.76	5	●	●								
	RDEW12T3M0T-BM*	12	3.97	4.4	○	○								
	RDEW1204M0T-BM	12	4.76	4.4	○	●								○
	RDMW1204M0T-BM	12	4.76	4.4	●	●								
	RDMW1605M0T-BM*	16	5.56	5.5	●	●								
	RDMW10T3M0T	10	3.97	4.4	●	●								
	RDMW1604M0T	16	4.76	5.5	○	●								

●标准库存 Stock ○需预定 Available upon Order
★非标规格Tailormade

仿形铣削刀片
Profiling Milling Inserts

RPET/RPMT

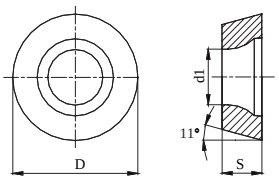


订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RPET1003M0-GL	10	3.18	4.4	○	●								
	RPET1204M0-GL	12	4.76	4.4	○	●								
	RPET08T2M0-GM	8	2.78	2.94	○	○	○							
	RPET1003M0T-GM	10	3.18	4.4	○	●								
	RPET1204M0-GM	12	4.76	4.4	●	●	○							
	RPET1204M0T-GM	12	4.76	4.4	○	●	○							
	RPET1606M0T-GM	16	6.35	5.5	○	●								
	RPET1606M0-SM	16	6.35	5.5			○							
	RPET1606M0T-GH	16	6.35	5.5	○	●	○							
	RPMT10T3M0-GM*	10	3.97	4.4	○	○								
	RPMT1003M0T-GM	10	3.18	4.4	●	●								
	RPMT1204M0-GM	12	4.76	4.4	●	●								

●标准库存 Stock ○需预定 Available upon Order
★非标规格Tailormade

仿形铣削刀片
Profiling Milling Inserts

RPEW/RPMW

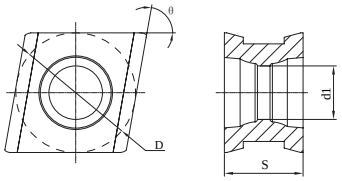


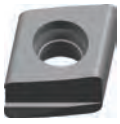
订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	RPEW08T2M0	8	2.78	2.94	○	○								
	RPEW1003M0	10	3.18	4.4	○	●								
	RPEW10T3M0*	10	3.97	4.4	○									○
	RPEW1003M0T	10	3.18	4.4	●	●								
	RPEW1204M0T	12	4.76	4.4	●	●								
	RPMW1003M0T	10	3.18	4.4	●	●								
	RPMW1204M0T	12	4.76	4.4	●	●								

●标准库存 Stock ○需预定 Available upon Order
★非标规格Tailormade

三面刃铣削刀片
Side and Face Milling Inserts

CNEU

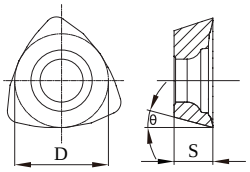


订货号 Ordering Code		尺寸 Dimensions(mm)				涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	θ	S	d1	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	CNEU070508–PM	7.6	80°	5	3.4	○	●			○					
	CNEU070508–KM	7.6	80°	5	3.4	○	●			●					

●标准库存 Stock ○需预定 Available upon Order

快进给铣削刀片
High Feed Milling Inserts

UD/UP

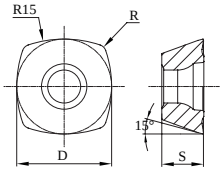


订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated				金属陶瓷 Cermet
		D	S	θ	GA4225	GA4230	GM2125	GK2115	GK4125	GA0115	GP0135	GK0115	GN9125	GP01TM
	UDET080308–MM	6.8	3.18	15°	●	●								
	UDET12T312–MM	9.6	3.97	15°	●	●								
	UPET170520–PM*	13	5.56	11°	●	●								
	UDMT080308T–MH	6.8	3.18	15°	●	●								
	UDMT12T312T–MH	9.6	3.97	15°	●	●								
	UDMW12T312T	9.6	3.97	15°	●	●								

●标准库存 Stock ○需预定 Available upon Order
★无修光刃 No Wiper

快进给铣削刀片
High Feed Milling Inserts

SDMT



订货号 Ordering Code		尺寸 Dimensions(mm)			涂层硬质合金 Coated					硬质合金 Uncoated			金属陶瓷 Cermet
		D	S	R	GA4225	GA4230	GM2125	GK2115	GK4125	GP0135	GK0115	GN9125	GP01TM
	SDMT120512–GM	12.7	5.56	1.2	●	●		○	○				
	SDMT150512–GM	15.875	5.56	1.2	●	●							
	SDMT120512–GH	12.7	5.56	1.2	●	●							
	SDMT150512–GH	15.875	5.56	1.2	●	●							

●标准库存 Stock ○需预定 Available upon Order

面铣
Face Milling

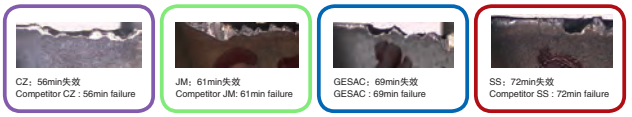
SEET刀片+MFA145刀体
SEET Inserts +MFA145 Cutter

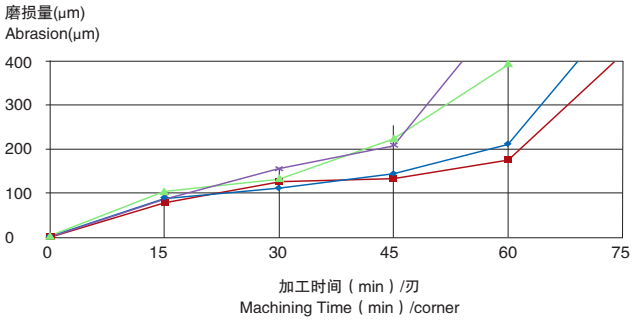
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	P20（HB320）
加工方式 Processing Way	平面铣削、干切 Face milling、dry cutting
切削参数 Cutting Parameters	Vc=220 m/min, fz=0.2 mm/t, ap =3.0mm，ae=40mm
使用刀片和刀体 Inserts and Cutter	SEET13T3AGSN–PM/GA4230 MFA145–050R04A22–SE13





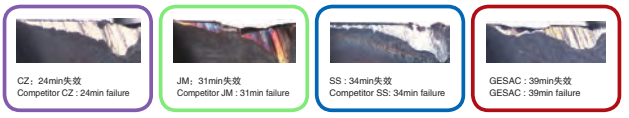


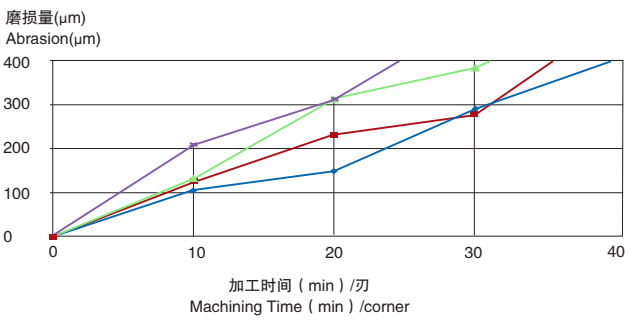


Case 2

工件材质 Workpiece Material	304（HB200）
加工方式 Processing Way	平面铣削、干切 Face milling、dry cutting
切削参数 Cutting Parameters	Vc=180m/min, fz=0.2mm/t, ap =3.0mm,ae=40mm
使用刀片和刀体 Inserts and Cutter	SEET13T3AGSN–PM/GA4230 MFA145–050R04A22–SE13









面铣
Face Milling

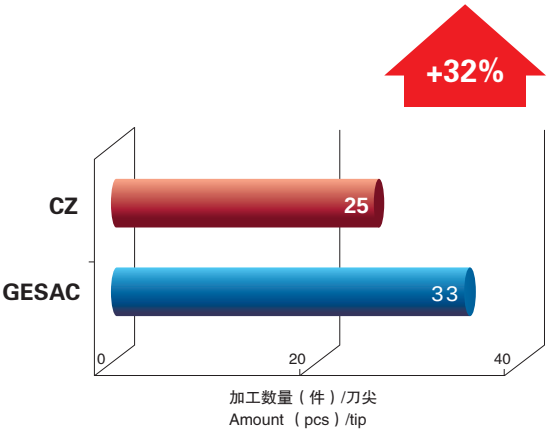
SNEU刀片+MFB145/245刀体
SNEU Inserts +MFB145/245 Cutter

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	HT300（HB230）
加工方式 Processing Way	平面铣削、干切 Face milling、dry cutting
切削参数 Cutting Parameters	Vc=200 m/min, fz=0.15 mm/t ap =3.5mm，ae=50mm
使用刀片和刀体 Inserts and Cutter	SNEU1206ANEN–GM–GK2115 MFB145–080R07A27–SN12

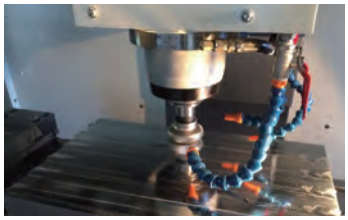


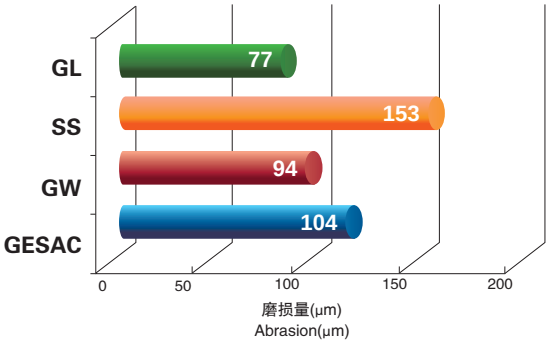


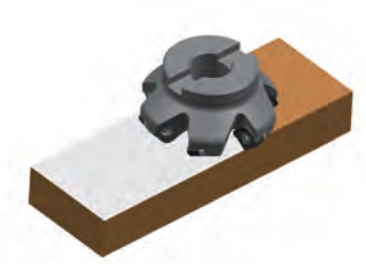


Case 2

工件材质 Workpiece Material	45#（HRC22）
加工方式 Processing Way	平面铣削、干切 Face milling、dry cutting
切削参数 Cutting Parameters	Vc=250 m/min, fz=0.2 mm/t, ap =2mm，ae=25mm
使用刀片和刀体 Inserts and Cutter	SNEU1206ANEN–GM–GA4230 MFB145–063R06A22–SN12
说明 Remark	刀片目标寿命为35分钟 The tool life target is 35 minutes.







面铣
Face Milling

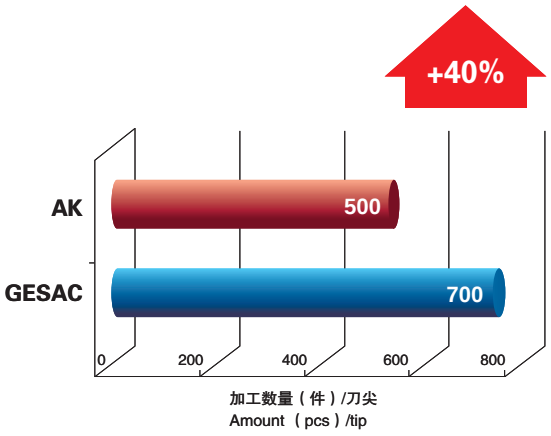
HNEX 刀片+MFB160 刀体
HNEX Inserts +MFB160 Cutter

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	HT250（HB180–230）
加工方式 Processing Way	平面铣削、半精加工、湿切 Face milling、medium–finishing、wet cutting
切削参数 Cutting Parameters	Vc=180 m/min, fz=0.4 mm/t, ap =0.35mm
使用刀片和刀体 Inserts and Cutter	HNEX090516–KR–GK4125 HNEX090502–WC–GK4125



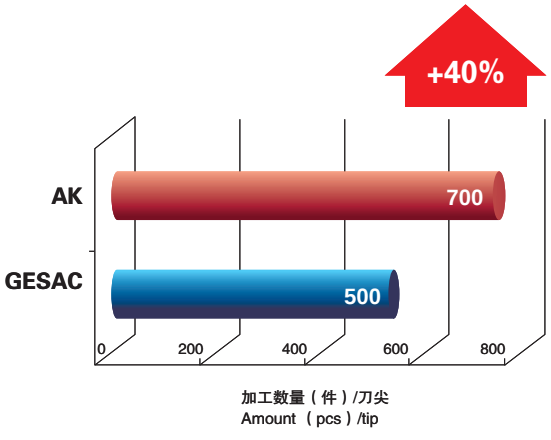




Case 2

工件材质 Workpiece Material	HT250（HB180–230）
加工方式 Processing Way	平面铣削、精加工、湿切 Face milling、finishing、wet cutting
切削参数 Cutting Parameters	Vc=160m/min, fz=0.32mm/t, ap =0.32mm
使用刀片和刀体 Inserts and Cutter	HNEX090520–KF–GK4125 HNEX090502–WC–GK4125







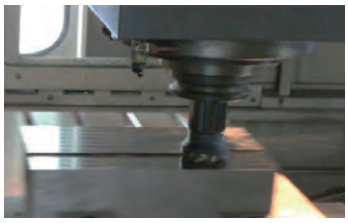
面铣
Face Milling

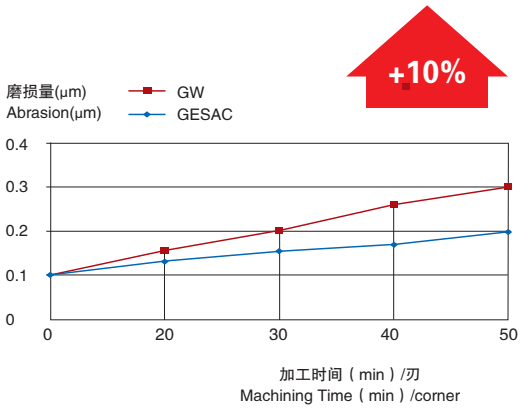
ODKT刀片+MFA143刀体
ODKT Inserts+MFA143 Cutter

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	HT250（HB210）
加工方式 Processing Way	面铣、干切 Face milling、dry cutting
切削参数 Cutting Parameters	Vc=180m/min, fz=0.2 mm/t, ap =1mm
使用刀片和刀体 Inserts and Cutter	ODKT060508–GM–GK4125 MFA143–063R05A27–OD06



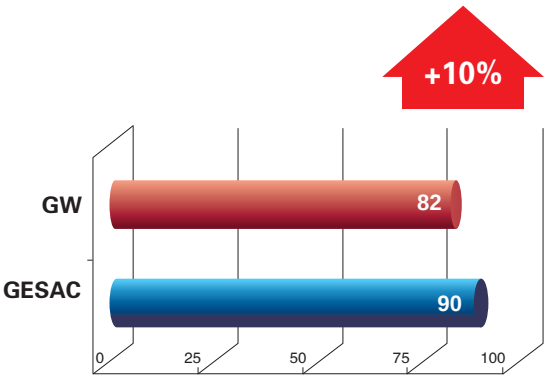




Case 2

工件材质 Workpiece Material	HT250（HB210）
加工方式 Processing Way	平面铣削、精加工、湿切 Face milling、Finishing wet cutting
切削参数 Cutting Parameters	Vc=130m/min, fz=0.2mm/t, ap =0.3mm
使用刀片和刀体 Inserts and Cutter	ODKT060508–NL–GK0115 MFA143–063R05A27–OD06
说明 Remark	刀片使用寿命均为6h Tool life are both 6 h.







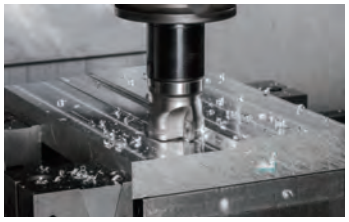
方肩铣
Shoulder Milling

APMT刀片+MEA190刀体
APMT Inserts and MEA190 Cutter

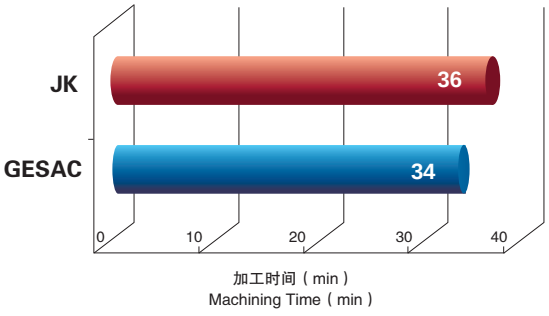
加工案例
Case Studies

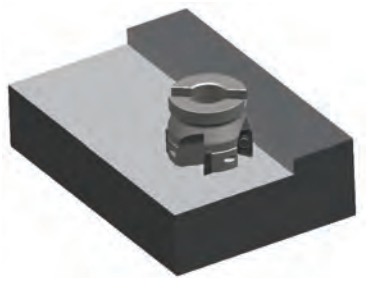
Case 1

工件材质 Workpiece Material	不锈钢（HB150） Stainless steel (HB150)
加工方式 Processing Way	面铣、半精加工、干切 Face milling，semi–finish milling，dry cutting
切削参数 Cutting Parameters	Vc=150m/min, fz=0.15mm/t, ap =1mm
使用刀片和刀体 Inserts and Cutter	APMT1604PDER–PL GA4225 MEA190–050R04A22–AP16



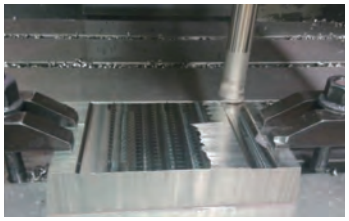
寿命相当
Equal life

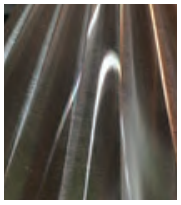




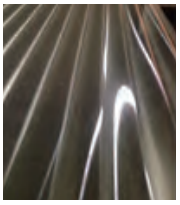
Case 2

工件材质 Workpiece Material	铝合金（HB130） Aluminum Alloy
加工方式 Processing Way	面铣、半精加工、空冷 Face milling、Semi–finish、dry cutting
切削参数 Cutting Parameters	Vc=300m/min, fz=0.15mm/t, ap =1.5mm ap=0.32mm
使用刀片和刀体 Inserts and Cutter	APGT1135PDFR–AL GN9125 MEA190–025R03P25–AP11





JM Ra=0.41–0.46



GESAC Ra=0.34–0.39

表面质量提升
Surface better



仿形铣
Profiling Milling

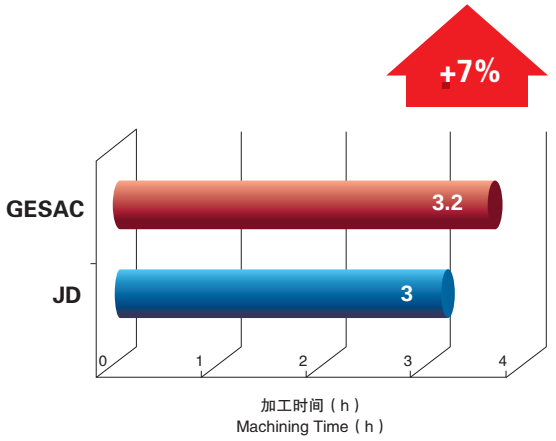
RD刀片+MPA100刀体
RD Inserts and MPA100 Cutter

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	718（HRC30）
加工方式 Processing Way	仿形铣、粗加工、干切 Profile milling、 Roughing、dry cutting
切削参数 Cutting Parameters	Vc=158m/min, fz=1.1mm/t, ap =0.7mm
使用刀片和刀体 Inserts and Cutter	RDEW1204M0T–BM GA4230 MPA100–063R05A22–RD12

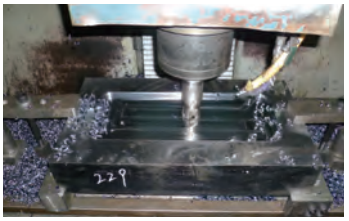


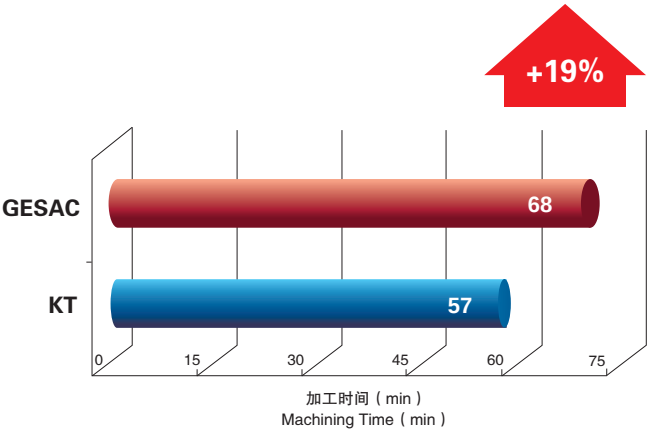


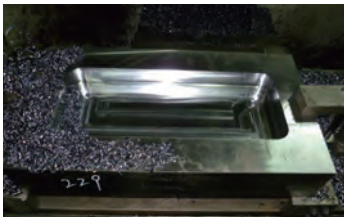


Case 2

工件材质 Workpiece Material	50#（30HRC）
加工方式 Processing Way	仿形铣、粗加工、干切 Profile milling、 Roughing、dry cutting
切削参数 Cutting Parameters	Vc=259m/min, fz=0.2mm/t, ap =1.5mm
使用刀片和刀体 Inserts and Cutter	RDEW1204M0T–BM GA4225 MPA100–050R04A22–RD12







仿形铣
Profiling Milling

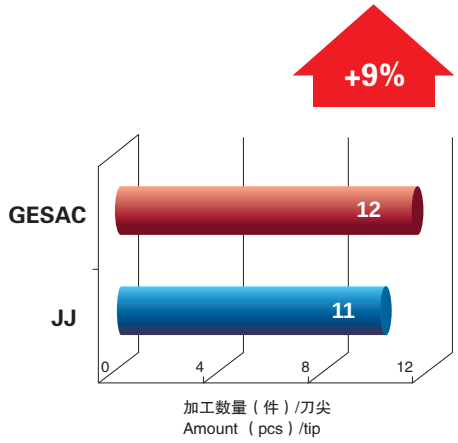
RP刀片+MPB100刀体
RP Inserts and MPB100 Cutter

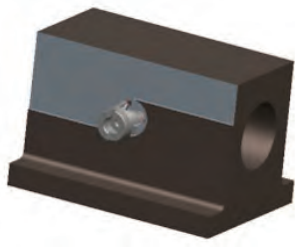
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	QT40–10（HB150–200）
加工方式 Processing Way	面铣、粗加工、干切 Face milling、 Roughing、dry cutting
切削参数 Cutting Parameters	Vc=178m/min, fz=0.67mm/t, ap =0.5mm
使用刀片和刀体 Inserts and Cutter	RPEW1204M0T GA4230 MPB100–063R04A22–RP12



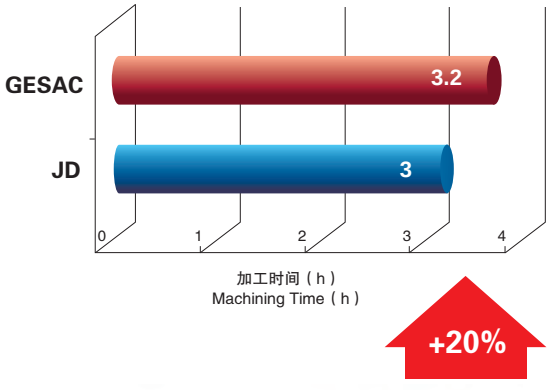


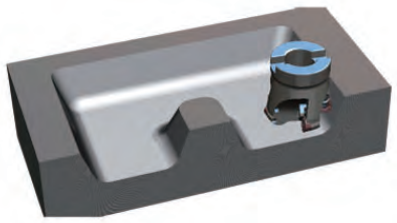


Case 2

工件材质 Workpiece Material	P20（HRC32–34）
加工方式 Processing Way	仿形铣、粗加工、干切 Profile milling、 Roughing、dry cutting
切削参数 Cutting Parameters	Vc=148m/min, fz=1.17mm/t, ap =0.7mm
使用刀片和刀体 Inserts and Cutter	RPEW1204M0T GA4230 MPB100–063R04A22–RP12







三面刃槽铣
Side and Face Milling

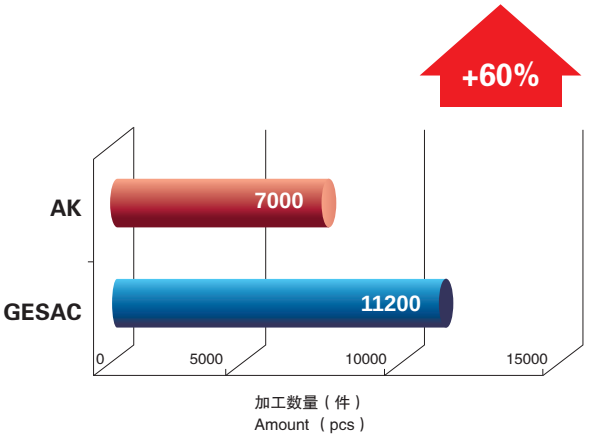
CNEU刀片+MSA110–113刀体
CNEU Inserts and MSA110–113 Cutter

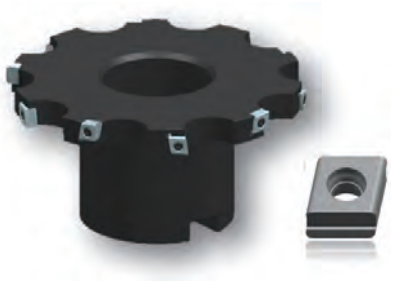
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	HT250（HB180–230）
加工方式 Processing Way	切断加工、干切 Parting、dry cutting
切削参数 Cutting Parameters	Vc=220m/min, fz=0.15mm/t, ap =15mm
使用刀片和刀体 Inserts and Cutter	CNEU070508–KM GK4125 MSA110–125R10B32–CN07







快进给铣削
High Feed Milling

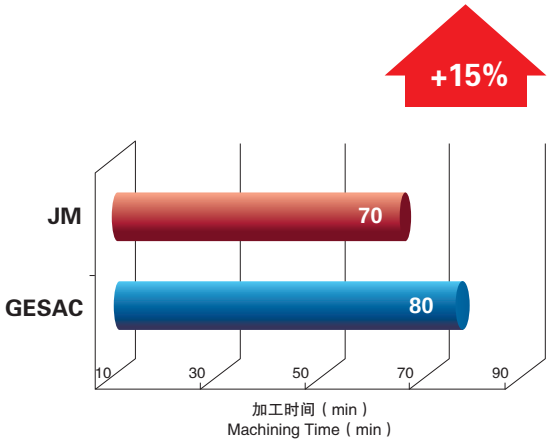
UD/UP刀片+MKA110刀体
UD/UP Inserts and MKA110 Cutter

加工案例
Case Studies

Case 1

工件材质 Workpiece Material	P20（HRC35）
加工方式 Processing Way	型腔铣、粗加工、干切 Pocket milling、Roughing、dry cutting
切削参数 Cutting Parameters	Vc140m/min, fz=1.6mm/t, ap =0.8mm
使用刀片和刀体 Inserts and Cutter	UPET170520–PM– GA4225 MKA110–063R04A22–UP17
说明 Remark	磨损值达到0.3mm Abrasion value reaches to 0.3mm

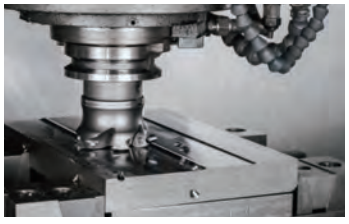


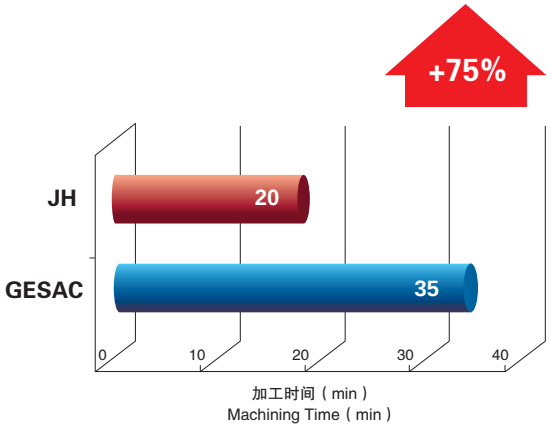


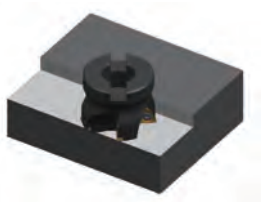


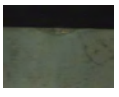
Case 2

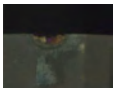
工件材质 Workpiece Material	SKD61（HRC45）
加工方式 Processing Way	面铣、粗加工、干切 Face milling、Roughing、dry cutting
切削参数 Cutting Parameters	Vc=160m/min, fz=1mm/t, ap =0.8mm
使用刀片和刀体 Inserts and Cutter	UDMT12T312T– MH–GA4230 MKA110–050R04A22–UD12
说明 Remark	磨损值达到0.3mm Abrasion value reaches to 0.3mm








GESAC


JH

快进给铣削
High Feed Milling

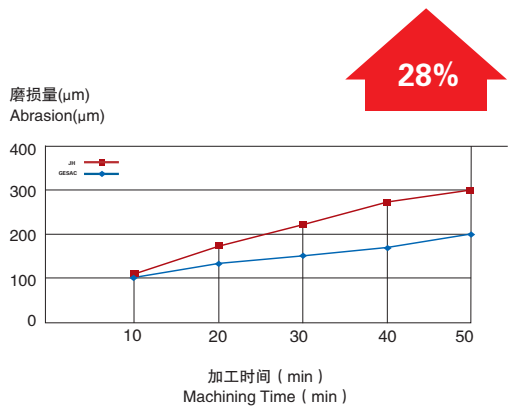
SDMT刀片+MKB113刀体
SDMT Inserts and MKB113 Cutter

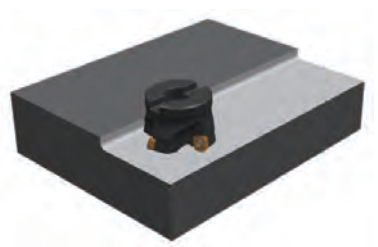
加工案例
Case Studies

Case 1

工件材质 Workpiece Material	P20（HRC37）
加工方式 Processing Way	面铣、粗加工、干切 Face milling、Roughing、dry cutting
切削参数 Cutting Parameters	Vc=160m/min, fz=1.5mm/t, ap =1mm
使用刀片和刀体 Inserts and Cutter	SDMT120512-GM GA4225 MKB113-063R04A22-SD12



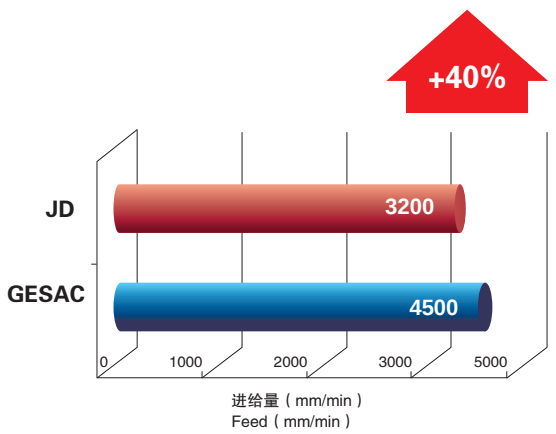




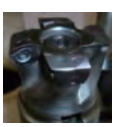
Case 2

工件材质 Workpiece Material	P20（HRC35）
加工方式 Processing way	型腔铣+仿形铣粗加工、干切 Pocket milling and Profile milling Roughing、dry cutting
切削参数 Cutting Parameters	Vc=138.5m/min, fz=1.6mm/t, ap =0.8mm
使用刀片和刀体 Inserts and cutter	SDMT120512-GM GA4230 MKB113-050R04A22-SD12
说明 Remark	刀片使用寿命均为3.5h Tool life are both 3.5 h.













SOLID CARBIDE ENDMILLS

整体立铣刀

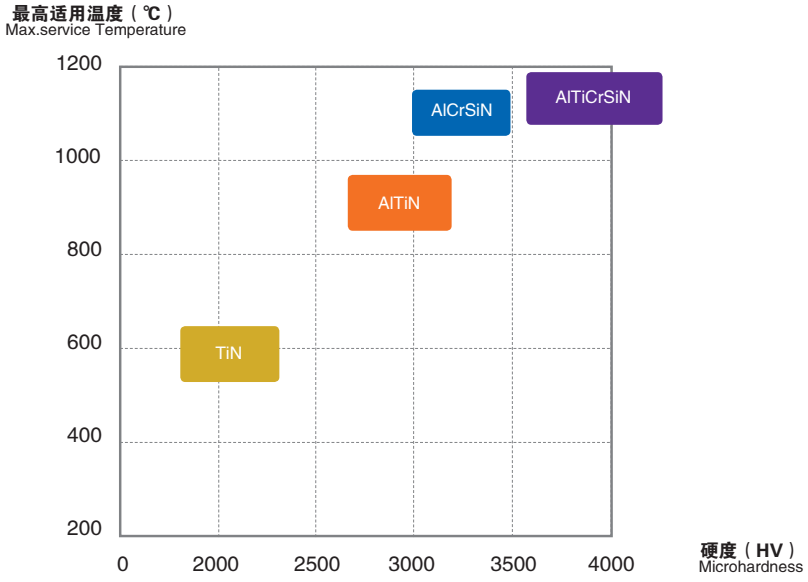
金鹭的涂层
GESAC Coating

涂层特性
Coating Characteristic

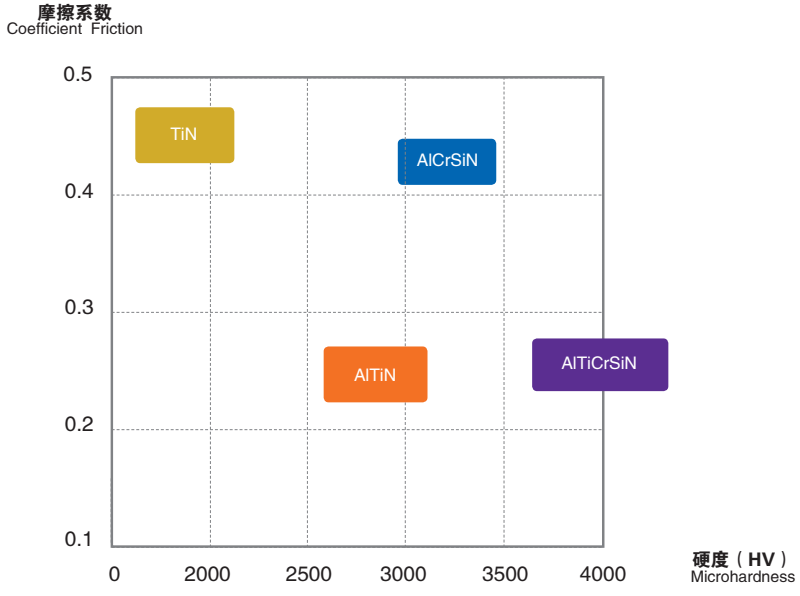
涂层名称 Coatings	维氏硬度 Microhardness (HV0.05)	摩擦系数 Coefficient Friction	最高适用温度 Max.service Temperature（℃）	特点与应用 Characteristic and Application
AlCrN	3200	0.45	1100	◇高抗氧化性和高温耐磨性能极其优异； ◇适用于中低硬度普通钢，模具钢，或钛合金的干式切削。 High oxidation resistance, extremely good of high temperature abrasion resistance, suitable for ordinary steel, low hardness of die steel or titanium alloy dry milling.
AlCrSiN	3300	0.4	1100	◇专为铣削加工开发,高抗氧化性，实现耐磨性与韧性完美平衡； ◇通用性极高，适用于HRC55以下的普通钢，模具钢，钛合金的各种铣削加工。 Specially designed for milling, high oxidation resistance,good balance of abrasionresistance and toughness, versatility is extremely high, suitable for ordinary steel under HRC55, die steel and titanium alloy milling .
TiAlN	2900	0.35	900	◇良好的红硬性与晶粒细化控制； ◇主要适用于不锈钢铣削加工，和一部分高硬度钢的干式加工,钛合金钻削加工。 Super–high micro hardness andfine–grain, suitable for stainless steel, some high hard steel drying cutting and titanium alloymilling.
AlTiN纳米	3000	0.45	900	◇结晶方位精密控制，硬度与韧性的完美平衡； ◇钻削与铣削通用涂层，适用于不锈钢，高硬钢的高速，高进给切削。 Extremely crystal texture controlled, good balance of micro hardness and toughness,universal milling and drilling coatings, suitable for stainless steel, high hard steel moderately high speed and high feed cutting.
AlCrN/TiSiN多层	3100	0.35	1100	◇高抗氧化性，高红硬性，良好的韧性，超光滑表面； ◇适用于不锈钢、铸铁钻削加工。 High oxidation resistance,good hot hardness, good toughness,and super–smooth surface, suitable for stainless steel and cast iron drilling.
AlTiN/TiSiN纳米多层	3300	0.35	1100	◇超高稳定性，超高韧性； ◇钻头通用涂层，适用于普通钢钻削。 Superhigh thermal–stability,super toughness, bit generalcoating, especially suitable for ordinary steel drilling.
AlTiCrSiN	4000	0.35	1100	◇高硬度，高抗氧化性与红硬性； ◇特别适用于HRC55以上的高硬度钢铣削加工。 High micro hardness,high oxidation resistance and hot hardness, suitable for high hard steel above HRC55 milling.
粗晶金刚石 Normal diamond coating	8500	–	700	◇高硬度，高热导率，高耐磨性； ◇适用于石墨加工。 High hardness,thermal conductivity and wear resistance,suitable for graphite machining.
超细晶金刚石 Ultra fine grain diamond coating	8000	–	700	◇表面光滑，自润滑性好, 高硬度、高热导率，高耐磨性； ◇适用于非铁材料,碳纤维复合材料等加工。 Smooth surface,good self–lubricity, hardness,thermal conductivity and wear resistance, suitable for nonferrous materials, carbon fiber composite machining,etc.

主要PVD纳米涂层的定位
Position of Main PVD Nano–structure Coating

PVD涂层精确控制晶粒尺寸（10nm~500nm），可获得很高的硬度、良好的抗氧化性能，并能有效降低摩擦系数。
PVD coating provides for superior control of coating grain size(from 10nm to 500nm), achieves excellent hardness, good oxidation resistant, and improved reduction of the coefficient of friction.



涂层硬度与最高适用温度
Microhardness and Max. Service Temperature

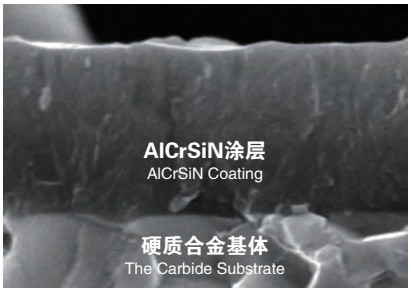


涂层硬度与摩擦系数
Microhardness and Coefficient of Friction

通用高性能涂层AlCrSiN
Universal High Performance Coating AlCrSiN

特点与功能
Characteristics and Function

- 通用性良好，以高效率切削加工显著提升生产力。
  Productivity increase due to significantly higher cutting speed and feed for applications
  in a wide range of materials. Significantly enhanced productivity.
- 独特的结构设计使得涂层韧性、热冲击稳定性、残余应力达到完美平衡。
  Particular design of structure brings good balance between toughness, thermo–shock stability and residual stress.

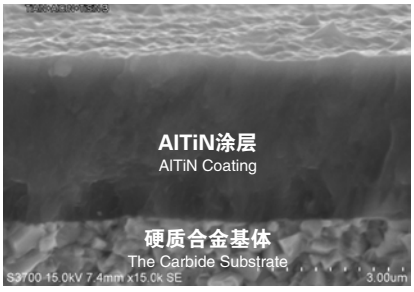


涂层断面形貌
SEM Photograph of Coating

纳米涂层AlTiN
Nano Coating AlTiN

特点与功能
Characteristics and Function

- 高的铝含量提供了优异的红硬性和抗氧化温度。
  High aluminum content provides excellent hot hardness and oxidation resistance.
- 特殊的涂层方式优化涂层结构，提高了稳定性，表面液滴大幅度减少。
  Special method optimizes the structure of coating, significantly improvedstability, reducing the number of surface droplet.

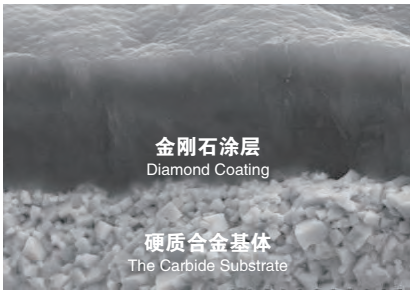


涂层断面形貌
SEM Photograph of Coating

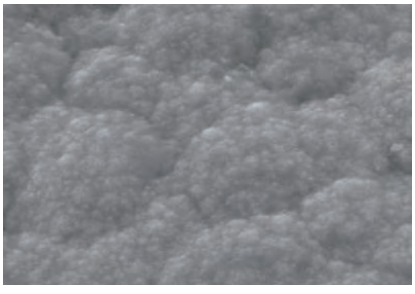
超细晶金刚石涂层
Ultra Fine Grain Diamond Coating

特点与功能
Characteristics and Function

- 高纯度金刚石涂层，涂层硬度能达到 80GPa 以上。
  High purity diamond coating, with hardness up to 80GPa.
- 涂层表面光滑，摩擦系数低。
  Ultra smooth and shiny surface, low coefficient friction.
- 适用于非铁材料的精加工，如石墨、高硅铝合金、碳纤维、玻璃纤维、陶瓷等。
  Suitable for finish machining nonferrous materials,such as graphite,aluminium,carbon fiber,ceramic,etc.



涂层断面形貌
Cross–section Image



涂层表面形貌
Surface Morphology

标记说明
Guidelines to Icons

	标示 Mark	说明 Description
柄部形状 Shank	SHANK h6	ISO 标准柄部 ISO Standard Shank
涂层 Coating	AlCrN	AlCrN涂层 AlCrN Coating
	AlCrSiN	AlCrSiN涂层 AlCrSiN Coating
	AlTiN	AlTiN涂层 AlTiN Coating
	AlTiN nano	AlTiN纳米涂层 Nano Coating AlTiN
	AlCrN/ TiSiN	AlCrN/TiSiN多层 AlCrN/TiSiN Coating
	AlTiN/ TiSiN	AlTiN/TiSiN纳米多层 Nano Coating AlTiN/TiSiN
	TiAlCrSiN	TiAlCrSiN TiAlCrSiN Coating
	N-DIA	粗晶金刚石涂层 Normal Diamond Coating
	U-DIA	超细晶金刚石涂层 Ultra Fine Grain Diamond Coating
底刃形状 Endteeth Type	Square	平头 Square End
	Corner-R	圆角头 Corner Radius
	Ballnose	球头 Ballnose
	Chamfer	刀尖倒角 Square End with Chamfer
切削方式 Cutting Condition		侧铣 For Side Milling
		槽铣 For Slotting
		仿形切削 For Profile Milling

	标示 Mark	说明 Description
螺旋角 Helix	−20° Helix	左20°螺旋角 −20° Helix
	30° Helix	30°螺旋角 30° Helix
	35° Helix	35°螺旋角 35° Helix
	35°/38° Helix	双螺旋角 Variable Helix
	40° Helix	40°螺旋角 40° Helix
	45° Helix	45°螺旋角 45° Helix
	47°/45°/43° Helix	不等螺旋角 Variable Helix
刃数 No. of Flutes	1	1 刃立铣刀 1 Flute Endmills
	2	2 刃立铣刀 2 Flute Endmills
	3	3 刃立铣刀 3 Flute Endmills
	4	4 刃立铣刀 4 Flute Endmills
	5	5 刃立铣刀 5 Flute Endmills
	6	6 刃立铣刀 6 Flute Endmills
	12	12 刃立铣刀 12 Flute Endmills
工件材料 Workpiece Material	P	钢 Steels
	M	不锈钢 Stainless Steels
	K	铸铁 Cast Iron
	N	非铁材料 Non−ferrous Materials
	S	高温合金、钛合金 Heat−resistant Super Alloys,Titanium Alloys
	H	高硬度材料 High Hardened Materials

整体硬质合金立铣刀型号（订货号）命名规则

UP210 –

①

工件材料 Workpiece	①系列号 Code of Series	
钢件、铸铁 Steel、Cast Iron	UP100	通用加工系列(≤35HRC) Suitable for Steels&Cast Iron(≤35HRC)
	UP210	通用加工系列(≤48HRC) Suitable for Steels&Cast Iron(≤48HRC)
	SP210	高效加工系列(≤48HRC) Suitable for High Efficiency Machining of Steels&Cast Iron(≤48HRC)
	UPR100	通用粗加工系列(≤48HRC) Suitable for Roughing of Steels&Cast Iron(≤48HRC)
	UPM100	通用深沟槽加工系列(≤48HRC) Suitable for Pocket Milling of Steels&Cast Iron(≤48HRC)
不锈钢 Stainless Steel	US200	不锈钢通用加工系列 Suitable for General Machining of Stainless Steel
	US300	不锈钢通用加工系列 Suitable for General Machining of Stainless Steel
	SS200	不锈钢高效加工系列 Suitable for High Efficiency Machining of Stainless Steel
铝合金 Aluminium Alloy	UA100	通用铝合金加工系列 Suitable for General Machining of Aluminium Alloy
	UA160	通用铝合金加工系列 Suitable for General Machining of Aluminium Alloy
	SA300	航空铝合金高效加工系列 Suitable for High Efficiency Machining of Aerospace Aluminium Alloys
	SA310/SA360	航空铝合金高速加工系列 Suitable For High Speed Machining of Aerospace Aluminium Alloys
石墨 Graphite	SG200	石墨高速加工系列 Suitable for High Speed Machining of Graphite
复合材料 Composite Materials	SD200	复合材料加工系列 Suitable for Composite Material
高温合金 Heat Resistant Super Alloys	SN200	高效加工立铣刀系列 Suitable for High Efficiency Machining of Heat Resistant Super Alloys
钛合金 Titanium Alloys	ST200	钛合金高性能加工系列 Suitable for High Performance Machining of Titanium Alloys
	ST260	钛合金高性能内冷加工系列 Suitable for High Performance Machining of Titanium Alloys
	ST300	钛合金高效内冷加工系列 Suitable for High Efficiency Machining for Titanium Alloys
高硬钢 High Hardened Material	SH160	高速加工系列（48–55HRC） Suitable for high Speed Machining of Hardened Steels（48–55HRC）
	SH200–H	NEW 高速加工系列（48–60HRC） Suitable for high Speed Machining of Hardened Steels（48–60HRC）
	SHM100	Suitable for high Speed Machining of Hardened Steels（48–56HRC）

S	S	2–	060	09
②	③	④	⑤	⑥

②底刃形状 End Profile	
S	平头 Square
B	球头 Ballnose
R	圆弧角 Cornor Radius
C	刀尖倒角 Square End with Chamfer

③刃部长度 Length of Flute	
N	长颈 Reduce Neck
H	长柄 Long Shank
L	长刃 Long Flute
S	短刃 Short Flute
空	标准 Blank: Standard

④刃数 No. of Flutes
2
3
4

⑤刃径 Diameter	
0.6mm	006
6mm	060
10mm	100

⑥特性码 Code Characteristic	
1	平头\球头 Square End\ Ballnose： a. 颈长Neck Length b. 刃长Flute Length 6–06　10–10
2	圆角头 Cornor Radius： r0.2–02　r1–10
3	微小径刀具 Miniature： a.颈长Neck Length： 1–01　10–10 b.刃长Flute Lengt (*10)： 0.8–08　1.6–16
4	刀尖倒角 Square End with Chamfer： C0.03–03 C0.13–13

整体立铣刀产品应用一览表
Application Summary Of Solid Carbide Endmills

<table>
<tr><th>材料组
ISO Material Group</th><th colspan="2">金鹭材料
分组
MC GESAC</th><th colspan="2">通用加工
General Machining</th><th>粗加工
Roughing</th><th>高效加工
High Efficiency Machining</th><th colspan="2">高速加工
High Speed Machining</th><th>微加工
Micro Machining</th></tr>
<tr><td rowspan="3">P</td><td>1
2
3
4</td><td>碳钢、合金钢
(＜35HRC)
Carbon Steel,Alloy Steel
(＜35HRC)</td><td>UP100</td><td rowspan="3">UP210</td><td>UPR100</td><td rowspan="3">SP210</td><td rowspan="3"></td><td rowspan="3"></td><td>UPM100</td></tr>
<tr><td>5</td><td>合金钢
(35–48HRC)
Alloy Steel (35–48HRC)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>6</td><td>PH与铁素体
/马氏体钢
(＜35HRC)
PH,Ferritic,Martensitic
Steel(＜35HRC)</td><td>UP100</td><td>UPR100</td><td>UPM100</td></tr>
<tr><td>M</td><td>1
2
3</td><td>不锈钢
Stainless Steel</td><td>US200</td><td>US300</td><td></td><td>SS200</td><td></td><td></td><td></td></tr>
<tr><td rowspan="2">K</td><td>1
2</td><td>灰铸铁、球墨铸铁
(＜32HRC)
Grey Cast Iron,Nodular Cast Iron
(＜32HRC)</td><td>UP100</td><td rowspan="2">UP210</td><td>UPR100</td><td rowspan="2">SP210</td><td></td><td></td><td></td></tr>
<tr><td>3</td><td>高合金铸铁
(35–45HRC)
High–alloy Cast Iron
(35–45HRC)</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">N</td><td>1
2</td><td>锻造铝合金、铸造铝合金
(Si≤12%)
Wrought Aluminium Alloys/Cast Aluminium Alloys (Si≤12%)</td><td>UA100</td><td>UA160</td><td></td><td rowspan="3">SA300</td><td rowspan="3">SA310</td><td rowspan="3">SA360</td><td></td></tr>
<tr><td>3</td><td>铸造铝合金
(Si＞12%)
Cast Aluminium Alloys (Si＞12%)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4</td><td>铜合金
(＜200HB)
Copper Alloys (＜200HB)</td><td>UA100</td><td>UA160</td><td></td><td></td></tr>
<tr><td>5</td><td>石墨、复合材料
Graphite、Composite Material</td><td colspan="4">SD200</td><td colspan="2">SG200</td><td></td></tr>
<tr><td rowspan="2">S</td><td>1
2
3</td><td>高温合金
(＜450HB)
Heat–resistant Alloys (＜450HB)</td><td colspan="4">SN200</td><td></td><td></td></tr>
<tr><td>4</td><td>钛合金
(＜400HB)
Titanium Alloys (＜400HB)</td><td colspan="2">ST200</td><td>ST300</td><td>ST260</td><td>ST300</td><td></td><td></td></tr>
<tr><td rowspan="2">H</td><td>1</td><td>高硬钢
(45–55HRC)
Hardened Steel(45–55HRC)</td><td></td><td></td><td></td><td></td><td>SH160</td><td rowspan="2">SH200–H
NEW</td><td rowspan="2">SHM100</td></tr>
<tr><td>2</td><td>高硬钢
(55–60HRC)
Hardened Steel(55–60HRC)</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

系列介绍
Series Introduction



UP100通用加工立铣刀

UP100 Endmills for General Purpose

- 适用于普通钢、铸铁材料（≤35HRC）的加工；
Suitable for steels&cast iron(≤35HRC).
- 锋利的刃口设计，满足软材料的切削加工。
Sharp cutting edges design，meet the cutting of soft material.

UP210通用加工立铣刀

UP210 Endmills for General Purpose

- 适用于普通钢、铸铁材料(≤48 HRC)的加工;
Suitable for steels&cast iron(≤48HRC).
- 采用高性能AlCr系涂层,耐高温、耐磨损;
High performance alcr series coating，
high temperature resistance and high wear resistance.
- 适用于油雾冷却、水冷、油冷、空冷等多种冷却环境。
Adapt to several kinds of cooling conditions,
for example oil mist, water, oil, air cooling.





SP210高效加工立铣刀

SP210 Endmills for High Efficiency Machining

- 适用于普通钢、铸铁材料(≤48 HRC)的高效加工；
Suitable for high efficiency machining of steels&cast iron(≤48 HRC) .
- 不等螺旋角、不等齿距设计，拥有卓越的抗震能力；
Variable helix angle and differential flute pitch, reduces vibration.
- 适用于大切深、大切宽的高效切削（机床刚性好）。
Applicable to high efficiency machining of large cutting depth (ap),
large cutting width (ae) .

系列介绍
Series Introduction



UPR100粗加工立铣刀

UPR100 Endmills for Roughing Application

- 适用于普通钢、铸铁材料（≤48HRC）的粗加工；
Suitable for roughing of steels&cast iron(≤48HRC).
特殊的刃口断屑槽处理，适用于工件的沟槽和侧壁粗加工。
Special chip–breaking cutting edge design,for roughing applications.

UPM100微小径深沟槽加工立铣刀

UPM100 Endmills for Micro Machining

- 适用于普通钢（≤48HRC）的深沟槽加工；
Suitable for pocket milling of steels&cast iron(≤48HRC).
- 长颈避免深腔加工干涉，适用于模具肋槽的深腔加工。
Longer neck design, prevents collisions with workpiece duringdeep pocket milling of mold rib areas.





US200不锈钢通用立铣刀

US200 Endmills for General Machining of Stainless Steel

- 适用于不锈钢（＜280HB）的通用加工；
Suitable for general machining of stainless steel (<280HB).
- 特殊的刃口设计，有效解决刀具刃口粘屑问题；
Special edge design，effectively solve the crumbs.
- 水冷、油冷为最佳冷却方式。
Water cooling, oil cooling is the best cooling method.

系列介绍
Series Introduction



US300不锈钢通用加工立铣刀

US300 Endmill for General Machining of Stainless Steel

- 适用于不锈钢（＜280HB）的粗加工、半精加工、精加工；

Suitable for rough milling，semi–finishing and finishing of stainless steel（＜280HB）.

- 适用于小切深、大切宽的面铣；大切深、小切宽的侧铣；ap≤0.3D槽铣；

Design for the small depth/large width in face milling, large depth/small width in side milling,less than 0.3D in shallow slotting.

- 水冷、油冷为最佳冷却方式。

Water soluable or oil based are the best cooling methods.

SS200不锈钢高效加工立铣刀

SS200 Endmill for High Efficiency Milling of Stainless Steel

- 适用于不锈钢（＜280HB）的高效粗、半精加工；

Suitable for high efficiency rough milling and semi–finishing of stainless steel（＜280HB）.

- 底刃变分度、不等螺旋角设计，拥有卓越的抗震性能，加工表面精度高；

Variable helix angle and differential flute pitch, reduces and eliminates vibration.

- 适用于大切深，大切宽的高效加工，金属去除率高；

Applicable for high efficiency machining at large cutting depth (ap), large cutting width (ae), high material removal rate.

- 水冷、油冷为最佳冷却方式。

Water soluable or oil based are the best cooling methods.





UA100铜铝合金通用立铣刀

UA100 Endmills for General Machining of Aluminum Alloy

- 适用于铝合金（Si≤12%）及铜合金（＜200HB）的通用加工；

Suitable for aluminum alloy (Si ≤ 12%) and copper alloy (< 200HB) general processing.

- 特殊的刃型设计，有效防止振动及解决刀具刃口粘屑问题；

Special edge design，reduces vibration，effectively solve the crumbs.

- 水冷为最佳冷却方式。

Water cooling is the best cooling method.

系列介绍
Series Introduction



UA160铜铝合金通用立铣刀

UA160 Endmills for General Machining for Aluminum Alloy and Copper

- 适用于不锈钢的加工；
Suitable for drilling stainless steel.
- 钻尖强度高，自定心性能好；
Excellent edge strength, excellent self–centering capability.
- 直线刃口，采用形状和尺寸精确的刃口钝化，提高刃口强度和切削的形成；
Straight lips, precise edge preparation is adapted, reinforce the strength of edge.
- 小刃带，大倒锥，减少了摩擦，降低扭矩。
Small edge home, largeblack taper, reduce friction and torque impaction.

SA300航空铝合金高效加工立铣刀

SA300 Endmills for High efficiency Machining of Aerospace Aluminium Alloys

- 适用于航空铝合金材料的高效加工；
Suitable for high efficiency machining of aerospace aluminium alloys.
- 采用超细晶硬质合金，耐磨性好和高韧性的基体；
Ultra–fine cemented carbide, High wear resistance and toughness.
- 独特的锋利切削刃设计，切削轻快流畅，提高了加工效力和工件表面质量；
Unique sharp cutting edges provide increased performance in smoothness efficiency and finishing.
- 用于高效率的型腔铣加工，金属切除率可达800cc/min。
Extremely high efficient cavity milling with metal remove rate up to 800cc/min.





SA310/SA360航空铝合金高速加工立铣刀

SA310/SA360 Endmills for High Speed Machining of Aerospace Aluminium Alloy

- 适用于航空铝合金材料的高速高效加工；
Suitable for high speed machining of aerospace aluminium alloys.
- 采用超细晶硬质合金，耐磨性好和高韧性的基体；
Ultra–fine cemented carbide ,High wear resistance and toughness.
- 特殊设计和精良制造相结合，刀具动平衡性能N=25000RPM，G2.0；
Special symmetry design and precision with balance N=25000RPM ，G2.0 good for high speed cutting.
- SA360系列内冷孔优化设计，充分发挥冷却效果，实现高速切削；
SA360 The feature inner coolant holes that provides more effective cooling action with cutting zone for high speed machining .
- 独特的锋利切削刃设计，切削轻快流畅，提高了加工效力和工件表面质量；
Unique sharp cutting edges provide increased performance in smoothness efficiency and finishing.
- 用于高效率的型腔铣加工，金属切除率可达800cc/min。
Extremely high efficient cavity milling with metal remove rate up to 800cc/min.

系列介绍
Series Introduction



SG200 石墨加工立铣刀

SG200 Endmills for High Speed Machining of Graphite

- 特殊的基体材质与金刚石涂层完美结合，使刀具具有优越的
耐磨性，极大的提高了加工寿命；
Special substrate with the perfect combination of diamond coating,superior wear resistance.
- 适用于石墨的半精加工和精加工，推荐使用气冷。
Suitable for semi–finishing and finishing of graphite，apply for air cooling.

SD200复合材料加工立铣刀

SD200 Endmills for Composite Material

- 适用于航空复合材料的铣边及铣槽加工；
Suitable for side milling and slotting milling of Composite Material.
- 采用金刚石涂层，提高刀具使用寿命；
Using diamond coating, prolongs cutting tool life.
- 采用左右交错的菱齿型设计，可有效抑制工件上下表面翻边、起毛等。
Variable helix angle and differential flute pitch, reduces and eliminates vibration, and improves surface quality.





SN200高温合金高效加工立铣刀

- 适用高温合金材料的粗加工、半精加工、精加工；
Suitable for rough，semi–finish and finish machining of HRSA.
- 独特的刃型设计，保证高刚性,优异抗震性能；
Special edge design，guarantees high rigidity and reduces vibration.
- 特殊的圆周后角处理，增加刃口强度，保证切削表面质量；
Special disposing of end cutting edge，improves edge strength and guarantees surface quality.
- 高压水冷或气冷为最佳冷却方式。
High pressure water or gas cooling is the best cooling methods.

系列介绍
Series Introduction



ST200钛合金高性能加工立铣刀

ST200 Endmills for High Performance Machining of Titanium Alloys

- 适用于航空钛合金材料的高性能加工；
Suitable for high performance machining of aerospace titanium alloys.
- 采用超细晶基体、专用R涂层及先进刃口处理技术，有效延长刀具使用寿命；
Ultra–fine cemented carbide substrate, special R coating and advanced edge processing, prolong tool life.
- 不等齿距、不等导程设计，大幅提升抗振性能，卓越的工件表面质量；
Variable helix angle and differential flute pitch, reduces and eliminates vibration, and im proves surface quality.
- 特别适用于大切深小切宽的侧铣、型腔铣加工。
Apply for large depth & small width in side milling and cavity milling.

ST260钛合金高性能内冷加工立铣刀

ST260 Endmills for High Performance Machining of Titanium Alloys

- 适用于航空钛合金材料的高性能内冷加工；
Suitable for high performance machining of aerospace titanium alloys.
- 不等齿距、不等导程设计，大幅提升抗振性能，切削更加稳定；
Variable helix angle and differential flute pitch, reduces and eliminates vibration, cutting more stably.
- 采用独特的Y型内冷孔设计，发挥优异冷却效果，排屑更顺畅；
Specially Y type internal cooling holes designing, excellent cooling effect, chipping more smoothly.
- 与ST200系列相比，允许更大的切削速度和切削深度，刀具寿命更长。
Comparing with ST200，allows higher cutting speed & cutting depth ，and longer tool life.





ST300钛合金高效内冷加工立铣刀

ST300 Endmills for High Efficiency Machining for Titanium Alloys

- 适用于航空钛合金材料的高效加工；
Suitable for high efficiency machining of aerospace titanium alloys.
- 采用超细晶基体、专用R涂层及先进刃口处理技术，使用寿命更长；
Ultra–fine cemented carbide substrate, special R coating and advanced edge processing technology, superior wear resistance, longer tool life.
- 不等距排屑空间、圆弧清边设计，优异减震效果，表面精度高；
Unequal flute spacing and eccentric relief design，super vibration reduction performance.
- 独特U型槽与内冷孔设计，超凡排屑性能，优异冷却效果，金属去除率更高；
Specially internal cooling holes and U type flute design, excellent cooling effect and chip evacuation, high material removal rate.
- 可满足大切宽大切深的高效加工要求，并可实现粗精一体化加工。
Apply for high efficiency machining at large depth ＆large width ，realizing rough and finishing milling with one tool.

系列介绍
Series Introduction



SH160高硬钢(48–55HRC)加工立铣刀

SH160 Endmills for Hardened Steels(48–55HRC)

- 高硬度、高韧性基体材质，特殊角度设计，用于高硬钢材料的加工；
High hardness, high toughness matrix materials,
special angle design , special for hardened steels processing.
- 适用于48–55HRC高硬钢的精加工;
For hardened steels (48–55 HRC)finishing .
- 推荐使用气冷或油雾冷却。
Recommended to use air or oil mist cooling.

SH200–H 高硬钢加工立铣刀

SH200–H Endmills Optimized for Hardened Steels

- 适用于48~60HRC高硬度材料的精加工、半精加工；
Suitable for Semi–Finishing and Finishing of 48~60HRC Hardened Steels;
- 高强度、高韧性的基体材质配合新研发的高硬专用涂层，有效的延长刀具使用寿命；
High strength, high toughness matrix materials base material with newly developed coating, lengthens the tool life significantly.
- 推荐使用气冷或油雾冷却。
Recommended to use air or oil mist cooling.





SHM100高硬钢微小径深沟槽加工

SHM100 Endmills for Micro Machining of Hardened Steels

- 特殊角度及长颈避空设计，适用于高硬钢（48–56HRC）的深沟槽微加工；
Special angles, with reduced neck to prevent collisions,suitable for deep trench processing of hardened steels (48–56HRC).
- 推荐使用气冷或油雾冷却。
Recommended to use air or oil mist cooling.

刀具系列目录（按形状）
Endmills Index–Characteristic of Flute

刃数 No.of Flutes	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表 页码 Dimension Page	切削参数 页码 Cutting Parameters Page
平头Square						
2	AlTiN	2刃短刃平头 2 Flute, Stub Length	UP100–SS2	D1 ~ D16	286	445
2	AlTiN	2刃平头 2 Flute, Standard Length	UP100–S2	D1 ~ D20	287	445
2	AlTiN	2刃长刃平头 2 Flute, Long Flute Length	UP100–SL2	D2 ~ D20	289	445
2	AlTiN	2刃长柄平头 2 Flute, with Long Shank Length	UP100–SH2	D1 ~ D20	290	445
3	AlTiN	3刃平头 3 Flute, Standard Length	UP100–S3	D1 ~ D25	291	445
4	AlTiN	4刃平头 4 Flute, Standard Length	UP100–S4	D1 ~ D20	292	446
4	AlTiN	4刃长刃平头 4 Flute, Long Flute Length	UP100–SL4	D4 ~ D20	295	446
4	AlTiN	4刃长柄平头 4 Flute, with Long Shank Length	UP100–SH4	D3 ~ D20	296	446
6	AlTiN	6刃平头 6 Flute, Standard Length	UP100–S6	D6 ~ D20	297	449
2	AlCrSiN	2刃短刃平头 2 Flute, Stub Length	UP210–SS2	D1 ~ D16	298	449
2	AlCrSiN	2刃平头 2 Flute, Standard Length	UP210–S2	D1 ~ D20	299	449
2	AlCrSiN	2刃长刃平头 2 Flute, Long Flute Length	UP210–SL2	D2 ~ D20	301	449
2	AlCrSiN	2刃长柄平头 2 Flute, with Long Shank Length	UP210–SH2	D2 ~ D20	302	449
3	AlCrSiN	3刃平头 3 Flute, Standard Length	UP210–S3	D2 ~ D25	303	450
4	AlCrSiN	4刃短刃平头 4 Flute, Stub Length	UP210–SS4	D1 ~ D16	304	450
4	AlCrSiN	4刃平头 4 Flute, Standard Length	UP210–S4	D1 ~ D20	305	450
4	AlCrSiN	4刃长刃平头 4 Flute, Long Flute Length	UP210–SL4	D1 ~ D20	308	450
4	AlCrSiN	4刃长柄平头 4 Flute, with Long Shank Length	UP210–SH4	D2 ~ D20	310	450
6	AlCrSiN	6刃平头 6 Flute, Standard Length	UP210–S6	D6 ~ D20	311	453
3	AlCrSiN	3刃平头变螺旋 3 Flute, with Variable Helix	SP210–S3	D3 ~ D20	312	453
3	AlCrSiN	3刃平头变螺旋(刀尖倒角) 3 Flute, with Variable Helix with Chamfer	SP210–C3	D6 ~ D16	313	453
4	AlCrSiN	4刃平头双螺旋(刀尖倒角) 4 Flute, Variable Helix with Chamfer	SP210–C4	D3 ~ D20	314	453

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、 合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、 复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	＜35HRC	<48HRC								45–55HRC	55–60HRC
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
	◎	○	○	◎	○	○					
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刀具系列目录（按形状）
Endmills Index–Characteristic of Flute

刃数 No.of Flutes	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
平头Square						
4	AlCrSiN	4刃平头双螺旋 4 Flute, with Variable Helix 	SP210–S4	D2 ~ D20	316	453
4	AlCrSiN	4刃长颈平头双螺旋 (刀尖倒角） 4 Flute, Variable Helix with Chamfer and with Reduced Neck 	SP210–CN4	D3 ~ D20	317	453
4	AlTiN	4刃粗加工平头 4 Flute Square End, with Roughing Geometry 	UPR100–S4	D6 ~ D20	318	456
2	AlTiN	2刃长颈平头 2 Flute Square End, Miniature Sizes with Neck 	UPM100–SN2	D0.8 ~ D2	319	458
2	AlTiN	2刃平头 2 Flute, Standard Length 	US200–S2	D0.5 ~ D20	320	460
4	AlTiN	4刃短刃平头 4 Flute, Stub Length 	US200–SS4	D2 ~ D20	322	461
4	AlTiN	4刃平头 4 Flute, Standard Length 	US200–S4	D1 ~ D20	323	461
4	AlTiN	4刃长颈平头 4 Flute, with Reduced Neck 	US200–SN4	D2 ~ D20	324	461
4	AlTiN	4刃短刃平头 4 Flute, Stub Length 	US300–SS4	D1 ~ D4	325	462
4	AlTiN	4刃平头 4 Flute, Standard Length 	US300–S4	D1 ~ D12	326	462
4	AlCrSiN	4刃短刃平头双螺旋(刀尖倒角） 4 Flute, Stub Length，Variable Helix with Chamfer 	SS200–CS4	D2 ~ D12	327	463
4	AlCrSiN	4刃平头双螺旋(刀尖倒角） 4 Flute, Variable Helix with Chamfer 	SS200–C4	D2 ~ D12	328	463
2		2刃平头 2 Flute, Standard Length 	UA100–S2	D1 ~ D20	329	464
2		2刃长刃平头 2 Flute, Long Flute Length 	UA100–SL2	D2 ~ D20	330	464
2		2刃长柄平头 2 Flute, with Long Shank Length 	UA100–SH2	D2 ~ D20	331	464
3		3刃平头 3 Flute, Standard Length 	UA100–S3	D2 ~ D20	332	465
3		3刃长刃平头 3 Flute, Long Flute Length 	UA100–SL3	D2 ~ D20	333	465
3		3刃长柄平头 3 Flute, with Long Shank Length 	UA100–SH3	D2 ~ D20	334	465
2		2刃平头 2 Flute, Standard Length 	UA160–S2	D1 ~ D12	335	467
3		3刃平头 3 Flute, Standard Length 	UA160–S3	D2 ~ D12	336	467
4		4刃平头 4 Flute, Standard Length 	UA160–S4	D4 ~ D12	337	468
2	U-DIA	2刃平头 2 Flute, Standard Length 	SG200–S2	D2 ~ D12	338	472

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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刀具系列目录（按形状）
Endmills Index–Characteristic of Flute

刃数 No.of Flutes	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
平头Square						
3	U-DIA	3刃平头 3 Flute, Standard Length	SG200–S3	D2 ~ D12	339	472
4	U-DIA	4刃平头 4 Flute, Standard Length	SG200–S4	D2 ~ D12	340	472
4	AlCrN	4刃不等齿距平头 4 Flute，Standard Length Unequal Flute Spacing	ST200–S4	D2 ~ D20	341	477
2	AlTiN	2刃平头 2 Flute, Standard Length	SH160–S2	D0.5 ~ D20	342	483
4	AlTiN	4刃平头 4 Flute, Standard Length	SH160–S4	D1 ~ D20	343	483
4	AlTiN	4刃长柄平头 4 Flute, with Long Shank Length	SH160–SH4	D3 ~ D10	345	483
6	AlTiN	6刃平头 6 Flute, Standard Length	SH160–S6	D6 ~ D20	346	483
4	TiAlCrSiN	4刃平头 4 Flute, Standard Length NEW	SH200–S4–H	D1—D12	347	484
4	TiAlCrSiN	4刃长柄平头 4 Flute, with Long Shank Length NEW	SH200–SH4–H	D1—D12	348	484
2	AlTiN	2刃长颈平头 2 Flute Square End, Miniature Sizes with Neck	SHM100–SN2	D0.4–D2	349	485
圆角头Cornor Radius						
2	AlTiN	2刃圆角头 2 Flute, Corner Radius	UP100–R2	D1 ~ D12	351	445
2	AlTiN	2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UP100–RH2	D6 ~ D12	354	445
4	AlTiN	4刃圆角头 4 Flute, Corner Radius	UP100–R4	D2 ~ D16	355	446
4	AlTiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	UP100–RH4	D6 ~ D16	357	446
2	AlCrSiN	2刃圆角头 2 Flute, Corner Radius	UP210–R2	D1 ~ D16	358	449
2	AlCrSiN	2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UP210–RH2	D6 ~ D16	361	449
4	AlCrSiN	4刃圆角头 4 Flute, Corner Radius	UP210–R4	D1.5 ~ D20	363	450
4	AlCrSiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	UP210–RH4	D6 ~ D16	366	450
4	AlCrSiN	4刃圆角头双螺旋 4 Flutes Corner Radius, with Variable Helix	SP210–R4	D3 ~ D16	368	453
2	AlTiN	2刃圆角头 2 Flute, Corner Radius	US200–R2	D3 ~ D16	370	460
3	AlTiN	3刃圆角头 3 Flute, Corner Radius	US200–R3	D2 ~ D20	372	460
4	AlTiN	4刃圆角头 4 Flute, Corner Radius	US200–R4	D2 ~ D20	374	461

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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刀具系列目录（按形状）
Endmills Index–Characteristic of Flute

刃数 No.of Flutes	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表 页码 Dimension Page	切削参数 页码 Cutting Parameters Page
圆角头Cornor Radius						
2		2刃圆角头 2 Flute, Corner Radius	UA100–R2	D1 ~ D20	376	464
2		2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UA100–RH2	D6 ~ D20	379	464
3		3刃圆角头 3 Flute, Corner Radius	UA100–R3	D1 ~ D20	381	465
3		3刃长柄圆角头 3 Flute Corner Radius, with Long Shank Length	UA100–RH3	D6 ~ D20	384	465
2		2刃长颈圆角头 2 Flute Corner Radius, with Reduced Neck	SA300–RN2	D10 ~ D20	386	469
3		3刃长颈圆角头 3 Flute Corner Radius, with Reduced Neck	SA300–RN3	D12 ~ D20	387	470
2		2刃长颈圆角头 2 Flute Corner Radius, with Reduced Neck	SA310–RN2	D10 ~ D32	388	471
3		3刃长颈圆角头 3 Flute Corner Radius, with Reduced Neck	SA310–RN3	D12 ~ D25	389	471
2		2刃长颈圆角头内冷立铣刀 2 Flute Corner Radius, Internal coolant With Reduced Neck	SA360–RN2	D12 ~ D25	390	471
2	U-DIA	2刃圆角头 2 Flute, Corner Radius	SG200–R2	D6 ~ D12	391	472
4	U-DIA	4刃圆角头 4 Flute, Corner Radius	SG200–R4	D6 ~ D12	392	472
4	AlTiN	4刃不等齿距圆角头 4 Flute，Corner Radius Unequal Flute Spacing	SN200–R4	D6 ~ D16	393	475
4	AlCrN	4刃不等齿距圆角头 4 Flute，Corner Radius Unequal Flute Spacing	ST200–R4	D6 ~ D20	394	477
4	AlCrN	4刃不等齿距长颈圆角头 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing	ST200–RN4	D12 ~ D25	395	477
5	AlCrN	5刃不等齿距长颈圆角头 5 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing	ST200–RN5	D16~D25	396	478
4	AlCrN	4刃不等齿距长颈圆角头内冷 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST260–RN4	D12 ~ D25	397	480
4	AlCrN	4刃不等齿距长颈圆角头内冷 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST300–RN4	D12 ~ D20	398	481
5	AlCrN	5刃不等齿距长颈圆角头内冷 5 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST300–RN5	D16 ~ D25	399	482
2	AlTiN	2刃圆角头 2 Flute, Corner Radius	SH160–R2	D2 ~ D12	400	483
4	AlTiN	4刃圆角头 4 Flute, Corner Radius	SH160–R4	D3 ~ D12	402	483
4	AlTiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	SH160–RH4	D6 ~ D10	404	483
4	TiAlCrSiN	NEW 4刃圆角头 4 Flute, Corner Radius	SH200–R4–H	D3 ~ D12	405	484
4	TiAlCrSiN	NEW 4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	SH200–RH4–H	D5 ~ D12	406	484

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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刀具系列目录（按形状）
Endmills Index–Characteristic of Flute

刃数 No.of Flutes	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
球头Ballnose						
2	AlTiN	2刃球头 2 Flute, Ballnose	UP100–B2	D0.8 ~ D20	408	448
2	AlTiN	2刃长柄球头 2 Flute Ballnose,with Long Shank Length	UP100–BH2	D2 ~ D12	410	448
4	AlTiN	4刃球头 4 Flute, Ballnose	UP100–B4	D2 ~ D20	411	448
2	AlCrSiN	2刃球头 2 Flute, Ballnose	UP210–B2	D0.8 ~ D20	412	452
2	AlCrSiN	2刃长柄球头 2 Flute Ballnose,with Long Shank Length	UP210–BH2	D2 ~ D12	414	452
4	AlCrSiN	4刃球头 4 Flute, Ballnose	UP210–B4	D2 ~ D20	415	452
2	AlCrSiN	2刃球头 2 Flute, Ballnose	SP210–B2	D1 ~ D12	416	455
2	AlCrSiN	2刃长柄球头 2 Flute Ballnose, with Long Shank length	SP210–BH2	D4 ~ D12	417	455
2	AlTiN	2刃长颈球头 2 Flute Ballnose, Miniature Sizes with Neck	UPM100–BN2	D0.8 ~ D2	418	459
2	AlTiN	2刃球头 2 Flute, Ballnose	US200–B2	D1 ~ D20	419	461
4	AlTiN	4刃球头 4 Flute, Ballnose	US200–B4	D1 ~ D20	420	461
2		2刃球头 2 Flute, Ballnose	UA100–B2	D1 ~ D16	421	465
2		2刃长颈球头 2 FluteBallnose, with Reduced Neck	SA300–BN2	D10 ~ D20	422	470
2	U-DIA	2刃球头 2 Flute, Ballnose	SG200–B2	D2 ~ D12	423	473
4	AlTiN	4刃不等齿距球头 4 Flute，Ballnose Unequal Flute Spacing	SN200–B4	D6 ~ D16	424	476
4	AlCrN	4刃不等齿距球头 4 Flute，Ballnose Unequal Flute Spacing	ST200–B4	D6 ~ D16	425	479
2	AlTiN	2刃球头 2 Flute, Ballnose	SH160–B2	D0.5 ~ D16	426	483
2	AlTiN	2刃长柄球头 2 Flute Ballnose, with Long Shank length	SH160–BH2	D6 ~ D12	428	483
4	AlTiN	4刃球头 4 Flute, Ballnose	SH160–B4	D2 ~ D16	429	483
2	AlTiN	2刃长颈球头 2 Flute Ballnose, Miniature Sizes with Neck	SHM100–BN2	D0.4–D2	430	485
其它Other						
12	U-DIA	12刃菱齿 12 Flute, Ling tooth	SD200–KDA	D6 ~ D12	432	474

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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刀具系列目录（按系列）
Endmills Index–Tool Series

适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
钢件 铸铁 For Steels, Cast Iron	**UP100**							
	2	Square	AlTiN	2刃短刃平头 2 Flute, Stub Length	UP100–SS2	D1 ~ D16	286	445
	2	Square	AlTiN	2刃平头 2 Flute, Standard Length	UP100–S2	D1 ~ D20	287	445
	2	Square	AlTiN	2刃长刃平头 2 Flute, Long Flute Length	UP100–SL2	D2 ~ D20	289	445
	2	Square	AlTiN	2刃长柄平头 2 Flute, with Long Shank Length	UP100–SH2	D1 ~ D20	290	445
	3	Square	AlTiN	3刃平头 3 Flute, Standard Length	UP100–S3	D1 ~ D25	291	445
	4	Square	AlTiN	4刃平头 4 Flute, Standard Length	UP100–S4	D1 ~ D20	292	446
	4	Square	AlTiN	4刃长刃平头 4 Flute, Long Flute Length	UP100–SL4	D4 ~ D20	295	446
	4	Square	AlTiN	4刃长柄平头 4 Flute, with Long Shank Length	UP100–SH4	D3 ~ D20	296	446
	6	Square	AlTiN	6刃平头 6 Flute, Standard Length	UP100–S6	D6 ~ D20	297	446
	2	Corner-R	AlTiN	2刃圆角头 2 Flute, Corner Radius	UP100–R2	D1 ~ D12	351	445
	2	Corner-R	AlTiN	2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UP100–RH2	D6 ~ D12	354	445
	4	Corner-R	AlTiN	4刃圆角头 4 Flute, Corner Radius	UP100–R4	D2 ~ D16	355	446
	4	Corner-R	AlTiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	UP100–RH4	D6 ~ D16	357	446
	2	Ballnose	AlTiN	2刃球头 2 Flute, Ballnose	UP100–B2	D0.8 ~ D20	408	448
	2	Ballnose	AlTiN	2刃长柄球头 2 Flute Ballnose,with Long Shank Length	UP100–BH2	D2 ~ D12	410	448
	4	Ballnose	AlTiN	4刃球头 4 Flute, Ballnose	UP100–B4	D2 ~ D20	411	448
	UP210							
	2	Square	AlCrSiN	2刃短刃平头 2 Flute, Stub Length	UP210–SS2	D1 ~ D16	298	449
	2	Square	AlCrSiN	2刃平头 2 Flute, Standard Length	UP210–S2	D1 ~ D20	299	449
	2	Square	AlCrSiN	2刃长刃平头 2 Flute, Long Flute Length	UP210–SL2	D2 ~ D20	301	449
	2	Square	AlCrSiN	2刃长柄平头 2 Flute, with Long Shank Length	UP210–SH2	D2 ~ D20	302	449
	3	Square	AlCrSiN	3刃平头 3 Flute, Standard Length	UP210–S3	D2 ~ D25	303	449

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	＜35HRC	<48HRC								45–55HRC	55–60HRC
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适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
钢件 铸铁 Steels, Cast Iron	**UP210**							
	4	Square	AlCrSiN	4刃短刃平头 4 Flute, Stub Length	UP210–SS4	D1 ~ D16	304	450
	4	Square	AlCrSiN	4刃平头 4 Flute, Standard Length	UP210–S4	D1 ~ D20	305	450
	4	Square	AlCrSiN	4刃长刃平头 4 Flute, Long Flute Length	UP210–SL4	D1 ~ D20	308	450
	4	Square	AlCrSiN	4刃长柄平头 4 Flute, with Long Shank Length	UP210–SH4	D2 ~ D20	310	450
	6	Square	AlCrSiN	6刃平头 6 Flute, Standard Length	UP210–S6	D6 ~ D20	311	450
	2	Corner-R	AlCrSiN	2刃圆角头 2 Flute, Corner Radius	UP210–R2	D1 ~ D16	358	449
	2	Corner-R	AlCrSiN	2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UP210–RH2	D6 ~ D16	361	449
	4	Corner-R	AlCrSiN	4刃圆角头 4 Flute, Corner Radius	UP210–R4	D1.5 ~ D20	363	450
	4	Corner-R	AlCrSiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	UP210–RH4	D6 ~ D16	366	450
	2	Ballnose	AlCrSiN	2刃球头 2 Flute, Ballnose	UP210–B2	D0.8 ~ D20	412	452
	2	Ballnose	AlCrSiN	2刃长柄球头 2 Flute Ballnose,with Long Shank Length	UP210–BH2	D2 ~ D12	414	452
	4	Ballnose	AlCrSiN	4刃球头 4 Flute, Ballnose	UP210–B4	D2 ~ D20	415	452
	SP210							
	3	Square	AlCrSiN	3刃平头变螺旋 3 Flute, with Variable Helix	SP210–S3	D3 ~ D20	312	453
	3	Chamfer	AlCrSiN	3刃平头变螺旋(刀尖倒角） 3 Flute, with Variable Helix with Chamfer	SP210–C3	D6 ~ D16	313	453
	4	Chamfer	AlCrSiN	4刃平头双螺旋(刀尖倒角） 4 Flute, Variable Helix with Chamfer	SP210–C4	D3 ~ D20	314	453
	4	Square	AlCrSiN	4刃平头双螺旋 4 Flute, with Variable Helix	SP210–S4	D2 ~ D20	316	453
	4	Chamfer	AlCrSiN	4刃长颈平头双螺旋 (刀尖倒角） 4 Flute, Variable Helix with Chamfer and with Reduced Neck	SP210–CN4	D3 ~ D20	317	453
	4	Corner-R	AlCrSiN	4刃圆角头双螺旋 4 Flutes Corner Radius, with Variable Helix	SP210–R4	D3 ~ D16	368	453
	2	Ballnose	AlCrSiN	2刃球头 2 Flute, Ballnose	SP210–B2	D1 ~ D12	416	455
	2	Ballnose	AlCrSiN	2刃长柄球头 2 Flute Ballnose, with Long Shank length	SP210–BH2	D4 ~ D12	417	455

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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	◎	◎	○	◎							
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刀具系列目录（按系列）
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适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
钢件 铸铁 Steels, Cast Iron	**UPR100**							
	4	Square	AlTiN	4刃粗加工平头 4 Flute Square End, with Roughing Geometry	UPR100–S4	D6 ~ D20	318	456
	UPM100							
	2	Square	AlTiN	2刃长颈平头 2 Flute Square End, Miniature Sizes with Neck	UPM100–SN2	D0.8 ~ D2	319	458
	2	Ballnose	AlTiN	2刃长颈球头 2 Flute Ballnose, Miniature Sizes with Neck	UPM100–BN2	D0.8 ~ D2	418	459
不锈钢 Stainless Steels	**US200**							
	2	Square	AlTiN	2刃平头 2 Flute, Standard Length	US200–S2	D0.5 ~ D20	320	460
	4	Square	AlTiN	4刃短刃平头 4 Flute, Stub Length	US200–SS4	D2 ~ D20	322	461
	4	Square	AlTiN	4刃平头 4 Flute, Standard Length	US200–S4	D1 ~ D20	323	461
	4	Square	AlTiN	4刃长颈平头 4 Flute, with Reduced Neck	US200–SN4	D2 ~ D20	324	461
	2	Corner-R	AlTiN	2刃圆角头 2 Flute, Corner Radius	US200–R2	D3 ~ D16	370	460
	3	Corner-R	AlTiN	3刃圆角头 3 Flute, Corner Radius	US200–R3	D2 ~ D20	372	460
	4	Corner-R	AlTiN	4刃圆角头 4 Flute, Corner Radius	US200–R4	D2 ~ D20	374	461
	2	Ballnose	AlTiN	2刃球头 2 Flute, Ballnose	US200–B2	D1 ~ D20	419	461
	4	Ballnose	AlTiN	4刃球头 4 Flute, Ballnose	US200–B4	D1 ~ D20	420	461
	US300							
	4	Square	AlTiN	4刃短刃平头 4 Flute, Stub Length	US300–SS4	D1 ~ D4	325	462
	4	Square	AlTiN	4刃平头 4 Flute, Standard Length	US300–S4	D1 ~ D12	326	462
	SS200							
	4	Chamfer	AlCrSiN	4刃短刃平头双螺旋(刀尖倒角） 4 Flute, Stub Length，Variable Helix with Chamfer	SS200–CS4	D2 ~ D12	327	463
	4	Chamfer	AlCrSiN	4刃平头双螺旋(刀尖倒角） 4 Flute, Variable Helix with Chamfer	SS200–C4	D2 ~ D12	328	463

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	＜35HRC	<48HRC								45–55HRC	55–60HRC
	◎	○	○	◎	○	○					
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适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
铝合金 Aluminium Alloy	**UA100**							
	2	Square		2刃平头 2 Flute, Standard Length	UA100–S2	D1 ~ D20	329	464
	2	Square		2刃长刃平头 2 Flute, Long Flute Length	UA100–SL2	D2 ~ D20	330	464
	2	Square		2刃长柄平头 2 Flute, with Long Shank Length	UA100–SH2	D2 ~ D20	331	464
	3	Square		3刃平头 3 Flute, Standard Length	UA100–S3	D2 ~ D20	332	465
	3	Square		3刃长刃平头 3 Flute, Long Flute Length	UA100–SL3	D2 ~ D20	333	465
	3	Square		3刃长柄平头 3 Flute, with Long Shank Length	UA100–SH3	D2 ~ D20	334	465
	2	Corner-R		2刃圆角头 2 Flute, Corner Radius	UA100–R2	D1 ~ D20	376	464
	2	Corner-R		2刃长柄圆角头 2 Flute Corner Radius, with Long Shank Length	UA100–RH2	D6 ~ D20	379	464
	3	Corner-R		3刃圆角头 3 Flute, Corner Radius	UA100–R3	D1 ~ D20	381	465
	3	Corner-R		3刃长柄圆角头 3 Flute Corner Radius, with Long Shank Length	UA100–RH3	D6 ~ D20	384	465
	2	Ballnose		2刃球头 2 Flute, Ballnose	UA100–B2	D1 ~ D16	421	466
	UA160							
	2	Square		2刃平头 2 Flute, Standard Length	UA160–S2	D1 ~ D12	335	467
	3	Square		3刃平头 3 Flute, Standard Length	UA160–S3	D2 ~ D12	336	468
	4	Square		4刃平头 4 Flute, Standard Length	UA160–S4	D4 ~ D12	337	468
	SA300							
	2	Corner-R		2刃长颈圆角头 2 Flute Corner Radius, with Reduced Neck	SA300–RN2	D10 ~ D20	386	469
	3	Corner-R		3刃长颈圆角头 3 Flute Corner Radius, with Reduced Neck	SA300–RN3	D12 ~ D20	387	470
	2	Ballnose		2刃长颈球头 2 FluteBallnose, with Reduced Neck	SA300–BN2	D10 ~ D20	422	470
	SA310							
	2	Corner-R		2刃长颈圆角头 2 Flute Corner Radius, with Reduced Neck	SA310–RN2	D10 ~ D32	388	471
	3	Corner-R		3刃长颈圆角头 3 Flute Corner Radius, with Reduced Neck	SA310–RN3	D12 ~ D25	389	471

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
铝合金 Aluminium Alloy	**SA360**							
	2	Corner-R		2刃长颈圆角头内冷立铣刀 2 Flute Corner Radius, Internal coolant With Reduced Neck	SA360–RN2	D12 ~ D25	390	471
石墨 Graphite	**SG200**							
	2	Square	U-DIA	2刃平头 2 Flute, Standard Length	SG200–S2	D2 ~ D12	338	472
	3	Square	U-DIA	3刃平头 3 Flute, Standard Length	SG200–S3	D2 ~ D12	339	472
	4	Square	U-DIA	4刃平头 4 Flute, Standard Length	SG200–S4	D2 ~ D12	340	472
	2	Corner-R	U-DIA	2刃圆角头 2 Flute, Corner Radius	SG200–R2	D6 ~ D12	391	472
	4	Corner-R	U-DIA	4刃圆角头 4 Flute, Corner Radius	SG200–R4	D6 ~ D12	392	472
	2	Ballnose	U-DIA	2刃球头 2 Flute, Ballnose	SG200–B2	D2 ~ D12	423	473
复合材料 Composite Material	**SD200**							
	12	Square	U-DIA	12刃菱齿 12 Flute, Ling tooth	SD200–KDA	D6 ~ D12	432	474
高温合金 Heat Resistant Super Alloys	**SN200**							
	4	Corner-R	AlTiN	4刃不等齿距圆角头 4 Flute，Corner Radius Unequal Flute Spacing	SN200–R4	D6 ~ D20	393	475
	4	Ballnose	AlTiN	4刃不等齿距球头 4 Flute，Ballnose Unequal Flute Spacing	SN200–B4	D6 ~ D16	424	476
钛合金 Titanium Alloy	**ST200**							
	4	Square	AlCrN	4刃不等齿距平头 4 Flute，Standard Length Unequal Flute Spacing	ST200–S4	D2 ~ D20	341	477
	4	Corner-R	AlCrN	4刃不等齿距圆角头 4 Flute，Corner Radius Unequal Flute Spacing	ST200–R4	D6 ~ D16	394	477
	4	Corner-R	AlCrN	4刃不等齿距长颈圆角头 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing	ST200–RN4	D12 ~ D25	395	477
	5	Corner-R	AlCrN	5刃不等齿距长颈圆角头 5 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing	ST200–RN5	D16~D25	396	478
	4	Ballnose	AlCrN	4刃不等齿距球头 4 Flute，Ballnose Unequal Flute Spacing	ST200–B4	D6 ~ D16	425	479

◎ 非常适用 Most Suitable　○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
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适用加工材料 Workpiece Material	刃数 No.of Flutes	底刃形状 Characteristic of flute	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page
钛合金 Titanium Alloy	**ST260**							
	4	Corner-R	AlCrN	4刃不等齿距长颈圆角头内冷 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST260–RN4	D12 ~ D25	397	480
	ST300							
	4	Corner-R	AlCrN	4刃不等齿距长颈圆角头内冷 4 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST300–RN4	D12 ~ D20	398	481
	5	Corner-R	AlCrN	5刃不等齿距长颈圆角头内冷 5 Flute，Corner Radius with Reduced Neck Unequal Flute Spacing，Internal Coolant	ST300–RN5	D16 ~ D25	399	482
高硬钢 Hardened Steels	**SH160**							
	2	Square	AlTiN	2刃平头 2 Flute, Standard Length	SH160–S2	D0.5 ~ D20	342	483
	4	Square	AlTiN	4刃平头 4 Flute, Standard Length	SH160–S4	D1 ~ D20	343	483
	4	Square	AlTiN	4刃长柄平头 4 Flute, with Long Shank Length	SH160–SH4	D3 ~ D10	345	483
	6	Square	AlTiN	6刃平头 6 Flute, Standard Length	SH160–S6	D6 ~ D20	346	483
	2	Corner-R	AlTiN	2刃圆角头 2 Flute, Corner Radius	SH160–R2	D2 ~ D12	400	483
	4	Corner-R	AlTiN	4刃圆角头 4 Flute, Corner Radius	SH160–R4	D3 ~ D12	402	483
	4	Corner-R	AlTiN	4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	SH160–RH4	D6 ~ D10	404	483
	2	Ballnose	AlTiN	2刃球头 2 Flute, Ballnose	SH160–B2	D0.5 ~ D16	426	483
	2	Ballnose	AlTiN	2刃长柄球头 2 Flute Ballnose, with Long Shank length	SH160–BH2	D6 ~ D12	428	483
	4	Ballnose	AlTiN	4刃球头 4 Flute, Ballnose	SH160–B4	D2 ~ D16	429	483
	SH200–H							
	4	Square	TiAlCrSiN	NEW 4刃平头 4 Flute, Standard Length	SH200–S4–H	D1 ~ D12	347	484
	4	Square	TiAlCrSiN	NEW 4刃长柄平头 4 Flute, with Long Shank Length	SH200–SH4–H	D1 ~ D12	348	484
	4	Corner-R	TiAlCrSiN	NEW 4刃圆角头 4 Flute, Corner Radius	SH200–R4–H	D3 ~ D12	405	484
	4	Corner-R	TiAlCrSiN	NEW 4刃长柄圆角头 4 Flute Corner Radius, with Long Shank Length	SH200–RH4–H	D5 ~ D12	406	484
	SHM100							
	2	Square	AlTiN	2刃长颈平头 2 Flute Square End, Miniature Sizes with Neck	SHM100–SN2	D0.4 ~ D2	349	485
	2	Ballnose	AlTiN	2刃长颈球头 2 Flute Ballnose, Miniature Sizes with Neck	SHM100–BN2	D0.4 ~ D2	430	485

◎ 非常适用 Most Suitable　○ 一般适用 Suitable

	工件材料 Workpiece Material										
	P		M	K	N			S		H	
	1 2 3 4	5 6	1 2 3	1 2 3	1 2 3	4	5	1 2 3	4	1	2
	碳钢、合金钢Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金Copper Alloys	石墨、复合材料 Graphite, Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	高硬钢 Hardened Steel	高硬钢 Hardened Steel
	<35HRC	<48HRC								45–55HRC	55–60HRC
	○	○	○						◎		
	○	○	○						◎		
	○	○	○						◎		
										◎	
										◎	
										◎	
										◎	
										◎	
										◎	
										◎	
										◎	
										◎	
		◎								◎	○
		◎								◎	○
		◎								◎	○
		◎								◎	○
										◎	○
										◎	○

UP100–SS2

2刃短刃平头

2 Flute,Stub Length

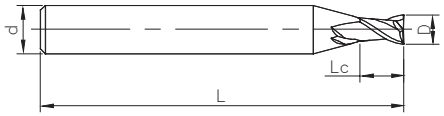


Fig1

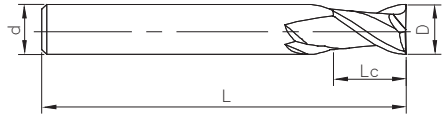


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–SS2–01002	1	2	50	4	1	○
UP100–SS2–02003	2	3	50	4	1	●
UP100–SS2–03005	3	5	50	4	1	●
UP100–SS2–04006	4	6	50	4	2	○
UP100–SS2–05008	5	8	50	6	1	○
UP100–SS2–06009	6	9	50	6	2	○
UP100–SS2–07010	7	10	60	8	1	○
UP100–SS2–08012	8	12	60	8	2	○
UP100–SS2–10015	10	15	75	10	2	●
UP100–SS2–12018	12	18	75	12	2	●
UP100–SS2–16024	16	24	100	16	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–S2

2刃平头

2 Flute,Standard Length

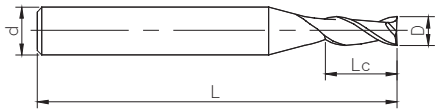


Fig1

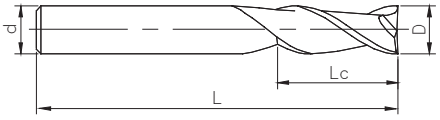


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S2–01003	1	3	50	4	1	●
UP100–S2–01505	1.5	5	50	4	1	●
UP100–S2–02006	2	6	50	4	1	○
UP100–S2–02506	2.5	6	50	4	1	○
UP100–S2–03009	3	9	50	4	1	●
UP100–S2–63009	3	9	50	6	1	●
UP100–S2–03509	3.5	9	50	4	1	●
UP100–S2–63509	3.5	9	50	6	1	●
UP100–S2–04011	4	11	50	4	2	●
UP100–S2–64011	4	11	50	6	1	●
UP100–S2–04511	4.5	11	50	6	1	●
UP100–S2–05013	5	13	50	6	1	○
UP100–S2–06016	6	16	50	6	2	●
UP100–S2–06516	6.5	16	60	8	1	●
UP100–S2–07020	7	20	60	8	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–S2

2刃平头

2 Flute,Standard Length

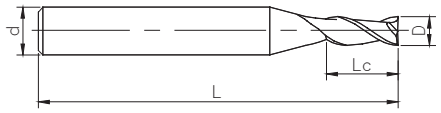


Fig1

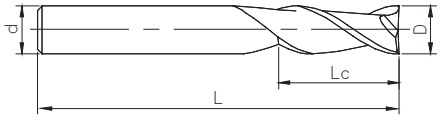


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S2–07520	7.5	20	60	8	1	●
UP100–S2–08020	8	20	60	8	2	●
UP100–S2–08523	8.5	23	75	10	1	●
UP100–S2–09023	9	23	75	10	1	●
UP100–S2–09525	9.5	25	75	10	1	●
UP100–S2–10025	10	25	75	10	2	●
UP100–S2–10526	10.5	26	75	12	1	●
UP100–S2–11028	11	28	75	12	1	●
UP100–S2–12030	12	30	75	12	2	●
UP100–S2–14034	14	34	100	14	2	○
UP100–S2–15036	15	36	90	16	1	○
UP100–S2–16036	16	36	100	16	2	●
UP210–S2–17040	17	40	100	20	1	○
UP100–S2–18040	18	40	100	18	2	●
UP100–S2–19040	19	40	100	20	1	●
UP100–S2–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–SL2

2刃长刃平头

2 Flute,Long Flute Length

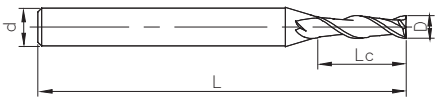


Fig1

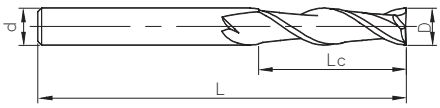


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–SL2–02015	2	15	75	4	1	○
UP100–SL2–03025	3	25	75	4	1	●
UP100–SL2–04030	4	30	75	4	2	●
UP100–SL2–05030	5	30	75	6	1	●
UP100–SL2–06035	6	35	75	6	2	●
UP100–SL2–08040	8	40	100	8	2	●
UP100–SL2–10045	10	45	100	10	2	○
UP100–SL2–12050	12	50	100	12	2	●
UP100–SL2–14055	14	55	100	14	2	●
UP100–SL2–16050	16	50	150	16	2	●
UP100–SL2–16060	16	60	150	16	2	●
UP100–SL2–18065	18	65	150	18	2	●
UP100–SL2–20070	20	70	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–SH2

2刃长柄平头

2 Flute, with Long Shank Length

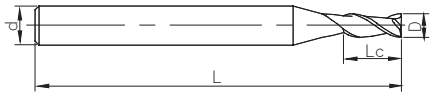


Fig1

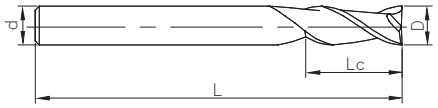


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–SH2–02006	2	6	75	4	1	●
UP100–SH2–03009	3	9	75	4	1	●
UP100–SH2–63012	3	12	75	6	1	●
UP100–SH2–04011	4	11	75	4	2	○
UP100–SH2–05020	5	20	75	6	1	●
UP100–SH2–06016	6	16	100	6	2	○
UP100–SH2–06020	6	20	100	6	2	○
UP100–SH2–08020	8	20	75	8	2	●
UP100–SH2–08025	8	25	100	8	2	●
UP100–SH2–10030	10	30	100	10	2	●
UP100–SH2–12035	12	35	100	12	2	●
UP100–SH2–16036	16	36	150	16	2	●
UP100–SH2–20045	20	45	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–S3

3刃平头

3 Flute, Standard Length

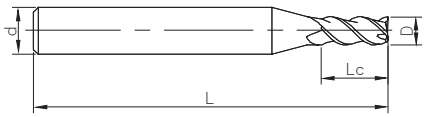


Fig1

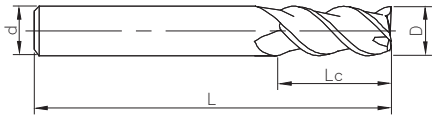


Fig2



SHANK h6 | 3 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S3–02006	2	6	50	4	1	○
UP100–S3–03009	3	9	50	4	1	●
UP100–S3–04011	4	11	50	4	2	●
UP100–S3–05013	5	13	50	6	1	●
UP100–S3–06016	6	16	50	6	2	●
UP100–S3–06516	6.5	16	60	8	1	○
UP100–S3–08020	8	20	60	8	2	●
UP100–S3–09524	9.5	24	75	10	1	●
UP100–S3–10025	10	25	75	10	2	●
UP100–S3–12030	12	30	75	12	2	●
UP100–S3–16036	16	36	100	16	2	●
UP100–S3–18040	18	40	100	18	2	●
UP100–S3–20045	20	45	100	20	2	●
UP100–S3–25050	25	50	100	25	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–S4

4刃平头

4 Flute, Standard Length

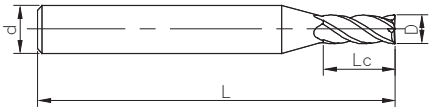


Fig1

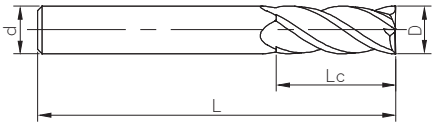


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S4–01003	1	3	50	4	1	●
UP100–S4–01505	1.5	5	50	4	1	○
UP100–S4–02006	2	6	50	4	1	●
UP100–S4–02508	2.5	8	50	4	1	●
UP100–S4–03006	3	6	50	4	1	○
UP100–S4–03009	3	9	50	4	1	●
UP100–S4–63006	3	6	50	6	1	●
UP100–S4–63009	3	9	50	6	1	●
UP100–S4–03511	3.5	11	50	4	1	●
UP100–S4–63509	3.5	9	50	6	1	●
UP100–S4–04011	4	11	50	4	2	●
UP100–S4–64011	4	11	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–S4

4刃平头

4 Flute, Standard Length

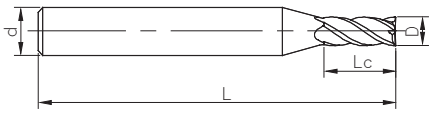


Fig1

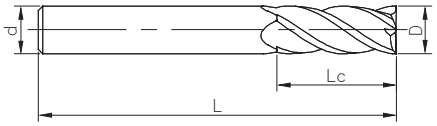


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S4–04511	4.5	11	50	6	1	●
UP100–S4–05008	5	8	50	6	1	●
UP100–S4–05013	5	13	50	6	1	●
UP100–S4–05513	5.5	13	50	6	1	●
UP100–S4–06016	6	16	50	6	2	●
UP100–S4–06516	6.5	16	60	8	1	○
UP100–S4–07020	7	20	60	8	1	●
UP100–S4–07520	7.5	20	60	8	1	●
UP100–S4–08020	8	20	60	8	2	●
UP100–S4–08523	8.5	23	75	10	1	●
UP100–S4–09023	9	23	75	10	1	○
UP100–S4–09525	9.5	25	75	10	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–S4

4刃平头

4 Flute, Standard Length

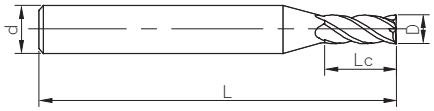


Fig1

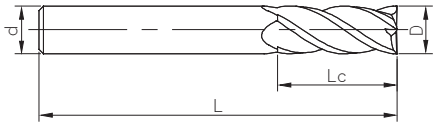


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S4–10025	10	25	75	10	2	●
UP100–S4–11028	11	28	75	12	1	●
UP100–S4–12030	12	30	75	12	2	○
UP100–S4–13032	13	32	90	14	1	●
UP100–S4–14034	14	34	100	14	2	●
UP100–S4–15036	15	36	100	16	1	○
UP100–S4–16036	16	36	100	16	2	●
UP100–S4–17038	17	38	100	18	1	●
UP100–S4–18038	18	38	100	18	2	●
UP100–S4–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–SL4

4刃长刃平头

4 Flute, Long Flute Length

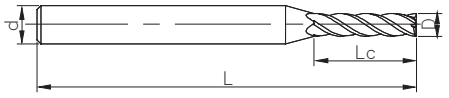


Fig1

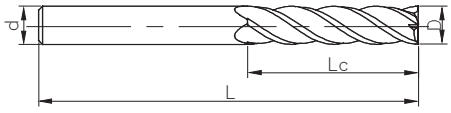


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–SL4–04030	4	30	75	4	2	●
UP100–SL4–05030	5	30	75	6	1	●
UP100–SL4–06030	6	30	100	6	2	○
UP100–SL4–06035	6	35	75	6	2	●
UP100–SL4–08040	8	40	100	8	2	●
UP100–SL4–10045	10	45	100	10	2	●
UP100–SL4–12040	12	40	150	12	2	●
UP100–SL4–12050	12	50	100	12	2	●
UP100–SL4–16050	16	50	150	16	2	●
UP100–SL4–16060	16	60	150	16	2	●
UP100–SL4–20070	20	70	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–SH4

4刃长柄平头

4 Flute, with Long Shank Length

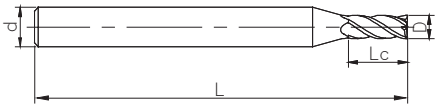


Fig1

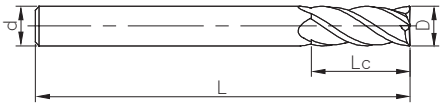


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–SH4–03009	3	9	75	4	1	●
UP100–SH4–63012	3	12	75	6	1	●
UP100–SH4–04011	4	11	75	4	2	●
UP100–SH4–64015	4	15	75	6	1	●
UP100–SH4–05020	5	20	75	6	1	○
UP100–SH4–06016	6	16	100	6	2	○
UP100–SH4–06020	6	20	75	6	2	○
UP100–SH4–08020	8	20	75	8	2	○
UP100–SH4–08025	8	25	100	8	2	●
UP100–SH4–10030	10	30	100	10	2	●
UP100–SH4–10035	10	35	150	10	2	●
UP100–SH4–12035	12	35	100	12	2	●
UP100–SH4–16036	16	36	150	16	2	●
UP100–SH4–20045	20	45	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–S6

6刃平头

6 Flute, Standard Length

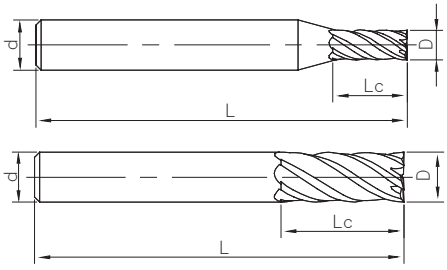


Fig1

Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP100–S6–06015	6	15	50	6	2	○
UP100–S6–08020	8	20	60	8	2	○
UP100–S6–10025	10	25	75	10	2	●
UP100–S6–12030	12	30	75	12	2	○
UP100–S6–16036	16	36	100	16	2	●
UP100–S6–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP210–SS2

2刃短刃平头

2 Flute, Stub Length

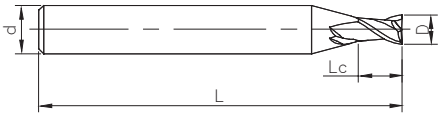


Fig1

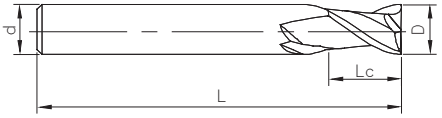


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SS2–01002	1	2	50	4	1	○
UP210–SS2–01502	1.5	2	50	4	1	○
UP210–SS2–02003	2	3	50	4	1	○
UP210–SS2–02504	2.5	4	50	4	1	○
UP210–SS2–03005	3	5	50	4	1	○
UP210–SS2–04006	4	6	50	4	2	●
UP210–SS2–05008	5	8	50	6	1	●
UP210–SS2–06009	6	9	50	6	2	●
UP210–SS2–07010	7	10	60	8	1	○
UP210–SS2–08012	8	12	60	8	2	●
UP210–SS2–10015	10	15	75	10	2	●
UP210–SS2–12018	12	18	75	12	2	○
UP210–SS2–16024	16	24	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S2

2刃平头

2 Flute, Standard Length

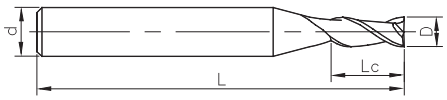


Fig1

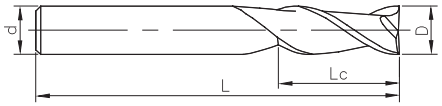


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S2–01003	1	3	50	4	1	●
UP210–S2–01504	1.5	4	50	4	1	●
UP210–S2–02006	2	6	50	4	1	●
UP210–S2–02506	2.5	6	50	4	1	○
UP210–S2–02508	2.5	8	50	4	1	●
UP210–S2–03009	3	9	50	4	1	●
UP210–S2–63009	3	9	50	6	1	●
UP210–S2–03509	3.5	9	50	4	1	○
UP210–S2–63509	3.5	9	50	6	1	○
UP210–S2–04011	4	11	50	4	2	●
UP210–S2–64011	4	11	50	6	1	●
UP210–S2–04511	4.5	11	50	6	1	○
UP210–S2–05013	5	13	50	6	1	●
UP210–S2–06016	6	16	50	6	2	●
UP210–S2–06516	6.5	16	60	8	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S2

2刃平头

2 Flute, Standard Length

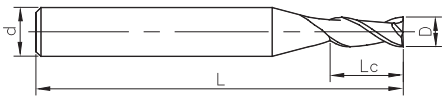


Fig1

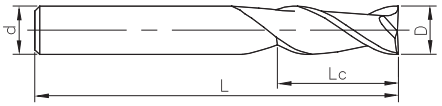


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S2–07020	7	20	60	8	1	●
UP210–S2–07520	7.5	20	60	8	1	○
UP210–S2–08020	8	20	60	8	2	●
UP210–S2–08523	8.5	23	75	10	1	○
UP210–S2–09023	9	23	75	10	1	●
UP210–S2–09525	9.5	25	75	10	1	○
UP210–S2–10025	10	25	75	10	2	●
UP210–S2–10526	10.5	26	75	12	1	○
UP210–S2–11028	11	28	75	12	1	●
UP210–S2–12030	12	30	75	12	2	●
UP210–S2–14034	14	34	100	14	2	●
UP210–S2–15036	15	36	90	16	1	○
UP210–S2–16036	16	36	100	16	2	●
UP210–S2–17040	17	40	100	20	1	○
UP210–S2–18040	18	40	100	18	2	●
UP210–S2–19040	19	40	100	20	1	○
UP210–S2–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SL2

2刃长刃平头

2 Flute, Long Flute Length

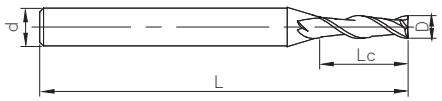


Fig1

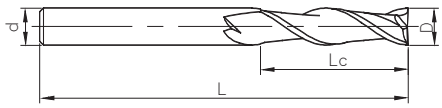


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SL2–02015	2	15	75	4	1	○
UP210–SL2–03025	3	25	75	4	1	○
UP210–SL2–04030	4	30	75	4	2	○
UP210–SL2–05030	5	30	75	6	1	●
UP210–SL2–06035	6	35	75	6	2	○
UP210–SL2–08040	8	40	100	8	2	○
UP210–SL2–10045	10	45	100	10	2	●
UP210–SL2–12050	12	50	100	12	2	○
UP210–SL2–14055	14	55	100	14	2	●
UP210–SL2–16050	16	50	150	16	2	○
UP210–SL2–16060	16	60	150	16	2	○
UP210–SL2–18065	18	65	150	18	2	○
UP210–SL2–20070	20	70	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SH2

2刃长柄平头

2 Flute, with Long Shank Length

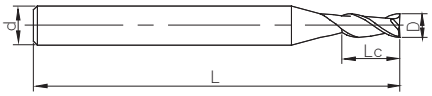


Fig1

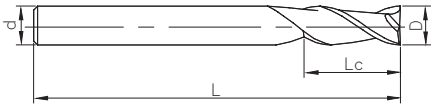


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SH2–02006	2	6	75	4	1	○
UP210–SH2–03009	3	9	75	4	1	○
UP210–SH2–63012	3	12	75	6	1	○
UP210–SH2–04011	4	11	75	4	2	○
UP210–SH2–05020	5	20	75	6	1	○
UP210–SH2–06016	6	16	100	6	2	○
UP210–SH2–06020	6	20	100	6	2	○
UP210–SH2–08020	8	20	75	8	2	○
UP210–SH2–08025	8	25	100	8	2	○
UP210–SH2–10030	10	30	100	10	2	○
UP210–SH2–12035	12	35	100	12	2	○
UP210–SH2–16036	16	36	150	16	2	○
UP210–SH2–20045	20	45	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S3

3刃平头

3 Flute, Standard Length

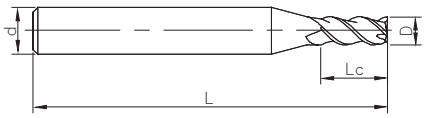


Fig1

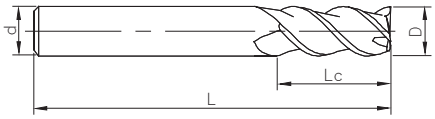


Fig2



SHANK h6 | 3 | AlCrSiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S3–02006	2	6	50	4	1	○
UP210–S3–03009	3	9	50	4	1	○
UP210–S3–04011	4	11	50	4	2	○
UP210–S3–05013	5	13	50	6	1	●
UP210–S3–06016	6	16	50	6	2	○
UP210–S3–06516	6.5	16	60	8	1	○
UP210–S3–08020	8	20	60	8	2	○
UP210–S3–09524	9.5	24	75	10	1	○
UP210–S3–10025	10	25	75	10	2	●
UP210–S3–12030	12	30	75	12	2	○
UP210–S3–16036	16	36	100	16	2	○
UP210–S3–18040	18	40	100	18	2	○
UP210–S3–20045	20	45	100	20	2	○
UP210–S3–25050	25	50	100	25	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SS4

4刃短刃平头

4 Flute, Stub Length

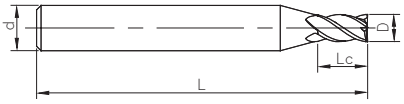


Fig1

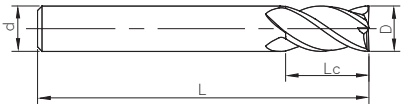


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SS4–01002	1	2	50	4	1	○
UP210–SS4–01502	1.5	2	50	4	1	○
UP210–SS4–02003	2	3	50	4	1	○
UP210–SS4–02504	2.5	4	50	4	1	○
UP210–SS4–03005	3	5	50	4	1	○
UP210–SS4–04006	4	6	50	4	2	●
UP210–SS4–05008	5	8	50	6	1	○
UP210–SS4–06009	6	9	50	6	2	●
UP210–SS4–07010	7	10	60	8	1	○
UP210–SS4–08012	8	12	60	8	2	○
UP210–SS4–10015	10	15	75	10	2	○
UP210–SS4–12018	12	18	75	12	2	●
UP210–SS4–16024	16	24	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S4

4刃平头

4 Flute, Standard Length

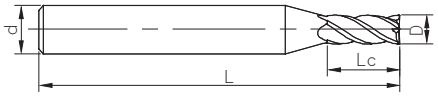


Fig1

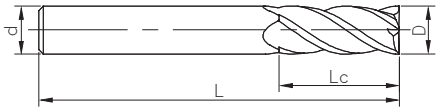


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S4–01003	1	3	50	4	1	●
UP210–S4–01505	1.5	5	50	4	1	●
UP210–S4–61505	1.5	5	50	6	1	●
UP210–S4–02006	2	6	50	4	1	●
UP210–S4–62006	2	6	50	6	1	●
UP210–S4–02508	2.5	8	50	4	1	●
UP210–S4–62508	2.5	8	50	6	1	●
UP210–S4–63006	3	6	50	6	1	○
UP210–S4–03009	3	9	50	4	1	●
UP210–S4–63009	3	9	50	6	1	●
UP210–S4–03511	3.5	11	50	4	1	●
UP210–S4–63509	3.5	9	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S4

4刃平头

4 Flute, Standard Length

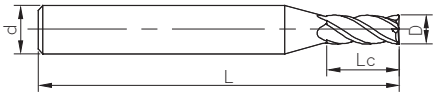


Fig1

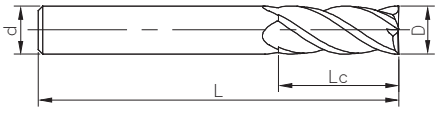


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S4–04011	4	11	50	4	2	●
UP210–S4–64011	4	11	50	6	1	●
UP210–S4–04511	4.5	11	50	6	1	●
UP210–S4–05008	5	8	50	6	1	●
UP210–S4–05013	5	13	50	6	1	●
UP210–S4–05516	5.5	16	50	6	1	●
UP210–S4–06016	6	16	50	6	2	●
UP210–S4–06516	6.5	16	60	8	1	●
UP210–S4–07020	7	20	60	8	1	●
UP210–S4–07520	7.5	20	60	8	1	○
UP210–S4–08020	8	20	60	8	2	●
UP210–S4–08523	8.5	23	75	10	1	●
UP210–S4–09023	9	23	75	10	1	●
UP210–S4–09525	9.5	25	75	10	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S4

4刃平头

4 Flute, Standard Length

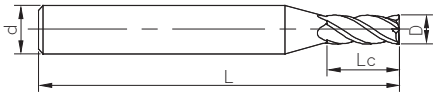


Fig1

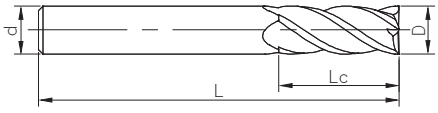


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S4–10025	10	25	75	10	2	●
UP210–S4–11028	11	28	75	12	1	●
UP210–S4–12030	12	30	75	12	2	●
UP210–S4–13032	13	32	100	14	1	●
UP210–S4–14032	14	32	75	14	2	●
UP210–S4–14034	14	34	100	14	2	●
UP210–S4–15036	15	36	100	16	1	●
UP210–S4–16036	16	36	100	16	2	●
UP210–S4–16040	16	40	100	16	2	●
UP210–S4–16045	16	45	100	16	2	●
UP210–S4–17038	17	38	100	18	1	○
UP210–S4–18045	18	45	100	18	2	●
UP210–S4–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SL4

4刃长刃平头

4 Flute, Long Flute Length

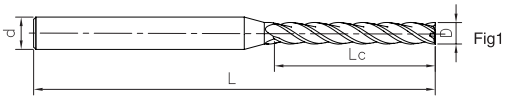


Fig1

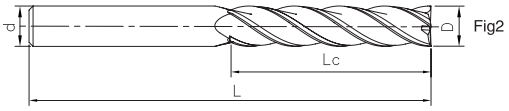


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SL4–01004	1	4	50	4	1	○
UP210–SL4–02010	2	10	50	4	1	●
UP210–SL4–03015	3	15	60	4	1	●
UP210–SL4–63015	3	15	60	6	1	●
UP210–SL4–04020	4	20	60	4	2	●
UP210–SL4–64020	4	20	75	6	1	●
UP210–SL4–04030	4	30	75	4	2	○
UP210–SL4–05025	5	25	75	6	1	●
UP210–SL4–05030	5	30	75	6	1	○
UP210–SL4–06030	6	30	75	6	2	●
UP210–SL4–06035	6	35	75	6	2	○
UP210–SL4–08035	8	35	100	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SL4

4刃长刃平头

4 Flute, Long Flute Length

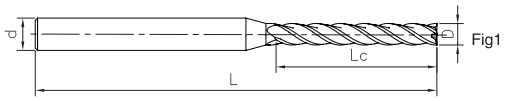


Fig1

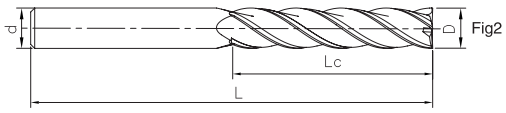


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SL4–08040	8	40	100	8	2	○
UP210–SL4–10045	10	45	100	10	2	●
UP210–SL4–10050	10	50	100	10	2	●
UP210–SL4–12045	12	45	100	12	2	●
UP210–SL4–12050	12	50	100	12	2	●
UP210–SL4–14045	14	45	100	14	2	●
UP210–SL4–16050	16	50	150	16	2	○
UP210–SL4–16060	16	60	150	16	2	●
UP210–SL4–16070	16	70	150	16	2	●
UP210–SL4–18070	18	70	150	18	2	●
UP210–SL4–20070	20	70	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–SH4

4刃长柄平头

4 Flute, with Long Shank Length

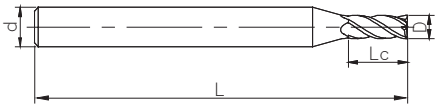


Fig1

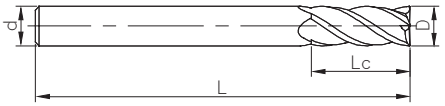


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–SH4–02010	2	10	75	4	1	●
UP210–SH4–03012	3	12	75	4	1	●
UP210–SH4–04011	4	11	75	4	2	●
UP210–SH4–04015	4	15	75	4	2	○
UP210–SH4–05020	5	20	75	6	1	○
UP210–SH4–06016	6	16	75	6	2	○
UP210–SH4–06020	6	20	75	6	2	○
UP210–SH4–08020	8	20	75	8	2	○
UP210–SH4–08025	8	25	100	8	2	●
UP210–SH4–10030	10	30	100	10	2	○
UP210–SH4–10035	10	35	100	10	2	○
UP210–SH4–12035	12	35	100	12	2	●
UP210–SH4–16036	16	36	150	16	2	○
UP210–SH4–20045	20	45	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–S6

6刃平头

6 Flute, Standard Length

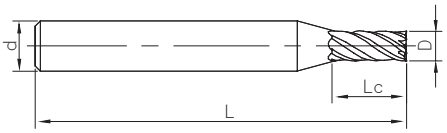


Fig1

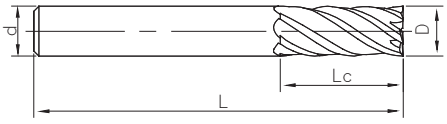


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UP210–S6–06015	6	15	50	6	2	○
UP210–S6–08020	8	20	60	8	2	○
UP210–S6–10025	10	25	75	10	2	○
UP210–S6–12030	12	30	75	12	2	○
UP210–S6–16036	16	36	100	16	2	○
UP210–S6–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

SP210–S3

3刃平头变螺旋

3 Flute, with Variable Helix

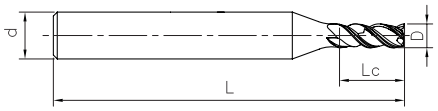


Fig1

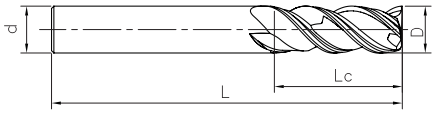


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SP210–S3–03009	3	9	50	4	1	●
SP210–S3–04011	4	11	50	4	2	●
SP210–S3–05013	5	13	50	6	1	●
SP210–S3–06016	6	16	50	6	2	●
SP210–S3–08020	8	20	60	8	2	●
SP210–S3–10025	10	25	75	10	2	●
SP210–S3–12030	12	30	75	12	2	●
SP210–S3–16036	16	36	100	16	2	●
SP210–S3–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–C3

3刃平头变螺旋(刀尖倒角)

3 Flute, Variable Helix with Chamfer

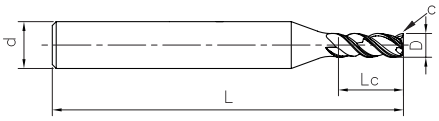


Fig1

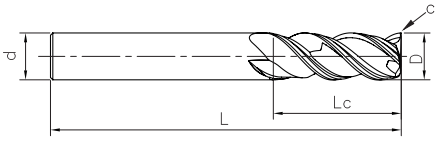


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	C	L	d	图号 Figure No.	库存 Stock
SP210–C3–06020	6	16	0.2	50	6	2	●
SP210–C3–08020	8	20	0.2	75	8	2	●
SP210–C3–10030	10	25	0.3	75	10	2	●
SP210–C3–12030	12	30	0.3	75	12	2	●
SP210–C3–16030	16	36	0.3	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–C4

4刃平头双螺旋(刀尖倒角)

4 Flute, Variable Helix with Chamfer

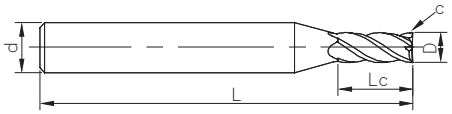


Fig1

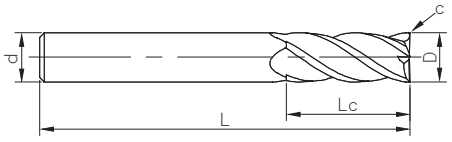


Fig2



SHANK h6 | 4 | AlCrSiN | 35°/38° Helix | Chamfer

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	C	L	d	图号 Figure No.	库存 Stock
SP210–C4–03003	3	9	0.03	50	4	1	○
SP210–C4–03013	3	9	0.13	50	4	1	○
SP210–C4–04004	4	11	0.04	50	4	2	●
SP210–C4–04018	4	11	0.18	50	4	2	●
SP210–C4–05005	5	13	0.05	50	6	1	○
SP210–C4–05020	5	13	0.2	50	6	1	●
SP210–C4–06006	6	16	0.06	50	6	2	○
SP210–C4–06020	6	16	0.2	50	6	2	●
SP210–C4–08008	8	20	0.08	60	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–C4

4刃平头双螺旋(刀尖倒角)

4 Flute, Variable Helix with Chamfer

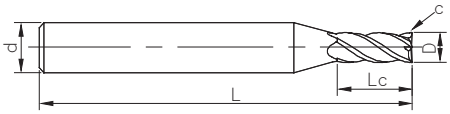


Fig1

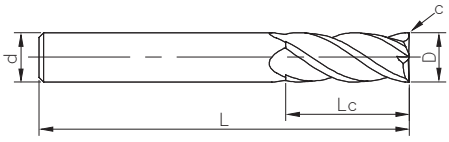


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	C	L	d	图号 Figure No.	库存 Stock
SP210–C4–08020	8	20	0.2	60	8	2	●
SP210–C4–10010	10	25	0.1	75	10	2	●
SP210–C4–10030	10	25	0.3	75	10	2	●
SP210–C4–12012	12	30	0.12	75	12	2	○
SP210–C4–12030	12	30	0.3	75	12	2	●
SP210–C4–16015	16	36	0.15	100	16	2	○
SP210–C4–16040	16	36	0.4	100	16	2	●
SP210–C4–20015	20	45	0.15	100	20	2	○
SP210–C4–20050	20	45	0.5	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–S4

4刃平头双螺旋

4 Flute, with Variable Helix

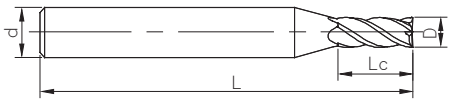


Fig1

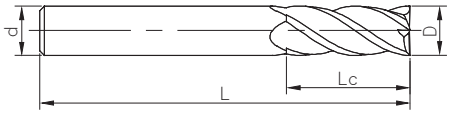


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SP210–S4–02006	2	6	50	4	1	○
SP210–S4–03009	3	9	50	4	1	●
SP210–S4–04011	4	11	50	4	2	●
SP210–S4–05013	5	13	50	6	1	●
SP210–S4–06016	6	16	50	6	2	●
SP210–S4–08020	8	20	60	8	2	●
SP210–S4–10025	10	25	75	10	2	●
SP210–S4–12030	12	30	75	12	2	●
SP210–S4–16036	16	36	100	16	2	●
SP210–S4–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–CN4

4刃长颈平头双螺旋（刀尖倒角）

4 Flute, with Variable Helix and Reduced Neck

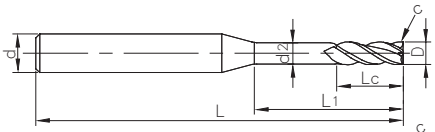


Fig1

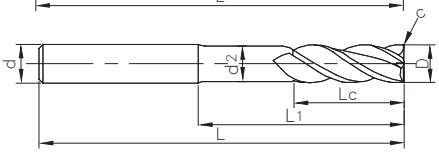


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号	D	Lc	C	d2	L1	L	d	图号 Figure No.	库存 Stock
SP210–CN4–03013	3	10	0.13	2.9	18	75	4	1	●
SP210–CN4–04018	4	12	0.18	3.8	20	75	4	2	●
SP210–CN4–06020	6	16	0.2	5.8	24	100	6	2	○
SP210–CN4–08020	8	20	0.2	7.5	30	100	8	2	●
SP210–CN4–10030	10	25	0.3	9.5	40	150	10	2	●
SP210–CN4–12030	12	30	0.3	11	40	150	12	2	●
SP210–CN4–16040	16	36	0.4	15	50	150	16	2	○
SP210–CN4–20050	20	45	0.5	19	60	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

UPR100–S4

4刃粗加工平头

4 Flute Square End, with Roughing Geometry

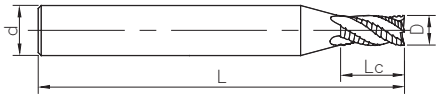


Fig1

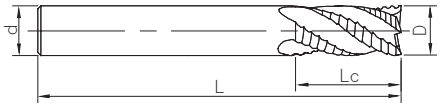


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UPR100–S4–06015	6	15	50	6	2	●
UPR100–S4–08020	8	20	60	8	2	●
UPR100–S4–10025	10	25	75	10	2	●
UPR100–S4–12030	12	30	75	12	2	●
UPR100–S4–16036	16	36	100	16	2	●
UPR100–S4–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤6	$^{0}_{-0.03}$
6 < D≤10	$^{0}_{-0.04}$
D > 10	$^{0}_{-0.05}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P456

UPM100–SN2

2刃微小径长颈平头

2 Flute Square End, Miniature Sizes with Neck

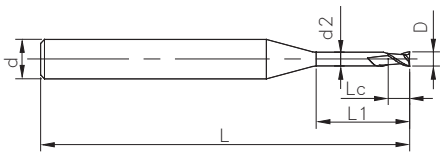


Fig1



SHANK h6 | 2 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
UPM100–SN2–00802	0.8	1.2	0.75	2	50	4	1	○
UPM100–SN2–00804	0.8	1.2	0.75	4	50	4	1	○
UPM100–SN2–00806	0.8	1.2	0.75	6	50	4	1	○
UPM100–SN2–01006	1.0	1.5	0.95	6	50	4	1	○
UPM100–SN2–01008	1.0	1.5	0.95	8	50	4	1	○
UPM100–SN2–01010	1.0	1.5	0.95	10	50	4	1	●
UPM100–SN2–01508	1.5	2.0	1.44	8	50	4	1	○
UPM100–SN2–01510	1.5	2.0	1.44	10	50	4	1	○
UPM100–SN2–01512	1.5	2.0	1.44	12	50	4	1	●
UPM100–SN2–02008	2.0	3.0	1.92	8	50	4	1	○
UPM100–SN2–02010	2.0	3.0	1.92	10	50	4	1	○
UPM100–SN2–02012	2.0	3.0	1.92	12	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P458

US200–S2

2刃平头

2Flute, Standard Length

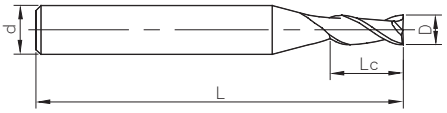


Fig1

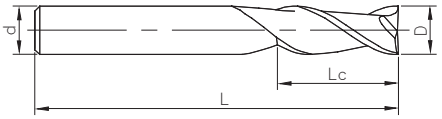


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US200–S2–00501	0.5	1	50	4	1	●
US200–S2–00802	0.8	2	50	4	1	○
US200–S2–01003	1	3	50	4	1	○
US200–S2–01504	1.5	4	50	4	1	○
US200–S2–02006	2	6	50	4	1	○
US200–S2–02508	2.5	8	50	4	1	○
US200–S2–63008	3	8	50	6	1	●
US200–S2–03009	3	9	50	4	1	●
US200–S2–03510	3.5	10	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–S2

2刃平头

2Flute, Standard Length

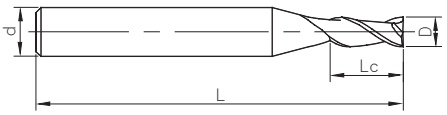


Fig1

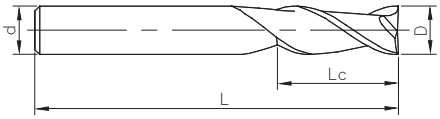


Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US200–S2–04011	4	11	50	4	2	●
US200–S2–64011	4	11	50	6	1	●
US200–S2–05013	5	13	50	6	1	●
US200–S2–06016	6	16	50	6	2	●
US200–S2–08020	8	20	60	8	2	●
US200–S2–10025	10	25	75	10	2	●
US200–S2–12030	12	30	75	12	2	●
US200–S2–16036	16	36	100	16	2	●
US200–S2–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–SS4

4刃短刃平头

4 Flute, Stub Length

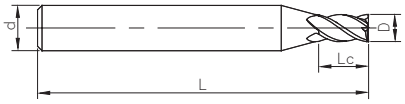


Fig1

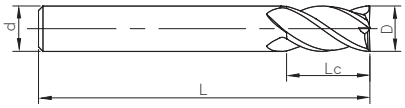


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US200–SS4–02004	2	4	50	4	1	●
US200–SS4–03004	3	4	50	4	1	○
US200–SS4–04006	4	6	50	4	2	●
US200–SS4–05008	5	8	50	6	1	○
US200–SS4–06009	6	9	50	6	2	●
US200–SS4–08010	8	10	60	8	2	○
US200–SS4–10012	10	12	75	10	2	○
US200–SS4–12016	12	16	75	12	2	●
US200–SS4–14020	14	20	75	14	2	○
US200–SS4–16024	16	24	100	16	2	●
US200–SS4–18027	18	27	100	18	2	●
US200–SS4–20030	20	30	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

US200–S4

4刃平头

4 Flute, Standard Length

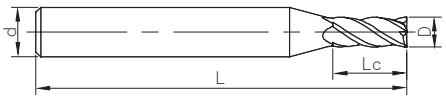


Fig1

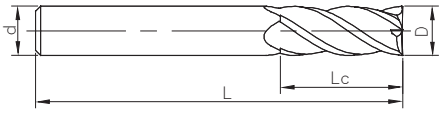


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US200–S4–01003	1	3	50	4	1	●
US200–S4–01504	1.5	4	50	4	1	●
US200–S4–02006	2	6	50	4	1	●
US200–S4–02508	2.5	8	50	4	1	●
US200–S4–63008	3	8	50	6	1	●
US200–S4–03009	3	9	50	4	1	●
US200–S4–03510	3.5	10	50	4	1	●
US200–S4–04011	4	11	50	4	2	●
US200–S4–64011	4	11	50	6	1	●
US200–S4–05013	5	13	50	6	1	●
US200–S4–06016	6	16	50	6	2	●
US200–S4–08020	8	20	60	8	2	●
US200–S4–10025	10	25	75	10	2	●
US200–S4–12030	12	30	75	12	2	●
US200–S4–16036	16	36	100	16	2	○
US200–S4–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

US200–SN4

4刃长颈平头

4 Flute,with Reduced Neck Diameter

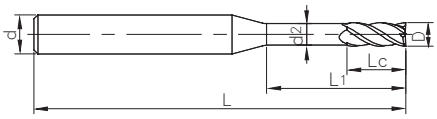


Fig1

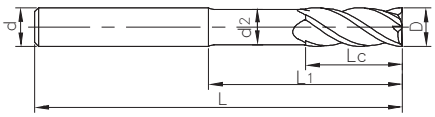


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
US200–SN4–02008	2	4	1.9	8	50	4	1	●
US200–SN4–04012	4	8	3.8	12	50	4	2	●
US200–SN4–06018	6	13	5.8	18	50	6	2	●
US200–SN4–08025	8	19	7.5	25	60	8	2	○
US200–SN4–10032	10	22	9.5	32	75	10	2	○
US200–SN4–12034	12	24	11	34	75	12	2	●
US200–SN4–16036	16	26	15	36	100	16	2	●
US200–SN4–20040	20	28	19	40	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat-resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

US300–SS4

4刃短刃平头

4 Flute, Stub Length

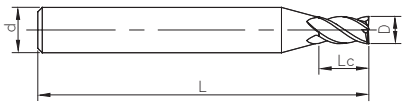


Fig1

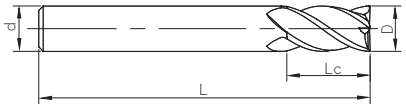


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US300–SS4–01002	1	2	50	4	1	●
US300–SS4–01503	1.5	3	50	4	1	●
US300–SS4–02002	2	2	50	4	1	○
US300–SS4–02004	2	4	50	4	1	○
US300–SS4–03003	3	3	50	4	1	●
US300–SS4–03004	3	4	50	4	1	○
US300–SS4–04004	4	4	50	4	2	○
US300–SS4–04006	4	6	50	4	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat-resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P462

US300–S4

4刃平头

4 Flute, Standard Length

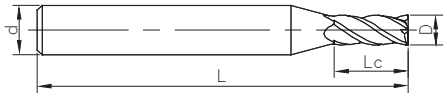


Fig1

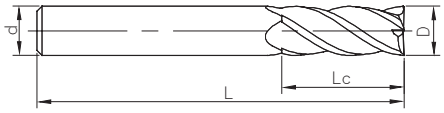


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
US300–S4–01003	1	3	50	4	1	●
US300–S4–01503	1.5	3.5	50	4	1	○
US300–S4–01504	1.5	4	50	4	1	●
US300–S4–02006	2	6	50	4	1	●
US300–S4–02508	2.5	8	50	4	1	●
US300–S4–03009	3	9	50	4	1	●
US300–S4–03510	3.5	10	50	4	1	●
US300–S4–04011	4	11	50	4	2	●
US300–S4–64011	4	11	50	6	1	●
US300–S4–05013	5	13	50	6	1	●
US300–S4–06016	6	16	50	6	2	●
US300–S4–08020	8	20	60	8	2	●
US300–S4–10025	10	25	75	10	2	●
US300–S4–12030	12	30	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P462

SS200–CS4

4刃短刃平头不等齿距

44 Flute, Stub Length with variable Helix

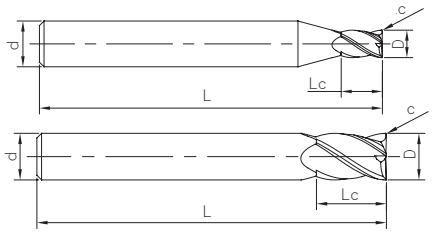


Fig1

Fig2



SHANK h6 | 4 | AlCrSiN | 36°/38° Helix | Chamfer

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	C	L	d	图号 Figure No.	库存 Stock
SS200–CS4–02002	2	4	0.02	50	6	1	●
SS200–CS4–03003	3	6	0.03	50	6	1	●
SS200–CS4–04004	4	8	0.04	50	6	1	●
SS200–CS4–05005	5	9	0.05	50	6	1	●
SS200–CS4–06006	6	10	0.06	50	6	2	●
SS200–CS4–08008	8	12	0.08	60	8	2	●
SS200–CS4–10010	10	14	0.10	75	10	2	●
SS200–CS4–12012	12	16	0.12	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P463

SS200–C4

4刃平头不等齿距

4 Flute, with Variable Helix

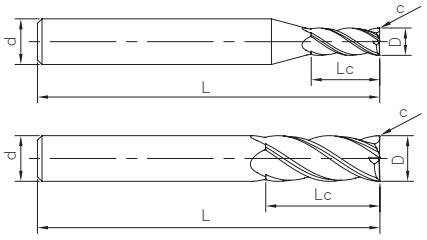


Fig1

Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	C	L	d	图号 Figure No.	库存 Stock
SS200–C4–02002	2	6	0.02	50	6	1	●
SS200–C4–03003	3	9	0.03	50	6	1	●
SS200–C4–04004	4	11	0.04	50	6	1	●
SS200–C4–05005	5	13	0.05	50	6	1	●
SS200–C4–06006	6	15	0.06	50	6	2	●
SS200–C4–08008	8	20	0.08	60	8	2	●
SS200–C4–10010	10	25	0.10	75	10	2	●
SS200–C4–12012	12	30	0.12	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P463

UA100–S2

2刃平头

2 Flute, Standard Length

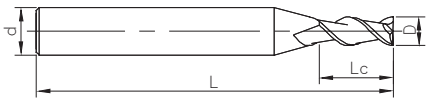


Fig1

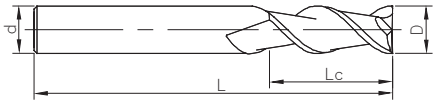


Fig2



SHANK h6 | 2 | 45° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–S2–01003	1	3	50	4	1	●
UA100–S2–01504	1.5	4	50	4	1	●
UA100–S2–02006	2	6	50	4	1	●
UA100–S2–03009	3	9	50	4	1	●
UA100–S2–63009	3	9	50	6	1	●
UA100–S2–04006	4	6	50	4	2	○
UA100–S2–04011	4	11	50	4	2	●
UA100–S2–64011	4	11	50	6	1	●
UA100–S2–04512	4.5	12	50	6	1	●
UA100–S2–05013	5	13	50	6	1	●
UA100–S2–05516	5.5	16	50	6	1	●
UA100–S2–06006	6	6	50	6	2	○
UA100–S2–06012	6	12	50	6	2	○
UA100–S2–06016	6	16	50	6	2	●
UA100–S2–07020	7	20	60	8	1	●
UA100–S2–08020	8	20	60	8	2	●
UA100–S2–09023	9	23	75	10	1	●
UA100–S2–10025	10	25	75	10	2	○
UA100–S2–12030	12	30	75	12	2	●
UA100–S2–16036	16	36	100	16	2	○
UA100–S2–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–SL2

2刃长刃平头

2 Flute, Long Flute Length

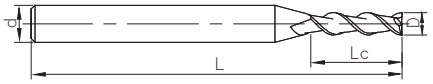


Fig1



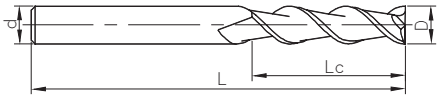
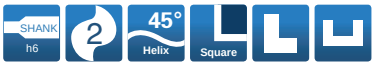


Fig2



标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–SL2–02020	2	20	75	4	1	○
UA100–SL2–03025	3	25	75	4	1	●
UA100–SL2–04030	4	30	75	4	2	○
UA100–SL2–05030	5	30	75	6	1	●
UA100–SL2–06035	6	35	75	6	2	○
UA100–SL2–08040	8	40	100	8	2	●
UA100–SL2–10045	10	45	100	10	2	○
UA100–SL2–12050	12	50	100	12	2	●
UA100–SL2–16060	16	60	150	16	2	○
UA100–SL2–20070	20	70	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–SH2

2刃长柄平头

2 Flute, with Long Shank Length

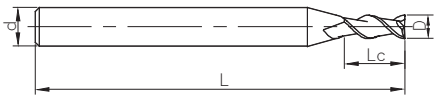


Fig1

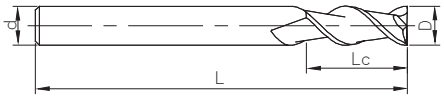


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–SH2–02006	2	6	75	4	1	●
UA100–SH2–03009	3	9	75	4	1	○
UA100–SH2–04010	4	10	75	4	2	●
UA100–SH2–06016	6	16	75	6	2	●
UA100–SH2–08020	8	20	100	8	2	●
UA100–SH2–10025	10	25	100	10	2	○
UA100–SH2–12030	12	30	100	12	2	○
UA100–SH2–16036	16	36	150	16	2	●
UA100–SH2–20045	20	45	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–S3

3刃平头

3 Flute, Standard Length

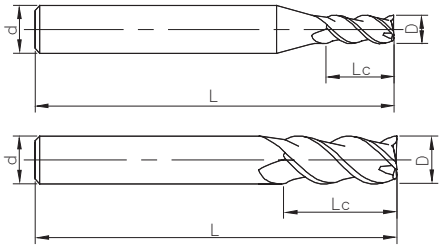


Fig1

Fig2



SHANK h6 | 3 | 45° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–S3–01003	1	3	50	4	1	○
UA100–S3–01504	1.5	4	50	4	1	○
UA100–S3–02006	2	6	50	4	1	●
UA100–S3–02508	2.5	8	50	4	1	●
UA100–S3–03009	3	9	50	4	1	○
UA100–S3–04011	4	11	50	4	2	●
UA100–S3–64011	4	11	50	6	1	○
UA100–S3–05013	5	13	50	6	1	●
UA100–S3–06012	6	12	50	6	2	○
UA100–S3–06016	6	16	50	6	2	●
UA100–S3–07020	7	20	60	8	1	●
UA100–S3–08020	8	20	60	8	2	●
UA100–S3–09023	9	23	75	10	1	●
UA100–S3–10025	10	25	75	10	2	●
UA100–S3–12030	12	30	75	12	2	●
UA100–S3–16036	16	36	100	16	2	●
UA100–S3–18038	18	38	100	18	2	●
UA100–S3–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–SL3

3刃长刃平头

3 Flute, Long Flute Length

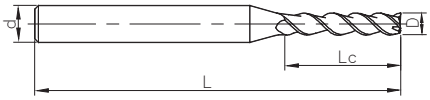


Fig1

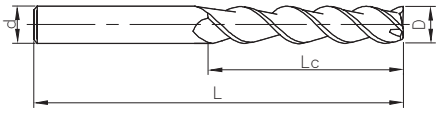


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–SL3–02020	2	20	75	4	1	●
UA100–SL3–03025	3	25	75	4	1	●
UA100–SL3–04030	4	30	75	4	2	●
UA100–SL3–05030	5	30	75	6	1	○
UA100–SL3–06035	6	35	75	6	2	●
UA100–SL3–08040	8	40	100	8	2	●
UA100–SL3–10045	10	45	100	10	2	●
UA100–SL3–12050	12	50	100	12	2	○
UA100–SL3–16060	16	60	150	16	2	○
UA100–SL3–20070	20	70	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–SH3

3刃长柄平头

3 Flute, with Long Shank Length

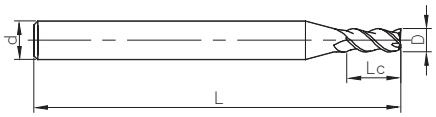


Fig1

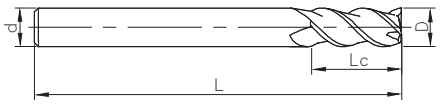


Fig2



SHANK h6 | 3 | 45° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA100–SH3–02008	2	8	75	4	1	○
UA100–SH3–03010	3	10	75	4	1	○
UA100–SH3–04012	4	12	75	4	2	●
UA100–SH3–06016	6	16	75	6	2	●
UA100–SH3–08020	8	20	100	8	2	○
UA100–SH3–10025	10	25	100	10	2	●
UA100–SH3–12030	12	30	100	12	2	○
UA100–SH3–16036	16	36	150	16	2	○
UA100–SH3–20045	20	45	150	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA160–S2

2刃平头

2 Flute, Standard Length

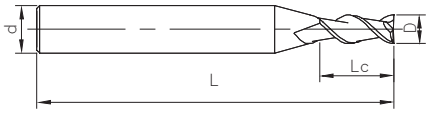


Fig1

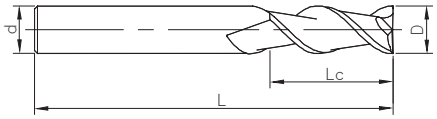


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA160–S2–01003	1	3	50	4	1	●
UA160–S2–01504	1.5	4	50	4	1	●
UA160–S2–02006	2	6	50	4	1	●
UA160–S2–02508	2.5	8	50	4	1	●
UA160–S2–03009	3	9	50	4	1	●
UA160–S2–04011	4	11	50	4	2	○
UA160–S2–05013	5	13	50	6	1	●
UA160–S2–06016	6	16	50	6	2	●
UA160–S2–08020	8	20	60	8	2	●
UA160–S2–10025	10	25	75	10	2	●
UA160–S2–12030	12	30	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤10	0 −0.01
D＞10	0 −0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P467

UA160–S3

3刃平头

3 Flute, Standard Length

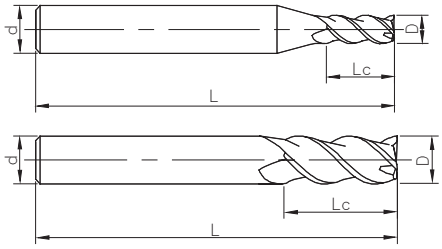


Fig1

Fig2



SHANK h6 | 3 | 40° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA160–S3–02006	2	6	50	4	1	●
UA160–S3–02508	2.5	8	50	4	1	●
UA160–S3–03009	3	9	50	4	1	○
UA160–S3–04011	4	11	50	4	2	●
UA160–S3–64011	4	11	50	6	1	○
UA160–S3–05013	5	13	50	6	1	●
UA160–S3–06016	6	16	50	6	2	●
UA160–S3–08020	8	20	60	8	2	●
UA160–S3–10025	10	25	75	10	2	●
UA160–S3–12030	12	30	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤10	$^{0}_{-0.01}$
D＞10	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P467

UA160–S4

4刃平头

4 Flute, Standard Length

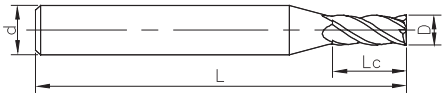


Fig1

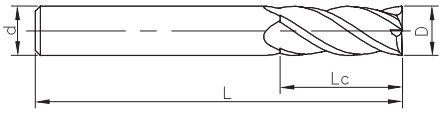


Fig2



SHANK h6 | 4 | 40° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
UA160–S4–04011	4	11	50	4	1	○
UA160–S4–06016	6	16	50	6	1	●
UA160–S4–08020	8	20	60	8	1	●
UA160–S4–10025	10	25	75	10	1	○
UA160–S4–12030	12	30	75	12	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤10	$^{0}_{-0.01}$
D＞10	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P468

SG200–S2

2刃平头

2 Flute, Standard Length



Fig1

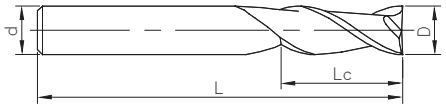


Fig2



SHANK h6 | 2 | U-DIA | 40° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SG200–S2–02006	2	6	50	4	1	○
SG200–S2–03009	3	9	50	4	1	○
SG200–S2–04010	4	10	50	4	2	○
SG200–S2–05013	5	13	50	6	1	○
SG200–S2–06015	6	15	50	6	2	●
SG200–S2–08020	8	20	60	8	2	●
SG200–S2–10025	10	25	75	10	2	○
SG200–S2–12030	12	30	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P472

SG200–S3

3刃平头

3 Flute, Standard Length

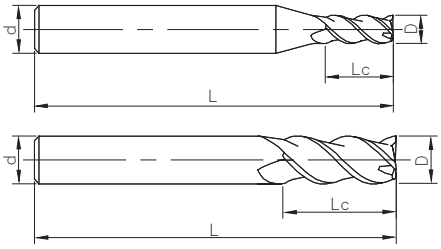


Fig1

Fig2



SHANK h6 | 3 | U-DIA | 40° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SG200–S3–02006	2	6	50	4	1	○
SG200–S3–03009	3	9	50	4	1	○
SG200–S3–04010	4	10	50	4	2	○
SG200–S3–05013	5	13	50	6	1	○
SG200–S3–06015	6	15	50	6	2	○
SG200–S3–08020	8	20	60	8	2	○
SG200–S3–10025	10	25	75	10	2	○
SG200–S3–12030	12	30	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P472

SG200–S4

4刃平头

4 Flute, Standard Length

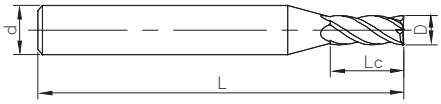


Fig1

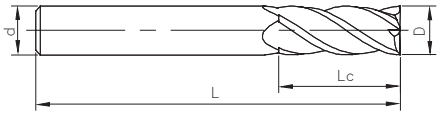


Fig2



SHANK h6 | 4 | U-DIA | 40° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SG200–S4–02006	2	6	50	4	1	○
SG200–S4–03009	3	9	50	4	1	○
SG200–S4–04010	4	10	50	4	2	○
SG200–S4–05013	5	13	50	6	1	○
SG200–S4–06015	6	15	50	6	2	○
SG200–S4–08020	8	20	60	8	2	○
SG200–S4–10025	10	25	75	10	2	○
SG200–S4–12030	12	30	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P472

ST200–S4

4刃不等齿距平头

4 Flute,Standard Length Unequal Flute Spacing

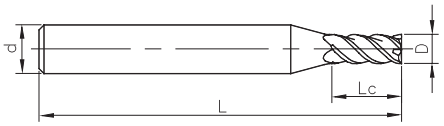


Fig1

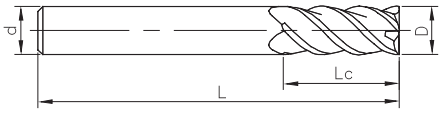


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
ST200–S4–02006	2	6	50	4	1	○
ST200–S4–03006	3	6	50	4	1	○
ST200–S4–04010	4	10	50	4	2	●
ST200–S4–05010	5	10	50	6	1	○
ST200–S4–06015	6	15	50	6	2	●
ST200–S4–08020	8	20	60	8	2	●
ST200–S4–10025	10	25	75	10	2	●
ST200–S4–12030	12	30	75	12	2	●
ST200–S4–16036	16	36	100	16	2	●
ST200–S4–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D<6	0 −0.02
6≤D≤16	0 −0.03
D>16	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P477

SH160–S2

2刃平头

2 Flute, Standard Length

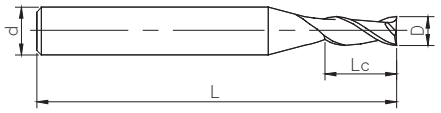


Fig1

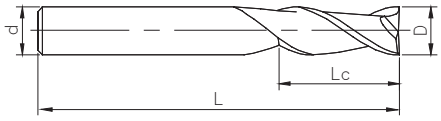


Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SH160–S2–00501	0.5	1.5	50	4	1	●
SH160–S2–01003	1	3	50	4	1	●
SH160–S2–01504	1.5	4	50	4	1	●
SH160–S2–02006	2	6	50	4	1	●
SH160–S2–02508	2.5	8	50	4	1	○
SH160–S2–03009	3	9	50	4	1	●
SH160–S2–63009	3	9	50	6	1	●
SH160–S2–04010	4	10	50	4	2	●
SH160–S2–64010	4	10	50	6	1	●
SH160–S2–05013	5	13	50	6	1	●
SH160–S2–06015	6	15	50	6	2	●
SH160–S2–08020	8	20	60	8	2	●
SH160–S2–10025	10	25	75	10	2	●
SH160–S2–12030	12	30	75	12	2	●
SH160–S2–16036	16	36	100	16	2	●
SH160–S2–20045	20	45	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–S4

4刃平头

4 Flute, Standard Length

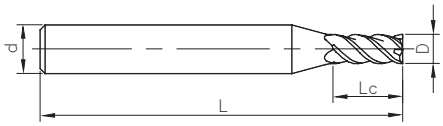


Fig1

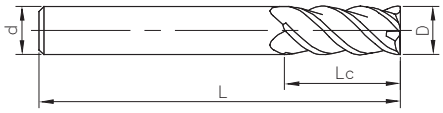


Fig2



SHANK h6 | 4 | AlTiN | 45° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SH160–S4–01003	1	3	50	4	1	○
SH160–S4–01504	1.5	4	50	4	1	○
SH160–S4–02006	2	6	50	4	1	○
SH160–S4–02508	2.5	8	50	4	1	○
SH160–S4–03009	3	9	50	4	1	○
SH160–S4–63009	3	9	50	6	1	○
SH160–S4–04010	4	10	50	4	2	○
SH160–S4–64010	4	10	50	6	1	○
SH160–S4–05013	5	13	50	6	1	○
SH160–S4–06015	6	15	50	6	2	○
SH160–S4–08020	8	20	60	8	2	○
SH160–S4–09023	9	23	75	10	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material

P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–S4

4刃平头

4 Flute, Standard Length

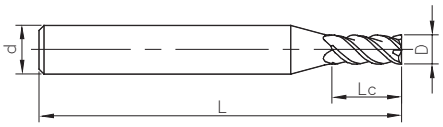


Fig1

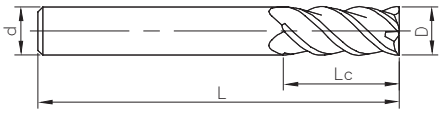


Fig2



SHANK h6 | 4 | AlTiN | 45° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SH160–S4–10025	10	25	75	10	2	○
SH160–S4–12030	12	30	75	12	2	○
SH160–S4–16036	16	36	100	16	2	○
SH160–S4–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–SH4

4刃长柄平头

4 Flute, with Long Shank Length

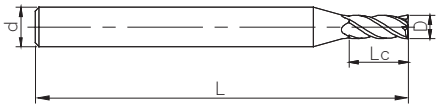


Fig1

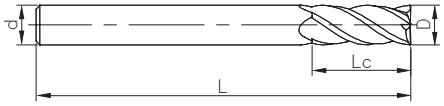


Fig2



SHANK h6 | 4 | AlTiN | 45° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SH160–SH4–03012	3	12	75	4	1	●
SH160–SH4–04015	4	15	75	4	2	●
SH160–SH4–06020	6	20	100	6	2	●
SH160–SH4–08025	8	25	100	8	2	●
SH160–SH4–10030	10	30	100	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–S6

6刃平头

6 Flute, Standard Length

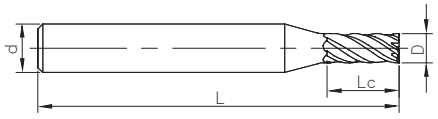


Fig1

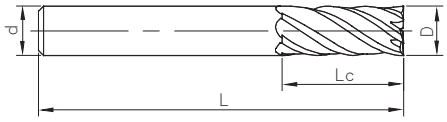


Fig2



SHANK h6 | 6 | AlTiN | 45° Helix | Square | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SH160–S6–06015	6	15	50	6	2	●
SH160–S6–08020	8	20	60	8	2	●
SH160–S6–10025	10	25	75	10	2	○
SH160–S6–12030	12	30	75	12	2	●
SH160–S6–16036	16	36	100	16	2	●
SH160–S6–20045	20	45	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH200–S4–H NEW

4刃平头

4 Flute, Standard Length

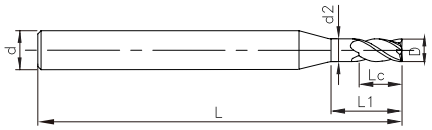


Fig1

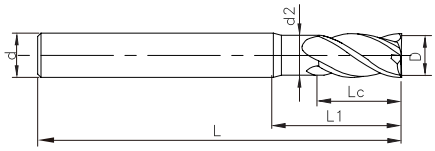


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SH200–S4–01003–H	1	2	0.96	3	50	4	1	●
SH200–S4–01505–H	1.5	3	1.44	4.5	50	4	1	●
SH200–S4–02006–H	2	4	1.92	6	50	4	1	●
SH200–S4–03009–H	3	6	2.88	9	50	4	1	●
SH200–S4–04012–H	4	8	3.85	12	50	4	2	●
SH200–S4–05015–H	5	10	4.8	15	50	6	1	●
SH200–S4–06018–H	6	12	5.8	18	50	6	2	●
SH200–S4–08024–H	8	16	7.8	24	60	8	2	●
SH200–S4–10030–H	10	20	9.8	30	75	10	2	●
SH200–S4–12036–H	12	24	11.8	36	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02

单位unit (mm)

工件材料 Workpiece Material				
P			H	
1234	5	6	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel (48HRC以下)	PH与铁素体/马氏体钢 (<35HRC) PH and Ferrite/Martensitic Steel (<35HRC)	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
	◎		◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P484

SH200–SH4–H NEW

4刃长柄平头

4 Flute, with Long Shank Length

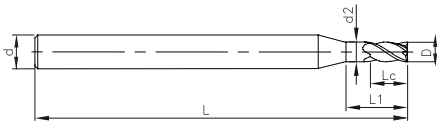


Fig1

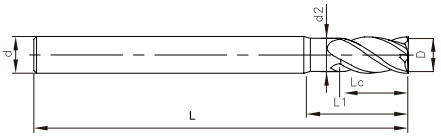


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SH200–SH4–01003–H	1	2	0.96	3	60	4	1	○
SH200–SH4–01505–H	1.5	3	1.44	4.5	60	4	1	○
SH200–SH4–02006–H	2	4	1.92	6	60	4	1	○
SH200–SH4–03009–H	3	6	2.88	9	60	4	1	○
SH200–SH4–04012–H	4	8	3.85	12	60	4	2	○
SH200–SH4–05015–H	5	10	4.8	15	60	6	1	○
SH200–SH4–06018–H	6	12	5.8	18	60	6	2	●
SH200–SH4–08024–H	8	16	7.8	24	75	8	2	●
SH200–SH4–10030–H	10	20	9.8	30	100	10	2	●
SH200–SH4–12036–H	12	24	11.8	36	100	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02

单位unit (mm)

工件材料 Workpiece Material				
P			H	
1234	5	6	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel (48HRC以下)	PH与铁素体/马氏体钢 (<35HRC) PH and Ferrite/Martensitic Steel (<35HRC)	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
	◎		◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P484

SHM100–SN2

2刃微小径长颈平头

2 Flute Square End, Miniature Sizes with Neck

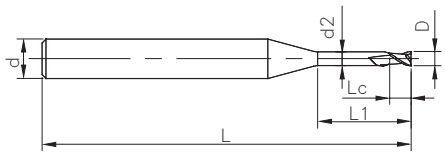


Fig1



SHANK h6 | 2 | AlTiN | 30° Helix | Square

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SHM100–SN2–00401	0.4	0.6	0.36	1	50	4	1	○
SHM100–SN2–00402	0.4	0.6	0.36	2	50	4	1	○
SHM100–SN2–00403	0.4	0.6	0.36	3	50	4	1	●
SHM100–SN2–00602	0.6	0.8	0.56	2	50	4	1	○
SHM100–SN2–00604	0.6	0.8	0.56	4	50	4	1	●
SHM100–SN2–00606	0.6	0.8	0.56	6	50	4	1	●
SHM100–SN2–08002	0.8	1.2	0.75	2	50	4	1	○
SHM100–SN2–00804	0.8	1.2	0.75	4	50	4	1	○
SHM100–SN2–00806	0.8	1.2	0.75	6	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
0.4≤D≤2	0 −0.02

单位unit (mm)

工件材料 Workpiece Material

P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P485

SHM100–SN2

2刃微小径长颈平头

2 Flute Square End, Miniature Sizes with Neck

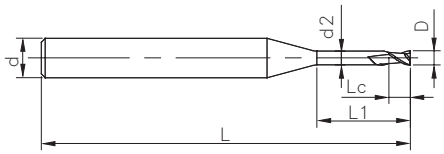


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SHM100–SN2–01006	1.0	1.5	0.95	6	50	4	1	○
SHM100–SN2–01008	1.0	1.5	0.95	8	50	4	1	●
SHM100–SN2–01010	1.0	1.5	0.95	10	50	4	1	●
SHM100–SN2–01508	1.5	2.0	1.44	8	50	4	1	●
SHM100–SN2–01510	1.5	2.0	1.44	10	50	4	1	●
SHM100–SN2–01512	1.5	2.0	1.44	12	50	4	1	●
SHM100–SN2–02008	2.0	3.0	1.92	8	50	4	1	○
SHM100–SN2–02010	2.0	3.0	1.92	10	50	4	1	●
SHM100–SN2–02012	2.0	3.0	1.92	12	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
0.4≤D≤2	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P485

UP100–R2

2刃圆角头

2 Flute, Corner Radius

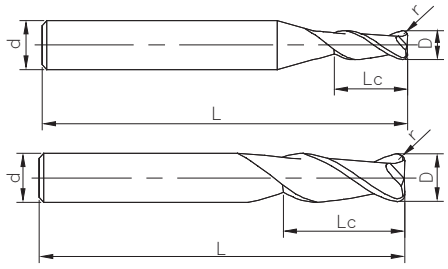


Fig1

Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–R2–01001	1	3	0.1	50	4	1	●
UP100–R2–02002	2	6	0.2	50	4	1	●
UP100–R2–03002	3	9	0.2	50	4	1	●
UP100–R2–63002	3	9	0.2	50	6	1	●
UP100–R2–03003	3	9	0.3	50	4	1	●
UP100–R2–63003	3	9	0.3	50	6	1	●
UP100–R2–03005	3	9	0.5	50	4	1	●
UP100–R2–63005	3	9	0.5	50	6	1	●
UP100–R2–04002	4	11	0.2	50	4	2	●
UP100–R2–64002	4	11	0.2	50	6	1	●
UP100–R2–04003	4	11	0.3	50	4	2	●
UP100–R2–64003	4	11	0.3	50	6	1	●
UP100–R2–04005	4	11	0.5	50	4	2	●
UP100–R2–64005	4	11	0.5	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–R2

2刃圆角头

2 Flute, Corner Radius

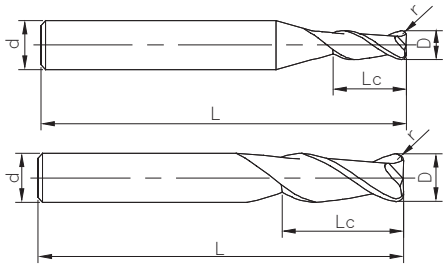


Fig1

Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–R2–04010	4	11	1	50	4	2	●
UP100–R2–05002	5	13	0.2	50	6	1	●
UP100–R2–05003	5	13	0.3	50	6	1	●
UP100–R2–05005	5	13	0.5	50	6	1	●
UP100–R2–05010	5	13	1	50	6	1	●
UP100–R2–05015	5	13	1.5	50	6	1	●
UP100–R2–06005	6	16	0.5	50	6	2	●
UP100–R2–06010	6	16	1	50	6	2	●
UP100–R2–06015	6	16	1.5	50	6	2	●
UP100–R2–06020	6	16	2	50	6	2	●
UP100–R2–08003	8	20	0.3	60	8	2	●
UP100–R2–08005	8	20	0.5	60	8	2	●
UP100–R2–08010	8	20	1	60	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–R2

2刃圆角头

2 Flute, Corner Radius

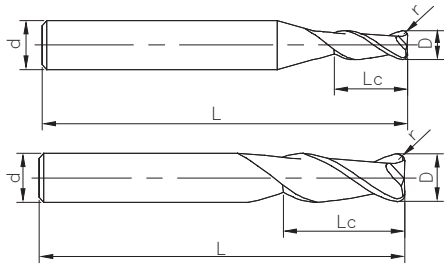


Fig1

Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–R2–08015	8	20	1.5	60	8	2	●
UP100–R2–08020	8	20	2	60	8	2	●
UP100–R2–10003	10	25	0.3	75	10	2	●
UP100–R2–10005	10	25	0.5	75	10	2	●
UP100–R2–10010	10	25	1	75	10	2	●
UP100–R2–10015	10	25	1.5	75	10	2	●
UP100–R2–10020	10	25	2	75	10	2	●
UP100–R2–10030	10	25	3	75	10	2	●
UP100–R2–12005	12	30	0.5	75	12	2	●
UP100–R2–12010	12	30	1	75	12	2	●
UP100–R2–12015	12	30	1.5	75	12	2	●
UP100–R2–12020	12	30	2	75	12	2	●
UP100–R2–12030	12	30	3	75	12	2	●
UP100–R2–16010	16	36	1	100	16	2	○
UP100–R2–16020	16	36	2	100	16	2	○
UP100–R2–16030	16	36	3	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–RH2

2刃长柄圆角头

2 Flute Corner Radius, with Long Shank Length

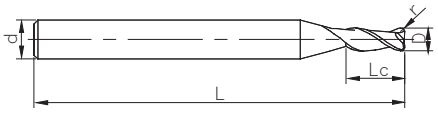


Fig1

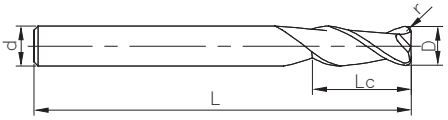


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–RH2–06005	6	15	0.5	75	6	2	●
UP100–RH2–06010	6	15	1	75	6	2	●
UP100–RH2–06015	6	15	1.5	75	6	2	○
UP100–RH2–08005	8	20	0.5	100	8	2	●
UP100–RH2–08010	8	20	1	100	8	2	○
UP100–RH2–08015	8	20	1.5	100	8	2	●
UP100–RH2–10005	10	25	0.5	100	10	2	○
UP100–RH2–10010	10	25	1	100	10	2	○
UP100–RH2–10015	10	25	1.5	100	10	2	●
UP100–RH2–10020	10	25	2	100	10	2	●
UP100–RH2–12005	12	30	0.5	100	12	2	○
UP100–RH2–12010	12	30	1	100	12	2	●
UP100–RH2–12015	12	30	1.5	100	12	2	●
UP100–RH2–12020	12	30	2	100	12	2	○
UP100–RH2–16005	16	36	0.5	150	16	2	●
UP100–RH2–16010	16	36	1	150	16	2	●
UP100–RH2–16015	16	36	1.5	150	16	2	●
UP100–RH2–16020	16	36	2	150	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P445

UP100–R4

4刃圆角头

4 Flute, Corner Radius

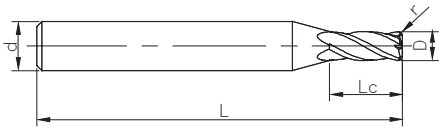


Fig1

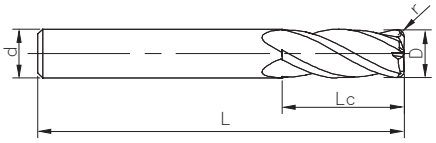


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–R4–02002	2	6	0.2	50	4	1	○
UP100–R4–03002	3	9	0.2	50	4	1	●
UP100–R4–03003	3	9	0.3	50	4	1	○
UP100–R4–03005	3	9	0.5	50	4	1	○
UP100–R4–04002	4	11	0.2	50	4	2	●
UP100–R4–04003	4	11	0.3	50	4	2	●
UP100–R4–04005	4	11	0.5	50	4	2	○
UP100–R4–04010	4	11	1	50	4	2	●
UP100–R4–05002	5	13	0.2	50	6	1	●
UP100–R4–05005	5	13	0.5	50	6	1	●
UP100–R4–05010	5	13	1	50	6	1	●
UP100–R4–05015	5	13	1.5	50	6	1	●
UP100–R4–06005	6	16	0.5	50	6	2	○
UP100–R4–06010	6	16	1	50	6	2	●
UP100–R4–06015	6	16	1.5	50	6	2	●
UP100–R4–08003	8	20	0.3	60	8	2	●
UP100–R4–08005	8	20	0.5	60	8	2	●
UP100–R4–08010	8	20	1	60	8	2	●
UP100–R4–08015	8	20	1.5	60	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–R4

4刃圆角头

4 Flute, Corner Radius

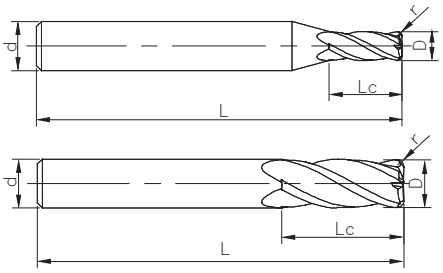


Fig1

Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–R4–08020	8	20	2	60	8	2	●
UP100–R4–10003	10	25	0.3	75	10	2	●
UP100–R4–10005	10	25	0.5	75	10	2	○
UP100–R4–10010	10	25	1	75	10	2	●
UP100–R4–10015	10	25	1.5	75	10	2	●
UP100–R4–10020	10	25	2	75	10	2	●
UP100–R4–10025	10	25	2.5	75	10	2	●
UP100–R4–10030	10	25	3	75	10	2	●
UP100–R4–12005	12	30	0.5	75	12	2	●
UP100–R4–12010	12	30	1	75	12	2	●
UP100–R4–12015	12	30	1.5	75	12	2	●
UP100–R4–12020	12	30	2	75	12	2	●
UP100–R4–12025	12	30	2.5	75	12	2	●
UP100–R4–12030	12	30	3	75	12	2	●
UP100–R4–16005	16	36	0.5	100	16	2	●
UP100–R4–16010	16	36	1	100	16	2	○
UP100–R4–16020	16	36	2	100	16	2	○
UP100–R4–16030	16	36	3	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP100–RH4

4刃长柄圆角头

4 Flute Corner Radius, with Long Shank Length

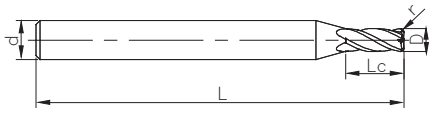


Fig1

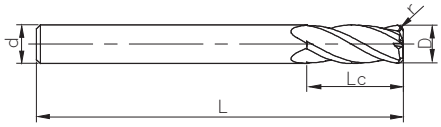


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP100–RH4–06005	6	15	0.5	75	6	2	○
UP100–RH4–06010	6	15	1	75	6	2	○
UP100–RH4–08005	8	20	0.5	100	8	2	○
UP100–RH4–08010	8	20	1	100	8	2	●
UP100–RH4–08015	8	20	1.5	100	8	2	●
UP100–RH4–08020	8	20	2	100	8	2	○
UP100–RH4–10005	10	25	0.5	100	10	2	●
UP100–RH4–10010	10	25	1	100	10	2	●
UP100–RH4–10015	10	25	1.5	100	10	2	●
UP100–RH4–10020	10	25	2	100	10	2	○
UP100–RH4–12005	12	30	0.5	100	12	2	○
UP100–RH4–12010	12	30	1	100	12	2	●
UP100–RH4–12015	12	30	1.5	100	12	2	●
UP100–RH4–12020	12	30	2	100	12	2	○
UP100–RH4–12030	12	30	3	100	12	2	○
UP100–RH4–16005	16	36	0.5	150	16	2	○
UP100–RH4–16010	16	36	1	150	16	2	○
UP100–RH4–16015	16	36	1.5	150	16	2	●
UP100–RH4–16020	16	36	2	150	16	2	○
UP100–RH4–16030	16	36	3	150	16	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P446

UP210–R2

2刃圆角头

2 Flute, Corner Radius

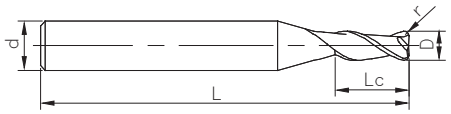


Fig1

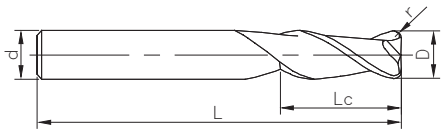


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R2–01002	1	3	0.2	50	4	1	●
UP210–R2–02002	2	6	0.2	50	4	1	○
UP210–R2–03002	3	9	0.2	50	4	1	○
UP210–R2–63002	3	9	0.2	50	6	1	○
UP210–R2–03003	3	9	0.3	50	4	1	●
UP210–R2–63003	3	9	0.3	50	6	1	○
UP210–R2–03005	3	9	0.5	50	4	1	●
UP210–R2–63005	3	9	0.5	50	6	1	○
UP210–R2–04002	4	11	0.2	50	4	2	○
UP210–R2–64002	4	11	0.2	50	6	1	○
UP210–R2–04003	4	11	0.3	50	4	2	○
UP210–R2–64003	4	11	0.3	50	6	1	○
UP210–R2–04005	4	11	0.5	50	4	2	○
UP210–R2–64005	4	11	0.5	50	6	1	○
UP210–R2–04010	4	11	1	50	4	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–R2

2刃圆角头

2 Flute, Corner Radius

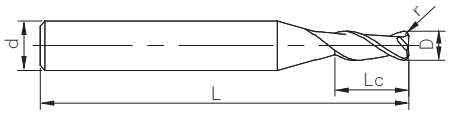


Fig1

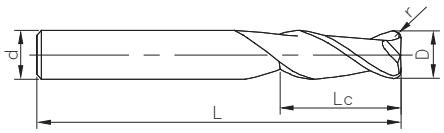


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R2–05002	5	13	0.2	50	6	1	○
UP210–R2–05003	5	13	0.3	50	6	1	●
UP210–R2–05005	5	13	0.5	50	6	1	○
UP210–R2–05010	5	13	1	50	6	1	○
UP210–R2–06005	6	16	0.5	50	6	2	●
UP210–R2–06010	6	16	1	50	6	2	●
UP210–R2–06015	6	16	1.5	50	6	2	●
UP210–R2–06020	6	16	2	50	6	2	○
UP210–R2–08003	8	20	0.3	60	8	2	○
UP210–R2–08005	8	20	0.5	60	8	2	●
UP210–R2–08010	8	20	1	60	8	2	●
UP210–R2–08015	8	20	1.5	60	8	2	●
UP210–R2–08020	8	20	2	60	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–R2

2刃圆角头

2 Flute, Corner Radius

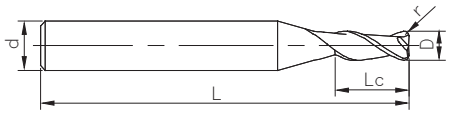


Fig1

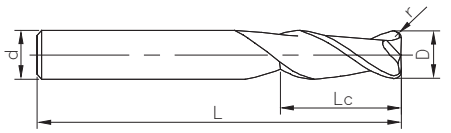


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R2–10003	10	25	0.3	75	10	2	○
UP210–R2–10005	10	25	0.5	75	10	2	●
UP210–R2–10010	10	25	1	75	10	2	●
UP210–R2–10015	10	25	1.5	75	10	2	●
UP210–R2–10020	10	25	2	75	10	2	●
UP210–R2–10030	10	25	3	75	10	2	○
UP210–R2–12005	12	30	0.5	75	12	2	●
UP210–R2–12010	12	30	1	75	12	2	●
UP210–R2–12015	12	30	1.5	75	12	2	●
UP210–R2–12020	12	30	2	75	12	2	●
UP210–R2–12030	12	30	3	75	12	2	●
UP210–R2–16010	16	36	1	100	16	2	○
UP210–R2–16020	16	36	2	100	16	2	○
UP210–R2–16030	16	36	3	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–RH2

2刃长柄圆角头

2 Flute Corner Radius, with Long Shank Length

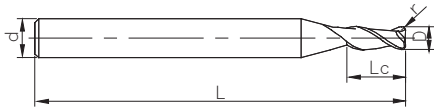


Fig1

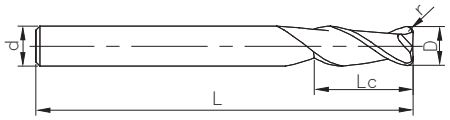


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–RH2–06005	6	16	0.5	75	6	2	●
UP210–RH2–06010	6	16	1	75	6	2	●
UP210–RH2–06015	6	16	1.5	75	6	2	○
UP210–RH2–08005	8	20	0.5	100	8	2	○
UP210–RH2–08010	8	20	1	100	8	2	○
UP210–RH2–08015	8	20	1.5	100	8	2	○
UP210–RH2–10005	10	25	0.5	100	10	2	●
UP210–RH2–10010	10	25	1	100	10	2	●
UP210–RH2–10015	10	25	1.5	100	10	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–RH2

2刃长柄圆角头

2 Flute Corner Radius, with Long Shank Length

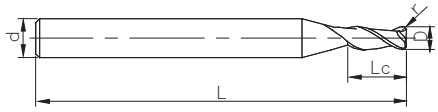


Fig1

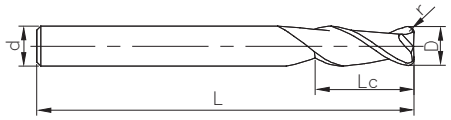


Fig2



SHANK h6 | 2 | AlCrSiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–RH2–10020	10	25	2	100	10	2	○
UP210–RH2–12005	12	30	0.5	100	12	2	○
UP210–RH2–12010	12	30	1	100	12	2	○
UP210–RH2–12015	12	30	1.5	100	12	2	○
UP210–RH2–12020	12	30	2	100	12	2	○
UP210–RH2–16005	16	36	0.5	150	16	2	○
UP210–RH2–16010	16	36	1	150	16	2	○
UP210–RH2–16015	16	36	1.5	150	16	2	○
UP210–RH2–16020	16	36	2	150	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P449

UP210–R4

4刃圆角头

4 Flute, Corner Radius

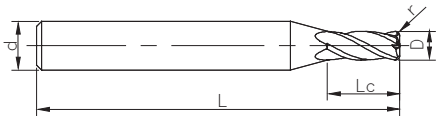


Fig1

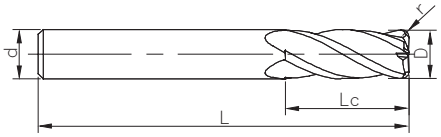


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R4–01502	1.5	5	0.2	50	4	1	○
UP210–R4–02002	2	6	0.2	50	4	1	●
UP210–R4–03002	3	9	0.2	50	4	1	●
UP210–R4–03003	3	9	0.3	50	4	1	○
UP210–R4–03005	3	9	0.5	50	4	1	●
UP210–R4–04002	4	11	0.2	50	4	2	○
UP210–R4–04003	4	11	0.3	50	4	2	○
UP210–R4–04005	4	11	0.5	50	4	2	●
UP210–R4–04010	4	11	1	50	4	2	●
UP210–R4–04510	4.5	12	1	50	6	1	●
UP210–R4–05002	5	13	0.2	50	6	1	○
UP210–R4–05005	5	13	0.5	50	6	1	●
UP210–R4–05010	5	13	1	50	6	1	●
UP210–R4–05015	5	13	1.5	50	6	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

UP210–R4

4刃圆角头

4 Flute, Corner Radius

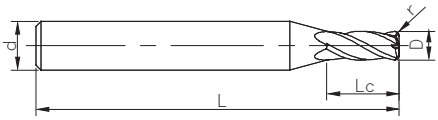


Fig1

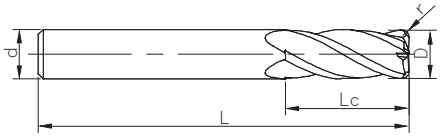


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R4–06005	6	16	0.5	50	6	2	●
UP210–R4–06010	6	16	1	50	6	2	●
UP210–R4–06015	6	16	1.5	50	6	2	●
UP210–R4–08003	8	20	0.3	60	8	2	○
UP210–R4–08005	8	20	0.5	60	8	2	●
UP210–R4–08010	8	20	1	60	8	2	●
UP210–R4–08015	8	20	1.5	60	8	2	●
UP210–R4–08020	8	20	2	60	8	2	●
UP210–R4–10003	10	25	0.3	75	10	2	○
UP210–R4–10005	10	25	0.5	75	10	2	●
UP210–R4–10010	10	25	1	75	10	2	●
UP210–R4–10015	10	25	1.5	75	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

UP210–R4

4刃圆角头

4 Flute, Corner Radius

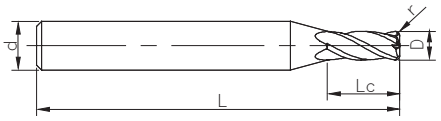


Fig1

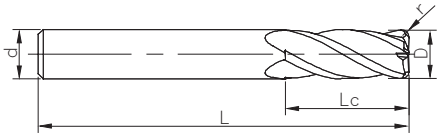


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–R4–10020	10	25	2	75	10	2	○
UP210–R4–10025	10	25	2.5	75	10	2	○
UP210–R4–10030	10	25	3	75	10	2	○
UP210–R4–12005	12	30	0.5	75	12	2	●
UP210–R4–12010	12	30	1	75	12	2	●
UP210–R4–12015	12	30	1.5	75	12	2	●
UP210–R4–12020	12	30	2	75	12	2	○
UP210–R4–12025	12	30	2.5	75	12	2	○
UP210–R4–12030	12	30	3	75	12	2	○
UP210–R4–16005	16	36	0.5	100	16	2	●
UP210–R4–16010	16	36	1	100	16	2	●
UP210–R4–16020	16	36	2	100	16	2	○
UP210–R4–16030	16	36	3	100	16	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

UP210–RH4

4刃长柄圆角头

4 Flute Corner Radius, with Long Shank Length

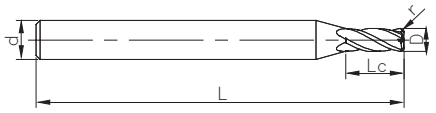


Fig1

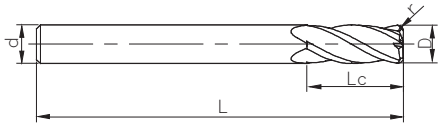


Fig2



SHANK h6 | 4 | AlCrSiN | 35° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–RH4–06005	6	16	0.5	75	6	2	●
UP210–RH4–06010	6	16	1	75	6	2	●
UP210–RH4–06015	6	16	1.5	75	6	2	○
UP210–RH4–08005	8	20	0.5	100	8	2	●
UP210–RH4–08010	8	20	1	100	8	2	●
UP210–RH4–08015	8	20	1.5	100	8	2	○
UP210–RH4–08020	8	20	2	100	8	2	○
UP210–RH4–10005	10	25	0.5	100	10	2	●
UP210–RH4–10010	10	25	1	100	10	2	○
UP210–RH4–10015	10	25	1.5	100	10	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

UP210–RH4

4刃长柄圆角头

4 Flute Corner Radius, with Long Shank Length

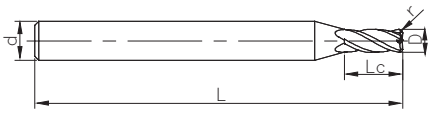


Fig1

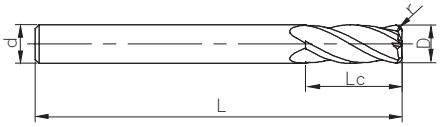


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UP210–RH4–10020	10	25	2	100	10	2	○
UP210–RH4–12005	12	30	0.5	100	12	2	●
UP210–RH4–12010	12	30	1	100	12	2	○
UP210–RH4–12015	12	30	1.5	100	12	2	○
UP210–RH4–12020	12	30	2	100	12	2	○
UP210–RH4–12030	12	30	3	100	12	2	○
UP210–RH4–16005	16	36	0.5	150	16	2	○
UP210–RH4–16010	16	36	1	150	16	2	○
UP210–RH4–16015	16	36	1.5	150	16	2	○
UP210–RH4–16020	16	36	2	150	16	2	○
UP210–RH4–16030	16	36	3	150	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P450

SP210–R4

4刃圆角头双螺旋

4 Flute Comer Radius, with Variable Helix

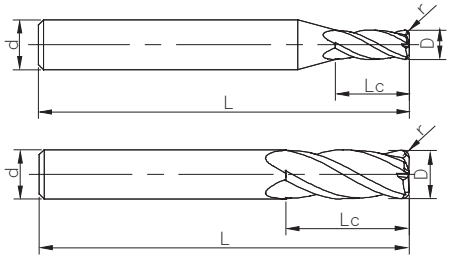


Fig1

Fig2



SHANK h6 | 4 | AlCrSiN | 35°/38° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SP210–R4–03003	3	9	0.3	50	4	1	○
SP210–R4–03005	3	9	0.5	50	4	1	○
SP210–R4–04003	4	11	0.3	50	4	2	○
SP210–R4–04005	4	11	0.5	50	4	2	●
SP210–R4–05003	5	13	0.3	50	6	1	○
SP210–R4–05005	5	13	0.5	50	6	1	○
SP210–R4–06003	6	16	0.3	50	6	2	○
SP210–R4–06005	6	16	0.5	50	6	2	○
SP210–R4–06010	6	16	1	50	6	2	●
SP210–R4–06015	6	16	1.5	50	6	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

SP210–R4

4刃圆角头双螺旋

4 Flute Comer Radius, with Variable Helix

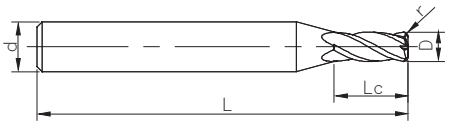


Fig1

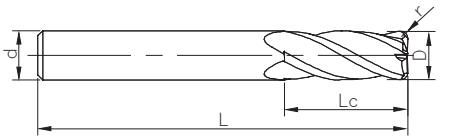


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SP210–R4–08005	8	20	0.5	60	8	2	●
SP210–R4–08010	8	20	1.0	60	8	2	●
SP210–R4–08015	8	20	1.5	60	8	2	●
SP210–R4–08020	8	20	2	60	8	2	●
SP210–R4–10005	10	25	0.5	75	10	2	●
SP210–R4–10010	10	25	1	75	10	2	●
SP210–R4–10015	10	25	1.5	75	10	2	○
SP210–R4–10020	10	25	2	75	10	2	●
SP210–R4–10030	10	25	3	75	10	2	●
SP210–R4–12005	12	30	0.5	75	12	2	●
SP210–R4–12010	12	30	1	75	12	2	●
SP210–R4–12015	12	30	1.5	75	12	2	●
SP210–R4–12020	12	30	2	75	12	2	●
SP210–R4–12030	12	30	3	75	12	2	●
SP210–R4–16020	16	36	2	100	16	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P453

US200–R2

2刃圆角头

2 Flute,Corner Radius

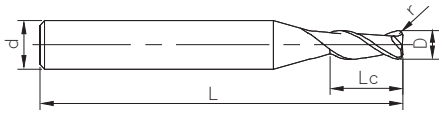


Fig1

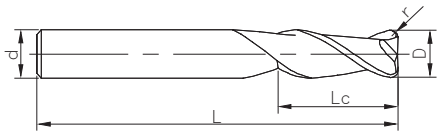


Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R2–03003	3	9	0.3	50	4	1	●
US200–R2–03005	3	9	0.5	50	4	1	●
US200–R2–04002	4	11	0.2	50	4	2	●
US200–R2–64002	4	11	0.2	50	6	1	●
US200–R2–04003	4	11	0.3	50	4	2	●
US200–R2–64003	4	11	0.3	50	6	1	●
US200–R2–64005	4	11	0.5	50	6	1	●
US200–R2–05002	5	13	0.2	50	6	1	●
US200–R2–05003	5	13	0.3	50	6	1	●
US200–R2–05005	5	13	0.5	50	6	1	●
US200–R2–06002	6	16	0.2	50	6	2	●
US200–R2–06003	6	16	0.3	50	6	2	●
US200–R2–06005	6	16	0.5	50	6	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–R2

2刃圆角头

2 Flute,Corner Radius

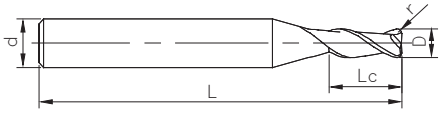


Fig1

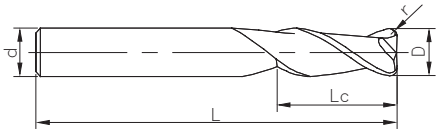


Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R2–08005	8	20	0.5	60	8	2	○
US200–R2–08010	8	20	1	60	8	2	●
US200–R2–10005	10	25	0.5	75	10	2	○
US200–R2–10010	10	25	1	75	10	2	●
US200–R2–10015	10	25	1.5	75	10	2	○
US200–R2–12005	12	30	0.5	75	12	2	○
US200–R2–12010	12	30	1	75	12	2	○
US200–R2–12015	12	30	1.5	75	12	2	●
US200–R2–16005	16	36	0.5	100	16	2	○
US200–R2–16010	16	36	1	100	16	2	○
US200–R2–16020	16	36	2	100	16	2	●
US200–R2–16030	16	36	3	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–R3

3刃圆角头

3 Flute, Corner Radius

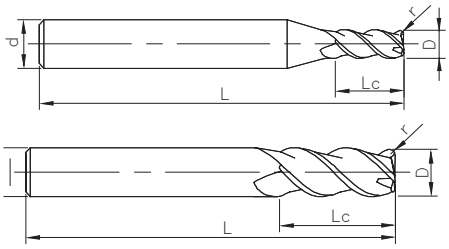


Fig1

Fig2



SHANK h6 | 3 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R3–02001	2	6	0.1	50	4	1	○
US200–R3–02002	2	6	0.2	50	4	1	●
US200–R3–04002	4	11	0.2	50	4	2	●
US200–R3–04005	4	11	0.5	50	4	2	●
US200–R3–06002	6	16	0.2	50	6	2	○
US200–R3–06005	6	16	0.5	50	6	2	●
US200–R3–08005	8	20	0.5	60	8	2	●
US200–R3–08010	8	20	1	60	8	2	●
US200–R3–10005	10	25	0.5	75	10	2	●
US200–R3–10010	10	25	1	75	10	2	●
US200–R3–10015	10	25	1.5	75	10	2	●
US200–R3–10020	10	25	2	75	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–R3

3刃圆角头

3 Flute, Corner Radius

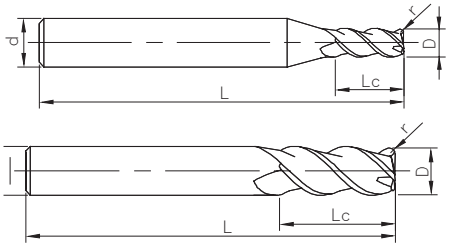


Fig1

Fig2



SHANK h6 | 3 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R3–12005	12	30	0.5	75	12	2	○
US200–R3–12010	12	30	1	75	12	2	●
US200–R3–12015	12	30	1.5	75	12	2	●
US200–R3–16005	16	36	0.5	100	16	2	●
US200–R3–16010	16	36	1	100	16	2	●
US200–R3–16020	16	36	2	100	16	2	●
US200–R3–16030	16	36	3	100	16	2	●
US200–R3–20005	20	45	0.5	100	20	2	●
US200–R3–20010	20	45	1	100	20	2	●
US200–R3–20020	20	45	2	100	20	2	●
US200–R3–20040	20	45	4	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P460

US200–R4

4刃圆角头

4 Flute,Corner Radius

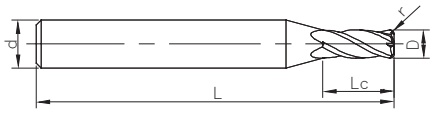


Fig1

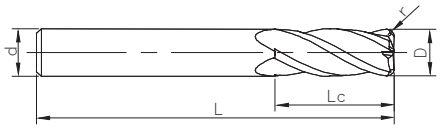


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R4–02002	2	6	0.2	50	4	1	○
US200–R4–03003	3	9	0.3	50	4	1	●
US200–R4–03005	3	9	0.5	50	4	1	●
US200–R4–64002	4	11	0.2	50	6	1	●
US200–R4–64003	4	11	0.3	50	6	1	●
US200–R4–04003	4	11	0.3	50	4	2	●
US200–R4–04005	4	11	0.5	50	4	2	○
US200–R4–05005	5	13	0.5	50	6	1	●
US200–R4–06005	6	16	0.5	50	6	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

US200–R4

4刃圆角头

4 Flute,Corner Radius

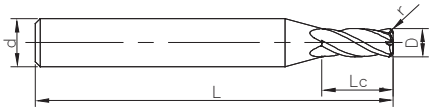


Fig1

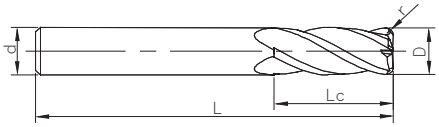


Fig2



SHANK h6 | 4 | AlTiN | 35° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
US200–R4–08002	8	20	0.2	60	8	2	●
US200–R4–08005	8	20	0.5	60	8	2	○
US200–R4–08010	8	20	1	60	8	2	●
US200–R4–10005	10	25	0.5	75	10	2	●
US200–R4–10010	10	25	1	75	10	2	○
US200–R4–12010	12	30	1	75	12	2	○
US200–R4–16010	16	36	1	100	16	2	●
US200–R4–20010	20	45	1	100	20	2	●
US200–RS4–06005	6	5	0.5	50	6	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

UA100–R2

2刃圆角头

2 Flute, Corner Radius

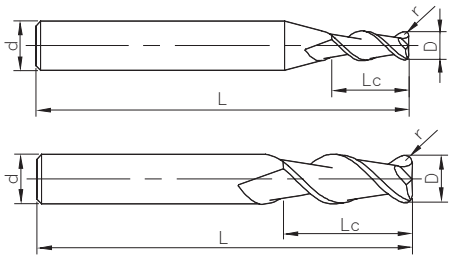


Fig1

Fig2



SHANK h6 | 2 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R2–01001	1	3	0.1	50	4	1	○
UA100–R2–02002	2	6	0.2	50	4	1	●
UA100–R2–03002	3	9	0.2	50	4	1	●
UA100–R2–03003	3	9	0.3	50	4	1	●
UA100–R2–63003	3	9	0.3	50	6	1	●
UA100–R2–03005	3	9	0.5	50	4	1	●
UA100–R2–63005	3	9	0.5	50	6	1	●
UA100–R2–04002	4	11	0.2	50	4	2	●
UA100–R2–04003	4	11	0.3	50	4	2	●
UA100–R2–64003	4	11	0.3	50	6	1	●
UA100–R2–04005	4	11	0.5	50	4	2	●
UA100–R2–64005	4	11	0.5	50	6	1	●
UA100–R2–04010	4	11	1	50	4	2	●
UA100–R2–05002	5	13	0.2	50	6	1	●
UA100–R2–05003	5	13	0.3	50	6	1	●
UA100–R2–05005	5	13	0.5	50	6	1	●
UA100–R2–05010	5	13	1	50	6	1	●
UA100–R2–05015	5	13	1.5	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–R2

2刃圆角头

2 Flute, Corner Radius

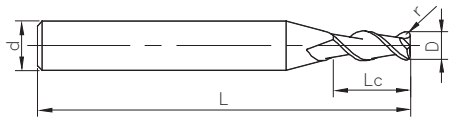


Fig1

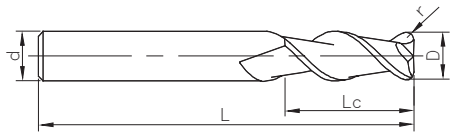


Fig2



SHANK h6 | 2 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R2–06005	6	16	0.5	50	6	2	●
UA100–R2–06010	6	16	1	50	6	2	●
UA100–R2–06015	6	16	1.5	50	6	2	●
UA100–R2–06020	6	16	2	50	6	2	●
UA100–R2–08005	8	20	0.5	60	8	2	●
UA100–R2–08010	8	20	1	60	8	2	●
UA100–R2–08015	8	20	1.5	60	8	2	●
UA100–R2–08020	8	20	2	60	8	2	●
UA100–R2–10005	10	25	0.5	75	10	2	●
UA100–R2–10010	10	25	1	75	10	2	●
UA100–R2–10015	10	25	1.5	75	10	2	●
UA100–R2–10020	10	25	2	75	10	2	●
UA100–R2–10025	10	25	2.5	75	10	2	●
UA100–R2–12005	12	30	0.5	75	12	2	●
UA100–R2–12010	12	30	1	75	12	2	●
UA100–R2–12015	12	30	1.5	75	12	2	●
UA100–R2–12020	12	30	2	75	12	2	●
UA100–R2–12025	12	30	2.5	75	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–R2

2刃圆角头

2 Flute, Corner Radius

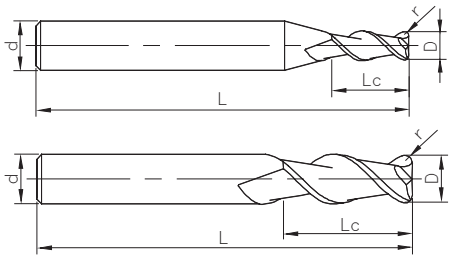


Fig1

Fig2



SHANK h6 | 2 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R2–16005	16	36	0.5	100	16	2	●
UA100–R2–16010	16	36	1	100	16	2	●
UA100–R2–16015	16	36	1.5	100	16	2	●
UA100–R2–16020	16	36	2	100	16	2	●
UA100–R2–16025	16	36	2.5	100	16	2	●
UA100–R2–20005	20	45	0.5	100	20	2	●
UA100–R2–20010	20	45	1	100	20	2	●
UA100–R2–20015	20	45	1.5	100	20	2	●
UA100–R2–20020	20	45	2	100	20	2	●
UA100–R2–20030	20	45	3	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–RH2

2刃长柄圆角头

2 Flute, Corner Radius, with Long Shank Length

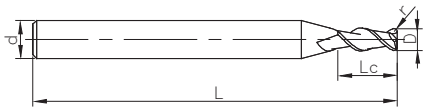


Fig1

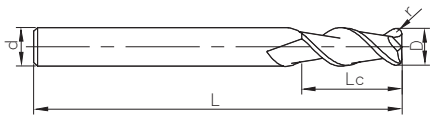


Fig2



SHANK h6 | 2 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–RH2–06005	6	16	0.5	75	6	2	○
UA100–RH2–06010	6	16	1	75	6	2	●
UA100–RH2–06015	6	16	1.5	75	6	2	●
UA100–RH2–06020	6	16	2	75	6	2	●
UA100–RH2–08005	8	20	0.5	100	8	2	○
UA100–RH2–08010	8	20	1	100	8	2	●
UA100–RH2–08015	8	20	1.5	100	8	2	●
UA100–RH2–08020	8	20	2	100	8	2	●
UA100–RH2–10005	10	25	0.5	100	10	2	○
UA100–RH2–10010	10	25	1	100	10	2	○
UA100–RH2–10015	10	25	1.5	100	10	2	●
UA100–RH2–10020	10	25	2	100	10	2	●
UA100–RH2–10025	10	25	2.5	100	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–RH2

2刃长柄圆角头

2 Flute, Corner Radius, with Long Shank Length

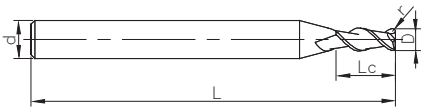


Fig1

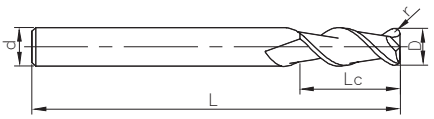


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–RH2–12005	12	30	0.5	100	12	2	●
UA100–RH2–12010	12	30	1	100	12	2	●
UA100–RH2–12015	12	30	1.5	100	12	2	●
UA100–RH2–12020	12	30	2	100	12	2	●
UA100–RH2–12025	12	30	2.5	100	12	2	●
UA100–RH2–16005	16	36	0.5	150	16	2	●
UA100–RH2–16010	16	36	1	150	16	2	●
UA100–RH2–16015	16	36	1.5	150	16	2	●
UA100–RH2–16020	16	36	2	150	16	2	●
UA100–RH2–16025	16	36	2.5	150	16	2	●
UA100–RH2–20005	20	45	0.5	150	20	2	●
UA100–RH2–20010	20	45	1	150	20	2	●
UA100–RH2–20015	20	45	1.5	150	20	2	●
UA100–RH2–20020	20	45	2	150	20	2	●
UA100–RH2–20030	20	45	3	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P464

UA100–R3

3刃圆角头

3 Flute, Corner Radius

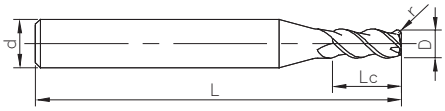


Fig1

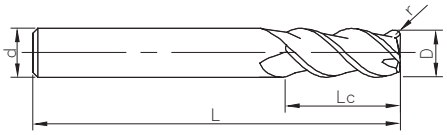


Fig2



SHANK h6 | 3 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R3–01001	1	3	0.1	50	4	1	○
UA100–R3– 02002	2	6	0.2	50	4	1	○
UA100–R3– 03002	3	9	0.2	50	4	1	○
UA100–R3– 03003	3	9	0.3	50	4	1	○
UA100–R3– 03005	3	9	0.5	50	4	1	○
UA100–R3– 04002	4	11	0.2	50	4	2	○
UA100–R3– 04003	4	11	0.3	50	4	2	○
UA100–R3– 04005	4	11	0.5	50	4	2	○
UA100–R3– 04010	4	11	1	50	4	2	○
UA100–R3– 05002	5	13	0.2	50	6	1	○
UA100–R3– 05003	5	13	0.3	50	6	1	○
UA100–R3– 05005	5	13	0.5	50	6	1	○
UA100–R3– 05010	5	13	1	50	6	1	○
UA100–R3– 05015	5	13	1.5	50	6	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

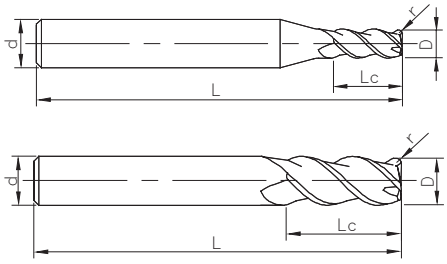
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–R3

3刃圆角头

3 Flute, Corner Radius





SHANK h6 | 3 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R3–06005	6	16	0.5	50	6	2	●
UA100–R3–06010	6	16	1	50	6	2	●
UA100–R3–06015	6	16	1.5	50	6	2	●
UA100–R3–06020	6	16	2	50	6	2	●
UA100–R3–08005	8	20	0.5	60	8	2	●
UA100–R3–08010	8	20	1	60	8	2	●
UA100–R3–08015	8	20	1.5	60	8	2	●
UA100–R3–08020	8	20	2	60	8	2	●
UA100–R3–10005	10	25	0.5	75	10	2	●
UA100–R3–10010	10	25	1	75	10	2	●
UA100–R3–10015	10	25	1.5	75	10	2	●
UA100–R3–10020	10	25	2	75	10	2	●
UA100–R3–10025	10	25	2.5	75	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D>12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–R3

3刃圆角头

3 Flute, Corner Radius

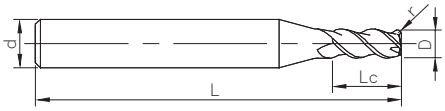


Fig1

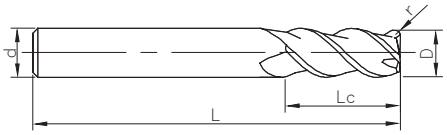


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–R3–12005	12	30	0.5	75	12	2	●
UA100–R3– 12010	12	30	1	75	12	2	○
UA100–R3–12015	12	30	1.5	75	12	2	●
UA100–R3–12020	12	30	2	75	12	2	●
UA100–R3–12025	12	30	2.5	75	12	2	●
UA100–R3–16005	16	36	0.5	100	16	2	○
UA100–R3–16010	16	36	1	100	16	2	●
UA100–R3–16015	16	36	1.5	100	16	2	●
UA100–R3–16020	16	36	2	100	16	2	●
UA100–R3–16025	16	36	2.5	100	16	2	●
UA100–R3–20005	20	45	0.5	100	20	2	●
UA100–R3–20010	20	45	1	100	20	2	●
UA100–R3– 20015	20	45	1.5	100	20	2	○
UA100–R3–20020	20	45	2	100	20	2	●
UA100–R3– 20030	20	45	3	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–RH3

3刃长柄圆角头

3 Flute, Corner Radius,with Long Shank Length

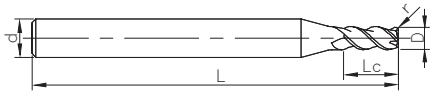


Fig1

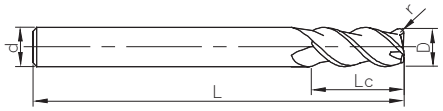


Fig2



SHANK h6 | 3 | 45° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–RH3–06005	6	16	0.5	75	6	2	●
UA100–RH3–06010	6	16	1	75	6	2	○
UA100–RH3–06015	6	16	1.5	75	6	2	●
UA100–RH3–06020	6	16	2	75	6	2	●
UA100–RH3–08005	8	20	0.5	100	8	2	○
UA100–RH3–08010	8	20	1	100	8	2	○
UA100–RH3–08015	8	20	1.5	100	8	2	○
UA100–RH3–08020	8	20	2	100	8	2	○
UA100–RH3–10005	10	25	0.5	100	10	2	○
UA100–RH3–10010	10	25	1	100	10	2	●
UA100–RH3–10015	10	25	1.5	100	10	2	●
UA100–RH3–10020	10	25	2	100	10	2	●
UA100–RH3–10025	10	25	2.5	100	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

UA100–RH3

3刃长柄圆角头

3 Flute, Corner Radius,with Long Shank Length

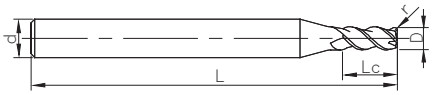


Fig1

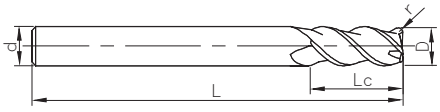


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
UA100–RH3–12005	12	30	0.5	100	12	2	○
UA100–RH3–12010	12	30	1	100	12	2	●
UA100–RH3–12015	12	30	1.5	100	12	2	●
UA100–RH3–12020	12	30	2	100	12	2	●
UA100–RH3–12025	12	30	2.5	100	12	2	●
UA100–RH3–16005	16	36	0.5	150	16	2	●
UA100–RH3–16010	16	36	1	150	16	2	●
UA100–RH3–16015	16	36	1.5	150	16	2	●
UA100–RH3–16020	16	36	2	150	16	2	○
UA100–RH3–16025	16	36	2.5	150	16	2	●
UA100–RH3–20005	20	45	0.5	150	20	2	○
UA100–RH3–20010	20	45	1	150	20	2	●
UA100–RH3–20015	20	45	1.5	150	20	2	●
UA100–RH3–20020	20	45	2	150	20	2	●
UA100–RH3–20030	20	45	3	150	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

SA300–RN2

2刃长颈圆角头铣刀

2 Flute,Corner Radius With Reduced Neck

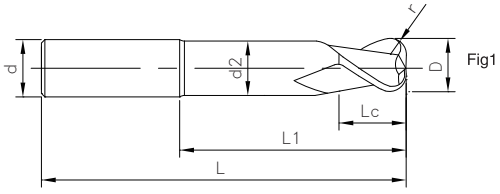


Fig1



SHANK h6 | 2 | 30° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA300–RN2–10010	10	1	12	32	9.5	72	10	1	○
SA300–RN2–12010	12	1	14	42	11	87	12	1	○
SA300–RN2–12030	12	3	14	42	11	87	12	1	○
SA300–RN2–16010	16	1	18	52	15	100	16	1	○
SA300–RN2–16030	16	3	18	52	15	100	16	1	○
SA300–RN2–20030	20	3	24	62	19	112	20	1	○
SA300–RN2–20050	20	5	24	62	19	112	20	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P469

SA300–RN3

3刃长颈圆角头铣刀

3 Flute,Corner Radius With Reduced Neck

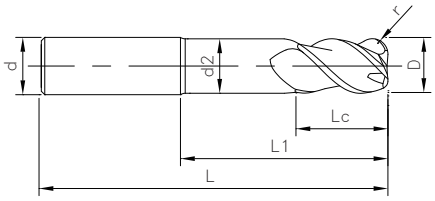
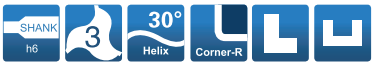


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA300–RN3–12010	12	1	14	50	11	95	12	1	○
SA300–RN3–12030	12	3	14	50	11	95	12	1	○
SA300–RN3–16010	16	1	18	52	15	100	16	1	○
SA300–RN3–16030	16	3	18	52	15	100	16	1	○
SA300–RN3–20030	20	3	24	62	19	112	20	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P470

SA310–RN2

2刃长颈圆角头铣刀

2 Flute,Corner Radius With Reduced Neck

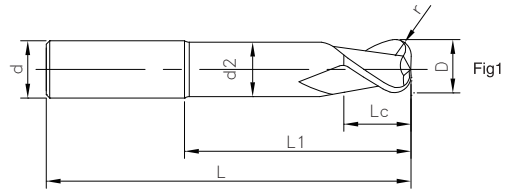
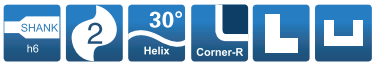


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA310–RN2–10010	10	1	12	32	9.5	72	10	1	○
SA310–RN2–12010	12	1	14	42	11	87	12	1	○
SA310–RN2–12030	12	3	14	42	11	87	12	1	○
SA310–RN2–16010	16	1	18	52	15	100	16	1	○
SA310–RN2–16030	16	3	18	52	15	100	16	1	○
SA310–RN2–20030	20	3	24	62	19	112	20	1	○
SA310–RN2–20050	20	5	24	62	19	112	20	1	○
SA310–RN2–25030	25	3	30	62	24	118	25	1	○
SA310–RN2–32030	32	3	30	62	31	122	32	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P471

SA310–RN3

3刃长颈圆角头铣刀

3 Flute,Corner Radius With Reduced Neck

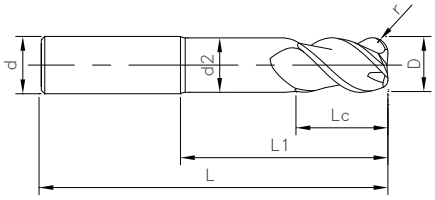
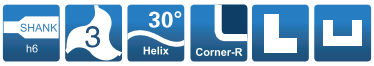


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA310–RN3–12005	12	05	14	50	11.5	95	12	1	○
SA310–RN3–12030	12	3	14	50	11.5	95	12	1	○
SA310–RN3–16010	16	1	18	52	15	100	16	1	○
SA310–RN3–16030	16	3	18	52	15	100	16	1	○
SA310–RN3–20030	20	3	30	60	19	110	20	1	○
SA310–RN3–25030	25	3	30	62	24	118	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P471

SA360–RN2

2刃长颈圆角头内冷铣刀

2 Flute,Corner Radius with Reduced Neck Internal Coolant

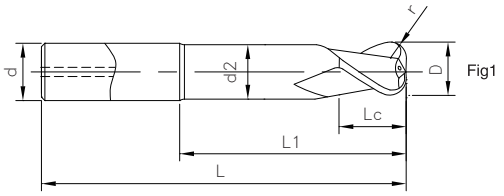
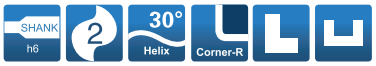


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA360–RN2–12030	12	3	26	40	11.5	90	12	1	○
SA360–RN2–16030	16	3	30	50	15	100	16	1	○
SA360–RN2–16050	16	5	30	50	15	100	16	1	○
SA360–RN2–20005	20	0.5	30	60	19	110	20	1	○
SA360–RN2–20030	20	3	30	60	19	110	20	1	○
SA360–RN2–20050	20	5	30	60	19	110	20	1	○
SA360–RN2–25030	25	3	30	60	24	115	25	1	○
SA360–RN2–25050	25	5	30	60	24	115	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P471

SG200–R2

2刃圆角头

2 Flute, Corner Radius

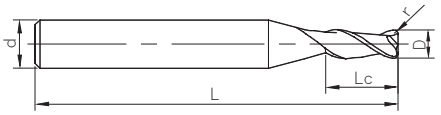


Fig1

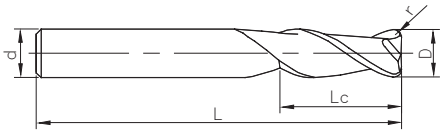


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SG200–R2–06003	6	16	0.3	50	6	2	○
SG200–R2–06005	6	16	0.5	50	6	2	○
SG200–R2–08005	8	20	0.5	60	8	2	○
SG200–R2–08010	8	20	1	60	8	2	○
SG200–R2–10005	10	25	0.5	75	10	2	○
SG200–R2–10010	10	25	1	75	10	2	○
SG200– R2–10015	10	25	1.5	75	10	2	○
SG200–R2–12005	12	30	0.5	75	12	2	○
SG200–R2–12010	12	30	1	75	12	2	○
SG200– R2–12015	12	30	1.5	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P472

SG200–R4

4刃圆角头

4 Flute, Corner Radius

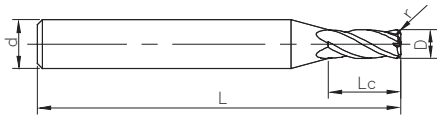


Fig1

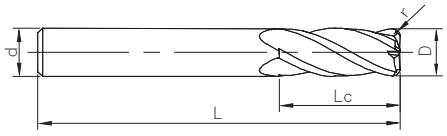


Fig2



SHANK h6 | 4 | U-DIA | 40° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SG200–R4–06005	6	16	0.5	50	6	2	○
SG200–R4–08002	8	20	0.2	60	8	2	○
SG200–R4–08005	8	20	0.5	60	8	2	○
SG200–R4–10005	10	25	0.5	75	10	2	○
SG200–R4–10010	10	25	1	75	10	2	○
SG200–R4–12010	12	30	1	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P472

SN200–R4

4刃不等齿距圆角头

4 Flute,Corner Radius Unequal Flute Spacing

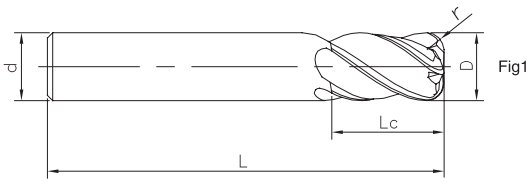


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L	d	图号 Figure No.	库存 Stock
SN200–R4–06005	6	0.5	15	50	6	1	○
SN200–R4–08010	8	1	20	60	8	1	○
SN200–R4–10010	10	1	25	75	10	1	○
SN200–R4–12010	12	1	30	75	12	1	○
SN200–R4–16010	16	1	32	100	16	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material				
P		M	S	
1234	5	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	高温合金 Aluminium Alloys	钛合金 Copper Alloys
○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P475

ST200–R4

4刃不等齿距圆角头

4 Flute,Corner Radius Unequal Flute Spacing

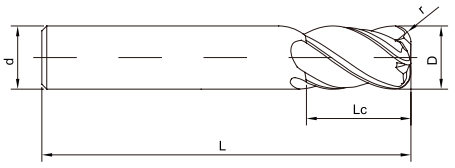


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L	d	图号 Figure No.	库存 Stock
ST200–R4–06005	6	0.5	15	50	6	1	●
ST200–R4–06010	6	1	15	50	6	1	●
ST200–R4–08005	8	0.5	20	60	8	1	●
ST200–R4–08010	8	1	20	60	8	1	●
ST200–R4–10010	10	1	25	75	10	1	○
ST200–R4–10030	10	3	25	75	10	1	○
ST200–R4–12010	12	1	30	75	12	1	○
ST200–R4–12030	12	3	30	75	12	1	○
ST200–R4–16010	16	1	36	100	16	1	○
ST200–R4–16030	16	3	36	100	16	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	0 −0.03
D＞16	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P477

ST200–RN4

4刃不等齿距长颈圆角头

4 Flute,Corner Radius with Reduced Neck Unequal Flute Spacing

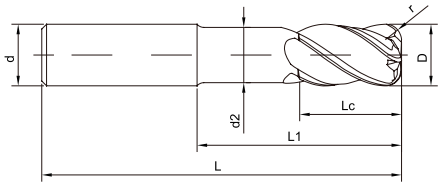


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
ST200–RN4–12010	12	1	24	36	11	90	12	1	○
ST200–RN4–12030	12	3	24	36	11	90	12	1	●
ST200–RN4–16010	16	1	32	47	15	100	16	1	○
ST200–RN4–16030	16	3	32	47	15	100	16	1	○
ST200–RN4–20010	20	1	40	57	19	115	20	1	○
ST200–RN4–20030	20	3	40	57	19	115	20	1	○
ST200–RN4–25030	25	3	50	65	24	130	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	$^{0}_{-0.03}$
D＞16	$^{0}_{-0.04}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P477

ST200–RN5

5刃不等齿距长颈圆角头

5 Flute,Corner Radius with Reduced Neck Unequal Flute Spacing

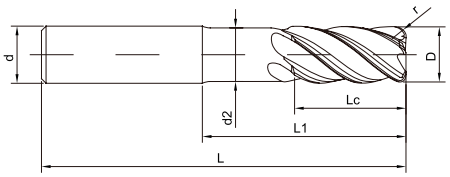


Fig1



SHANK h6 | 5 | AlCrN | 40° Helix | Corner-R

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
ST200–RN5–16010	16	1	32	45	15	100	16	1	○
ST200–RN5–20010	20	1	40	60	19	112	20	1	○
ST200–RN5–20020	20	2	40	60	19	112	20	1	○
ST200–RN5–20030	20	3	40	60	19	112	20	1	○
ST200–RN5–20040	20	4	40	60	19	112	20	1	○
ST200–RN5–25030	25	3	50	65	24	130	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	0 −0.03
D＞16	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P478

ST260–RN4

4刃不等齿距长颈圆角头内冷

4 Flute,Corner Radius with Reduced Neck
Unequal Flute Spacing,Internal Coolant

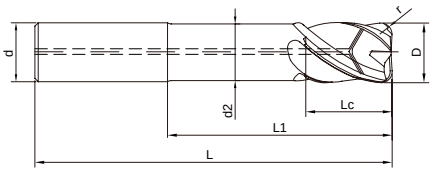


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
ST260–RN4–12010	12	1	24	36	11	90	12	1	○
ST260–RN4–12030	12	3	24	36	11	90	12	1	○
ST260–RN4–16010	16	1	32	47	15	100	16	1	○
ST260–RN4–16030	16	3	32	47	15	100	16	1	○
ST260–RN4–20030	20	3	40	57	19	115	20	1	○
ST260–RN4–25050	25	5	50	65	24	130	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	$^{0}_{-0.03}$
D＞16	$^{0}_{-0.04}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P480

ST300–RN4

4刃不等齿距长颈圆角头内冷

4 Flute,Corner Radius with Reduced Neck
Unequal Flute Spacing,Internal Coolant

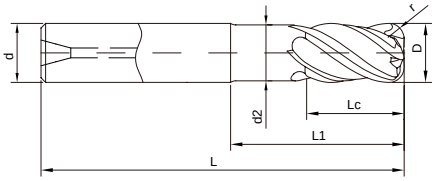


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
ST300–RN4–12010	12	1	24	38	11.4	90	12	1	○
ST300–RN4–12030	12	3	24	38	11.4	90	12	1	○
ST300–RN4–16010	16	1	32	47	15.4	100	16	1	○
ST300–RN4–16030	16	3	32	47	15.4	100	16	1	○
ST300–RN4–20010	20	1	40	57	19.4	115	20	1	○
ST300–RN4–20030	20	3	40	57	19.4	115	20	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	0 −0.03
D＞12	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P481

ST300–RN5

5刃不等齿距长颈圆角头内冷

5 Flute,Corner Radius with Reduced Neck
Unequal Flute Spacing,Internal Coolant

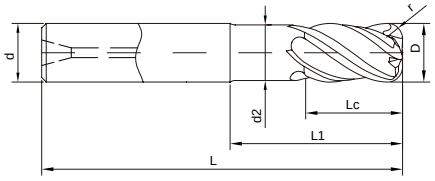


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	r	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
ST300–RN5–16010	16	1	32	47	15.4	100	16	1	○
ST300–RN5–16030	16	3	32	47	15.4	100	16	1	●
ST300–RN5–20010	20	1	40	67	19.4	117	20	1	○
ST300–RN5–20030	20	3	40	67	19.4	117	20	1	○
ST300–RN5–25030	25	3	50	82	24.4	138	25	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤16	0 −0.03
D＞16	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P482

SH160–R2

2刃圆角头

2 Flute, Corner Radius

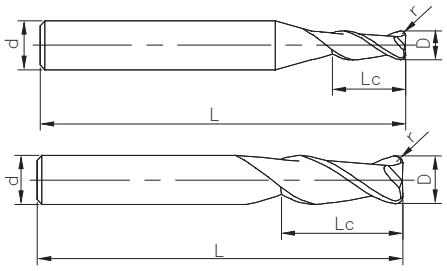


Fig1

Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SH160–R2–02002	2	6	0.2	50	4	1	●
SH160–R2–03003	3	9	0.3	50	4	1	○
SH160–R2–03005	3	9	0.5	50	4	1	○
SH160–R2–04005	4	10	0.5	50	4	2	○
SH160–R2–04010	4	10	1	50	4	2	●
SH160–R2–05005	5	13	0.5	50	6	1	○
SH160–R2–05010	5	13	1	50	6	1	○
SH160–R2–06005	6	15	0.5	50	6	2	●
SH160–R2–06010	6	15	1	50	6	2	●
SH160–R2–08005	8	20	0.5	60	8	2	○
SH160–R2–08010	8	20	1	60	8	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D>12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–R2

2刃圆角头

2 Flute, Corner Radius

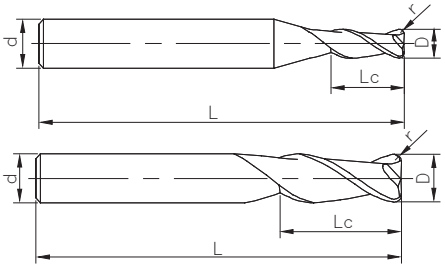


Fig1

Fig2



SHANK h6 | 2 | AlTiN | 35° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SH160–R2–10005	10	25	0.5	75	10	2	○
SH160–R2–10010	10	25	1	75	10	2	○
SH160–R2–10015	10	25	1.5	75	10	2	○
SH160–R2–10020	10	25	2	75	10	2	○
SH160–R2–12005	12	30	0.5	75	12	2	○
SH160–R2–12010	12	30	1	75	12	2	○
SH160–R2–12015	12	30	1.5	75	12	2	○
SH160–R2–12020	12	30	2	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–R4

4刃圆角头

4 Flute, Corner Radius

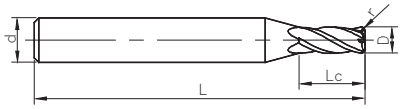


Fig1

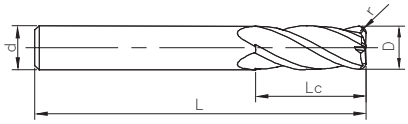


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SH160–R4–03003	3	9	0.3	50	4	1	○
SH160–R4–03005	3	9	0.5	50	4	1	○
SH160–R4–63003	3	8	0.3	50	6	1	○
SH160–R4–63005	3	8	0.5	50	6	1	○
SH160–R4–04003	4	10	0.3	50	4	2	○
SH160–R4–04005	4	10	0.5	50	4	2	○
SH160–R4–04010	4	10	1	50	4	2	○
SH160–R4–64003	4	10	0.3	50	6	1	○
SH160–R4–64005	4	10	0.5	50	6	1	○
SH160–R4–64010	4	10	1	50	6	1	○
SH160–R4–05003	5	13	0.3	50	6	1	○
SH160–R4–05005	5	13	0.5	50	6	1	○
SH160–R4–05010	5	13	1	50	6	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–R4

4刃圆角头

4 Flute, Corner Radius

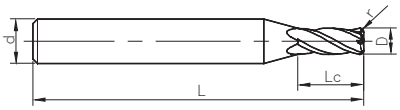


Fig1

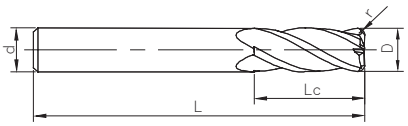


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SH160–R4–06003	6	15	0.3	50	6	2	○
SH160–R4–06005	6	15	0.5	50	6	2	○
SH160–R4–06010	6	15	1	50	6	2	○
SH160–R4–08002	8	20	0.2	60	8	2	○
SH160–R4–08003	8	20	0.3	60	8	2	○
SH160–R4–08005	8	20	0.5	60	8	2	○
SH160–R4–08010	8	20	1	60	8	2	○
SH160–R4–10005	10	25	0.5	75	10	2	○
SH160–R4–10010	10	25	1	75	10	2	○
SH160–R4–10015	10	25	1.5	75	10	2	○
SH160–R4–10020	10	25	2	75	10	2	○
SH160–R4–12005	12	30	0.5	75	12	2	○
SH160–R4–12010	12	30	1	75	12	2	○
SH160–R4–12015	12	30	1.5	75	12	2	○
SH160–R4–12020	12	30	2	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–RH4

4刃长柄圆角头

4 Flute Corner Radius, with Long Shank Length

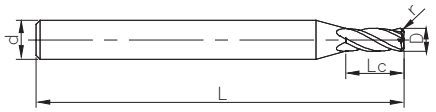


Fig1

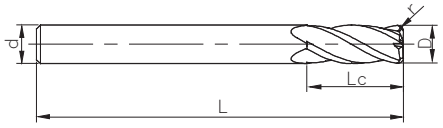


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	L	d	图号 Figure No.	库存 Stock
SH160–RH4–06005	6	15	0.5	75	6	2	●
SH160–RH4–06010	6	15	1	75	6	2	●
SH160–RH4–08005	8	20	0.5	100	8	2	●
SH160–RH4–08010	8	20	1	100	8	2	●
SH160–RH4–10005	10	25	0.5	100	10	2	●
SH160–RH4–10010	10	25	1	100	10	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH200–R4–H NEW

4刃圆角头

4 Flute, Corner Radius

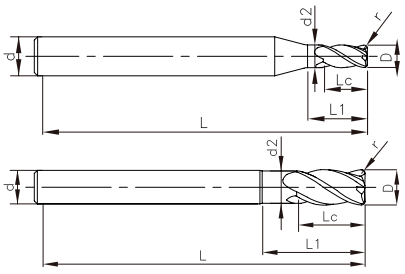


Fig1

Fig2



SHANK h6 | 4 | TiAlCrSiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	d2	L1	L	d	图号 Figure No.	库存 Stock
SH200–R4–03002–H	3	6	0.2	2.88	9	50	4	1	○
SH200–R4–63002–H	3	6	0.2	2.88	9	50	6	1	○
SH200–R4–03005–H	3	6	0.5	2.88	9	50	4	1	●
SH200–R4–63005–H	3	6	0.5	2.88	9	50	6	1	●
SH200–R4–04002–H	4	8	0.2	3.85	12	50	4	2	○
SH200–R4–64002–H	4	8	0.2	3.85	12	50	6	1	○
SH200–R4–04005–H	4	8	0.5	3.85	12	50	4	2	●
SH200–R4–64005–H	4	8	0.5	3.85	12	50	6	1	●
SH200–R4–05002–H	5	10	0.2	4.8	15	50	6	1	○
SH200–R4–05005–H	5	10	0.5	4.8	15	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02

单位unit (mm)

工件材料 Workpiece Material				
P			H	
1234	5	6	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel (48HRC以下)	PH与铁素体/马氏体钢 (<35HRC) PH and Ferrite/Martensitic Steel (<35HRC)	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
	◎		◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P484

SH200–R4–H NEW

4刃圆角头

4 Flute, Corner Radius

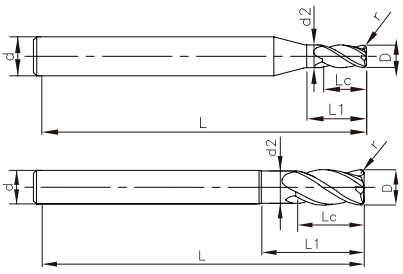


Fig1

Fig2



SHANK h6 | 4 | TiAlCrSiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	Lc	r	d2	L1	L	d	图号 Figure No.	库存 Stock
SH200–R4–06002–H	6	12	0.2	5.8	18	50	6	2	○
SH200–R4–06005–H	6	12	0.5	5.8	18	50	6	2	●
SH200–R4–06010–H	6	12	1	5.8	18	50	6	2	●
SH200–R4–08002–H	8	16	0.2	7.8	24	60	8	2	○
SH200–R4–08005–H	8	16	0.5	7.8	24	60	8	2	○
SH200–R4–08010–H	8	16	1	7.8	24	60	8	2	○
SH200–R4–10005–H	10	20	0.5	9.8	30	75	10	2	●
SH200–R4–10010–H	10	20	1	9.8	30	75	10	2	●
SH200–R4–12005–H	12	24	0.5	11.8	36	75	12	2	○
SH200–R4–12010–H	12	24	1	11.8	36	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02

单位unit (mm)

工件材料 Workpiece Material				
P			H	
1234	5	6	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel (48HRC以下)	PH与铁素体/马氏体钢 (<35HRC) PH and Ferrite/Martensitic Steel (<35HRC)	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
	◎		◎	○

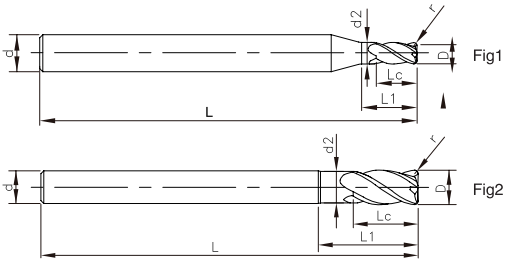
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P484

SH200–RH4–H NEW

4刃长柄圆角头

4 Flute, Corner Radius with Long Shank Length





SHANK h6 | 4 | TiAlCrSiN | 30° Helix | Corner-R | L

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	r	d2	L1	L	d	图号 Figure No.	库存 Stock
SH200–RH4–05002–H	5	10	0.2	4.8	15	60	6	1	○
SH200–RH4–05005–H	5	10	0.5	4.8	15	60	6	1	●
SH200–RH4–06002–H	6	12	0.2	5.8	18	60	6	2	●
SH200–RH4–06005–H	6	12	0.5	5.8	18	60	6	2	●
SH200–RH4–06010–H	6	12	1	5.8	18	60	6	2	●
SH200–RH4–08002–H	8	16	0.2	7.8	24	75	8	2	○
SH200–RH4–08005–H	8	16	0.5	7.8	24	75	8	2	●
SH200–RH4–08010–H	8	16	1	7.8	24	75	8	2	●
SH200–RH4–10005–H	10	20	0.5	9.8	30	100	10	2	●
SH200–RH4–10010–H	10	20	1	9.8	30	100	10	2	●
SH200–RH4–12005–H	12	24	0.5	11.8	36	100	12	2	○
SH200–RH4–12010–H	12	24	1	11.8	36	100	12	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02

单位unit (mm)

工件材料 Workpiece Material				
P			H	
1234	5	6	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel (48HRC以下)	PH与铁素体/马氏体钢 (<35HRC) PH and Ferrite/Martensitic Steel (<35HRC)	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
	◎		◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P484

UP100–B2

2刃球头

2 Flute, Ballnose

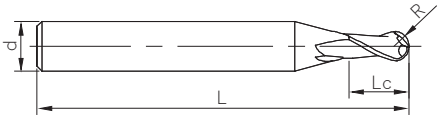


Fig1

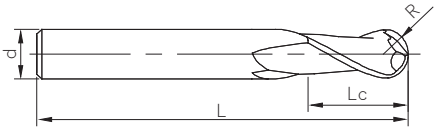


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP100–B2–00801	0.8	0.4	1.6	50	4	1	○
UP100–B2–00901	0.9	0.45	1.8	50	4	1	○
UP100–B2–01002	1	0.5	2	50	4	1	○
UP100–B2–01503	1.5	0.75	3	50	4	1	○
UP100–B2–02004	2	1	4	50	4	1	●
UP100–B2–02505	2.5	1.25	5	50	4	1	○
UP100–B2–03006	3	1.5	6	50	4	1	○
UP100–B2–63006	3	1.5	6	50	6	1	○
UP100–B2–63508	3.5	1.75	8	50	6	1	●
UP100–B2–04008	4	2	8	50	4	2	○
UP100–B2–64008	4	2	8	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P448

UP100–B2

2刃球头

2 Flute, Ballnose

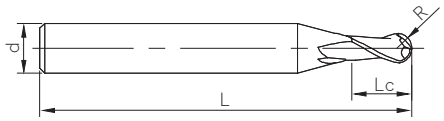


Fig1

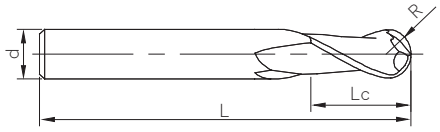


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP100–B2–05010	5	2.5	10	50	6	1	●
UP100–B2–06012	6	3	12	50	6	2	○
UP100–B2–07014	7	3.5	14	60	8	1	○
UP100–B2–08014	8	4	14	60	8	2	○
UP100–B2–09016	9	4.5	16	75	10	1	●
UP100–B2–10018	10	5	18	75	10	2	○
UP100–B2–11020	11	5.5	20	75	12	1	●
UP100–B2–12022	12	6	22	75	12	2	●
UP100–B2–13026	13	6.5	26	90	16	1	●
UP100–B2–14026	14	7	26	90	16	1	○
UP100–B2–15030	15	7.5	30	90	16	1	●
UP100–B2–16030	16	8	30	100	16	2	○
UP100–B2–20038	20	10	38	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	0 −0.01
1.5<R<3	0 −0.015
R≥3	0 −0.02

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P448

UP100–BH2

2刃长柄球头

2 Flute Ballnose, with Long Shank Length

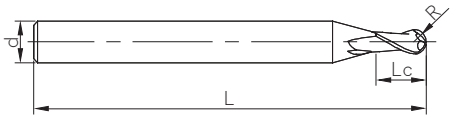


Fig1

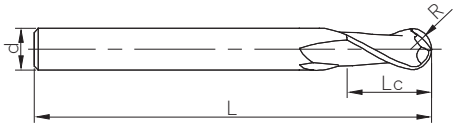


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP100–BH2–02004	2	1	4	75	4	1	●
UP100–BH2–03006	3	1.5	6	75	4	1	●
UP100–BH2–04008	4	2	8	75	4	2	●
UP100–BH2–05010	5	2.5	10	75	6	1	●
UP100–BH2–06012	6	3	12	100	6	2	●
UP100–BH2–08016	8	4	16	100	8	2	●
UP100–BH2–10020	10	5	20	150	10	2	●
UP100–BH2–12024	12	6	24	150	12	2	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	0 −0.01
1.5<R<3	0 −0.015
R≥3	0 −0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P448

UP100–B4

4刃球头

4 Flute, Ballnose

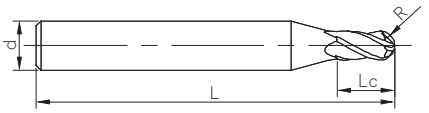


Fig1

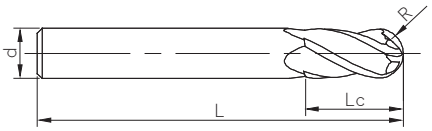


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP100–B4–02004	2	1	4	50	4	1	○
UP100–B4–02505	2.5	1.25	5	50	4	1	●
UP100–B4–03006	3	1.5	6	50	4	1	●
UP100–B4–63006	3	1.5	6	50	6	1	●
UP100–B4–04008	4	2	8	50	4	2	●
UP100–B4–64008	4	2	8	50	6	1	●
UP100–B4–05010	5	2.5	10	50	6	1	●
UP100–B4–06012	6	3	12	50	6	2	●
UP100–B4–07014	7	3.5	14	60	8	1	●
UP100–B4–08014	8	4	14	60	8	2	●
UP100–B4–09016	9	4.5	16	75	10	1	●
UP100–B4–10018	10	5	18	75	10	2	●
UP100–B4–11020	11	5.5	20	75	12	1	●
UP100–B4–12022	12	6	22	75	12	2	●
UP100–B4–14024	14	7	24	75	14	2	○
UP100–B4–16030	16	8	30	100	16	2	○
UP100–B4–20038	20	10	38	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎	○	○	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P448

UP210–B2

2刃球头

2 Flute, Ballnose

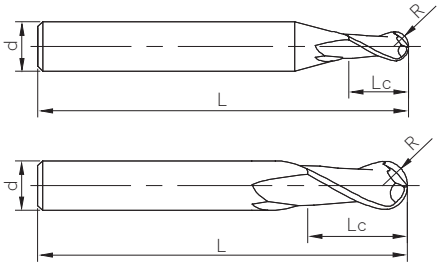


Fig1

Fig2



SHANK h6 | 2 | AlCrSiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP210–B2–00801	0.8	0.4	1.6	50	4	1	○
UP210–B2–00901	0.9	0.45	1.8	50	4	1	○
UP210–B2–01002	1	0.5	2	50	4	1	●
UP210–B2–01503	1.5	0.75	3	50	4	1	●
UP210–B2–02004	2	1	4	50	4	1	●
UP210–B2–62004	2	1	4	50	6	1	●
UP210–B2–02505	2.5	1.25	5	50	4	1	○
UP210–B2–03006	3	1.5	6	50	4	1	●
UP210–B2–63006	3	1.5	6	50	6	1	●
UP210–B2–04008	4	2	8	50	4	2	●
UP210–B2–64008	4	2	8	50	6	1	●
UP210–B2–05010	5	2.5	10	50	6	1	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P452

UP210–B2

2刃球头

2 Flute, Ballnose

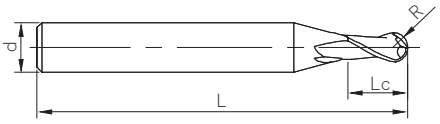


Fig1

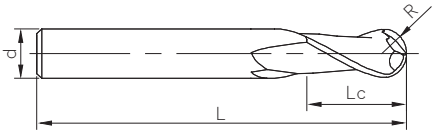


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP210–B2–06012	6	3	12	50	6	2	●
UP210–B2–07014	7	3.5	14	60	8	1	●
UP210–B2–08014	8	4	14	60	8	2	●
UP210–B2–09016	9	4.5	16	75	10	1	●
UP210–B2–10018	10	5	18	75	10	2	●
UP210–B2–11020	11	5.5	20	75	12	1	○
UP210–B2–12022	12	6	22	75	12	2	●
UP210–B2–13026	13	6.5	26	90	14	1	○
UP210–B2–14026	14	7	26	90	14	2	●
UP210–B2–15030	15	7.5	30	90	16	1	○
UP210–B2–16030	16	8	30	100	16	2	●
UP210–B2–20038	20	10	38	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P452

UP210–BH2

2刃长柄球头

2 Flute Ballnose, with Long Shank Length

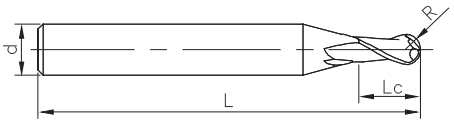


Fig1

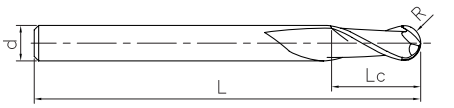


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP210–BH2–02004	2	1	4	75	4	1	●
UP210–BH2–03006	3	1.5	6	75	4	1	●
UP210–BH2–63006	3	1.5	6	75	6	1	●
UP210–BH2–04008	4	2	8	75	4	2	●
UP210–BH2–64008	4	2	8	75	6	1	●
UP210–BH2–05010	5	2.5	10	75	6	1	●
UP210–BH2–06012	6	3	12	75	6	2	●
UP210–BH2–08014	8	4	14	100	8	2	○
UP210–BH2–10018	10	5	18	100	10	2	●
UP210–BH2–12022	12	6	22	100	12	2	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	0 −0.01
1.5<R<3	0 −0.015
R≥3	0 −0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P452

UP210–B4

4刃球头

4 Flute, Ballnose

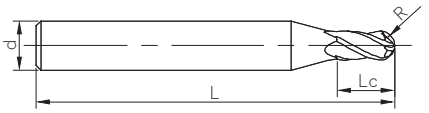


Fig1

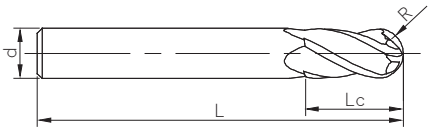


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UP210–B4–02004	2	1	4	50	4	1	○
UP210–B4–02505	2.5	1.25	5	50	4	1	○
UP210–B4–03006	3	1.5	6	50	4	1	○
UP210–B4–63006	3	1.5	6	50	6	1	○
UP210–B4–04008	4	2	8	50	4	2	○
UP210–B4–64008	4	2	8	50	6	1	○
UP210–B4–05010	5	2.5	10	50	6	1	●
UP210–B4–06012	6	3	12	50	6	2	○
UP210–B4–07014	7	3.5	14	60	8	1	○
UP210–B4–08014	8	4	14	60	8	2	●
UP210–B4–09016	9	4.5	16	75	10	1	○
UP210–B4–10018	10	5	18	75	10	2	○
UP210–B4–11020	11	5.5	20	75	12	1	○
UP210–B4–12022	12	6	22	75	12	2	●
UP210–B4–14024	14	7	24	75	14	2	○
UP210–B4–16030	16	8	30	100	16	2	○
UP210–B4–20038	20	10	38	100	20	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material

P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P452

SP210–B2

2刃球头

2 Flute,Ballnose

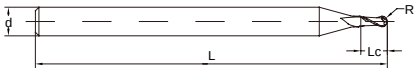


Fig1

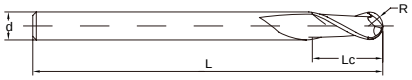


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SP210–B2–01002	1	0.5	2	50	4	1	○
SP210–B2–02004	2	1	4	50	4	1	○
SP210–B2–03006	3	1.5	6	50	4	1	○
SP210–B2–04008	4	2	8	50	4	2	○
SP210–B2–06012	6	3	12	50	6	2	●
SP210–B2–08014	8	4	14	60	8	2	○
SP210–B2–10018	10	5	18	75	10	2	○
SP210–B2–12022	12	6	22	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	0 −0.01
1.5<R<3	0 −0.015
R≥3	0 −0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P455

SP210–BH2

2刃长柄球头

2 Flute,Ballnose with Long Shank Length

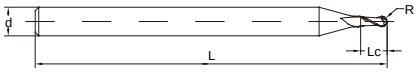


Fig1



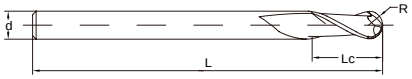


Fig2



标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SP210–BH2–04008	4	2	8	75	4	2	○
SP210–BH2–64008	4	2	8	75	6	1	○
SP210–BH2–06012	6	3	12	75	6	2	○
SP210–BH2–08014	8	4	14	75	8	2	○
SP210–BH2–10018	10	5	18	100	10	2	○
SP210–BH2–12022	12	6	22	100	12	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5<R<3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	◎	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P455

UPM100–BN2

2刃微小径长颈球头

2 Flute Ballnose, Miniature Sizes with Neck

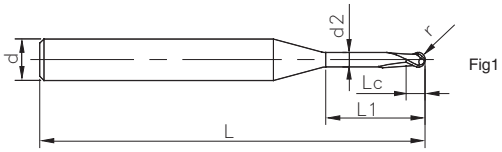


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
UPM100–BN2–00802	0.8	0.4	0.6	0.75	2	50	4	1	○
UPM100–BN2–00804	0.8	0.4	0.6	0.75	4	50	4	1	○
UPM100–BN2–00806	0.8	0.4	0.6	0.75	6	50	4	1	●
UPM100–BN2–01006	1.0	0.5	0.8	0.95	6	50	4	1	○
UPM100–BN2–01008	1.0	0.5	0.8	0.95	8	50	4	1	○
UPM100–BN2–01010	1.0	0.5	0.8	0.95	10	50	4	1	●
UPM100–BN2–01206	1.2	0.6	1.0	1.15	6	50	4	1	○
UPM100–BN2–01208	1.2	0.6	1.0	1.15	8	50	4	1	○
UPM100–BN2–01210	1.2	0.6	1.0	1.15	10	50	4	1	●
UPM100–BN2–01508	1.5	0.75	1.4	1.44	8	50	4	1	○
UPM100–BN2–01510	1.5	0.75	1.4	1.44	10	50	4	1	○
UPM100–BN2–01512	1.5	0.75	1.4	1.44	12	50	4	1	●
UPM100–BN2–02008	2.0	1.0	1.6	1.92	8	50	4	1	○
UPM100–BN2–02010	2.0	1.0	1.6	1.92	10	50	4	1	○
UPM100–BN2–02012	2.0	1.0	1.6	1.92	12	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R	±0.015

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
◎	○	○	◎			

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P459

US200–B2

2刃球头

2 Flute,Ballnose

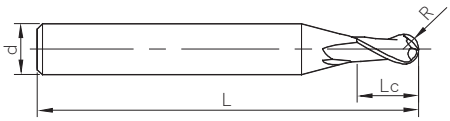


Fig1

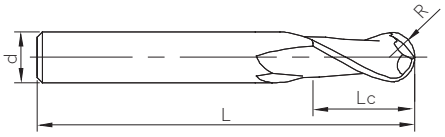


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
US200–B2–01002	1	0.5	2	50	4	1	○
US200–B2–01503	1.5	0.75	3	50	4	1	○
US200–B2–02004	2	1	4	50	4	1	○
US200–B2–03006	3	1.5	6	50	4	1	○
US200–B2–63006	3	1.5	6	50	6	1	●
US200–B2–04008	4	2	8	50	4	2	●
US200–B2–64008	4	2	8	50	6	1	●
US200–B2–05010	5	2.5	10	50	6	1	●
US200–B2–06012	6	3	12	50	6	2	●
US200–B2–08014	8	4	14	60	8	2	●
US200–B2–10018	10	5	18	75	10	2	●
US200–B2–12022	12	6	22	75	12	2	●
US200–B2–16026	16	8	26	100	16	2	●
US200–B2–20038	20	10	38	100	20	2	●

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Super Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

US200–B4

4刃球头

4 Flute,Ballnose

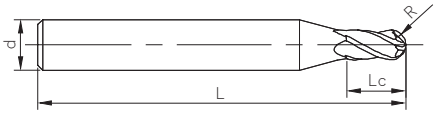


Fig1

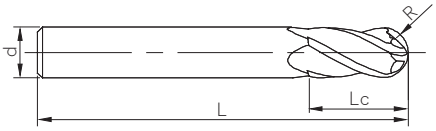


Fig2



SHANK h6 | 4 | AlTiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
US200–B4–01002	1	0.5	2	50	4	1	●
US200–B4–01503	1.5	0.75	3	50	4	1	●
US200–B4–02004	2	1	4	50	4	1	○
US200–B4–03006	3	1.5	6	50	4	1	●
US200–B4–04008	4	2	8	50	4	2	●
US200–B4–05010	5	2.5	10	50	6	1	○
US200–B4–06012	6	3	12	50	6	2	○
US200–B4–08014	8	4	14	60	8	2	●
US200–B4–10018	10	5	18	75	10	2	●
US200–B4–12022	12	6	22	75	12	2	○
US200–B4–16026	16	8	26	100	16	2	○
US200–B4–20038	20	10	38	100	20	2	○
US200–B4–63006	3	1.5	6	50	6	1	○
US200–B4–64008	4	2	8	50	4	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	$^{0}_{-0.02}$
D＞12	$^{0}_{-0.03}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	S	
1234	5	123	123	123	4
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高温合金 Heat–resistant Super Alloys	钛合金 Titanium Alloys
○	○	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P461

UA100–B2

2刃球头

2 Flute, Ballnose

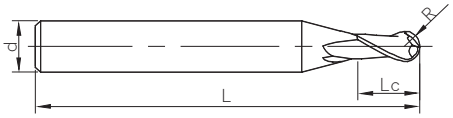


Fig1

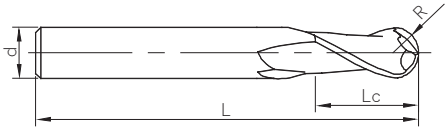


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
UA100–B2–01002	1	0.5	2	50	4	1	○
UA100–B2–02004	2	1	4	50	4	1	○
UA100–B2–03006	3	1.5	6	50	4	1	●
UA100–B2–63006	3	1.5	6	50	6	1	●
UA100–B2–04008	4	2	8	50	4	2	●
UA100–B2–64008	4	2	8	50	6	1	○
UA100–B2–05010	5	2.5	10	50	6	1	●
UA100–B2–06012	6	3	12	50	6	2	○
UA100–B2–07014	7	3.5	14	60	8	1	●
UA100–B2–08014	8	4	14	60	8	2	●
UA100–B2–09016	9	4.5	16	75	10	1	●
UA100–B2–10018	10	5	18	75	10	2	○
UA100–B2–12022	12	6	22	75	12	2	●
UA100–B2–16026	16	8	26	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R＜3	±0.015
R≥3	±0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P465

SA300–BN2

2刃长颈球头铣刀

2 Flute,Ballnose With Reduced Neck

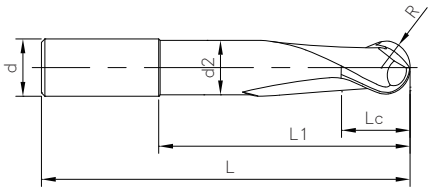


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L1	d2	L	d	图号 Figure No.	库存 Stock
SA300–BN2–10030	10	5	12	30	9.5	70	10	1	○
SA300–BN2–12036	12	6	14	36	11.5	80	12	1	○
SA300–BN2–16048	16	8	18	48	15	100	16	1	○
SA300–BN2–20060	20	10	24	60	19	112	20	1	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤10	±0.02

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				◎	◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P470

SG200–B2

2刃球头

2 Flute, Ballnose

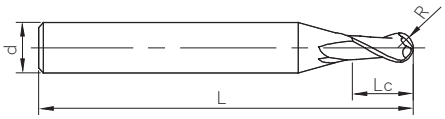


Fig1

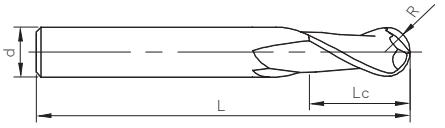


Fig2



SHANK h6 | 2 | U-DIA | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SG200–B2–02004	2	1	4	50	4	1	○
SG200–B2–03006	3	1.5	6	50	4	1	○
SG200–B2–04008	4	2	8	50	4	2	○
SG200–B2–05010	5	2.5	10	50	6	1	○
SG200–B2–06012	6	3	12	50	6	2	○
SG200–B2–08014	8	4	14	60	8	2	○
SG200–B2–10018	10	5	18	75	10	2	○
SG200–B2–12022	12	6	22	75	12	2	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
D≤12	0 −0.02
D＞12	0 −0.03

单位unit (mm)

工件材料 Workpiece Material						
P		M	K	N		
1234	5	123	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	铝合金 Aluminium Alloys	铜合金 Copper Alloys	石墨 Graphite
				○		◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P473

SN200–B4

4刃不等齿距球头

4 Flute,Ballnose Unequal Flute Spacing

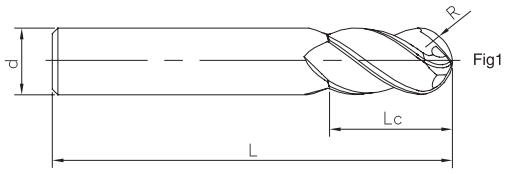


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SN200–B4–06012	6	3	12	50	6	1	○
SN200–B4–08014	8	4	14	60	8	1	○
SN200–B4–10018	10	5	18	75	10	1	○
SN200–B4–12022	12	6	22	75	12	1	○
SN200–B4–16026	16	8	26	90	16	1	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≥3	±0.020

单位unit (mm)

工件材料 Workpiece Material				
P		M	S	
1234	5	123	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (<48HRC) Alloy Steel,Tool Steel(<48HRC)	不锈钢 Stainless Steel	高温合金 Heat–resistant Super Alloys	钛合金 Titanium Alloys
○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P476

ST200–B4

4刃不等齿距球头

4 Flute,Ballnose Unequal Flute Spacing

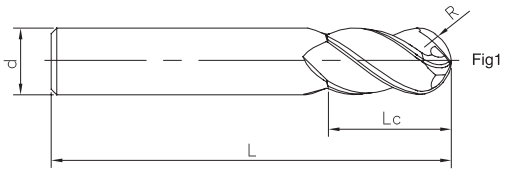


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
ST200–B4–06012	6	3	12	50	6	1	○
ST200–B4–08014	8	4	14	60	8	1	○
ST200–B4–10018	10	5	18	75	10	1	○
ST200–B4–12022	12	6	22	80	12	1	○
ST200–B4–16026	16	8	26	90	16	1	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≥3	±0.02

单位unit (mm)

工件材料 Workpiece Material					
P		M	S		
1234	5	123	4		
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	TA α钛合金	TC α+β钛合金	TB β钛合金
○	○	○	◎	◎	◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P479

SH160–B2

2 刃球头

2 Flute, Ballnose

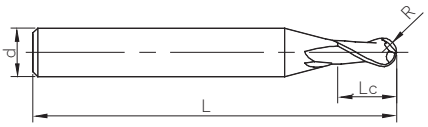


Fig1

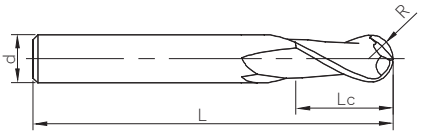


Fig2



SHANK h6 | 2 | AlTiN | 30° Helix | Ballnose

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SH160–B2–00501	0.5	0.25	1	50	4	1	○
SH160–B2–01002	1	0.5	2	50	4	1	○
SH160–B2–01503	1.5	0.75	3	50	4	1	○
SH160–B2–02004	2	1	4	50	4	1	○
SH160–B2–03006	3	1.5	6	50	4	1	○
SH160–B2–04008	4	2	8	50	4	2	○
SH160–B2–05010	5	2.5	10	50	6	1	○
SH160–B2–06012	6	3	12	50	6	2	○
SH160–B2–07014	7	3.5	14	60	8	1	○
SH160–B2–08014	8	4	14	60	8	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5＜R＜3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–B2

2 刃球头

2 Flute, Ballnose

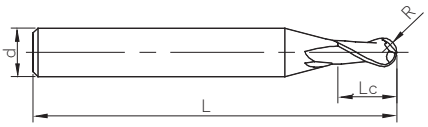


Fig1

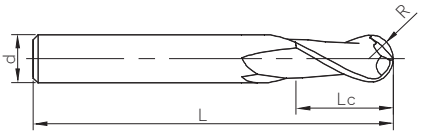


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SH160–B2–09016	9	4.5	16	75	10	1	○
SH160–B2–10018	10	5	18	75	10	2	○
SH160–B2–11020	11	5.5	20	75	12	1	○
SH160–B2–12022	12	6	22	75	12	2	○
SH160–B2–16026	16	8	26	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5＜R＜3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–BH2

2刃长柄球头

2 Flute, Ballnose with Long Shank Length

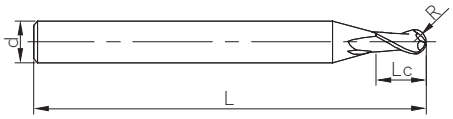


Fig1

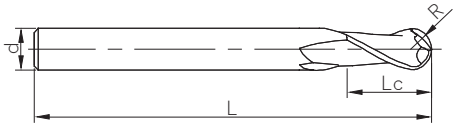


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SH160–BH2–06012	6	3	12	100	6	2	●
SH160–BH2–08014	8	4	14	100	8	2	●
SH160–BH2–10018	10	5	18	100	10	2	●
SH160–BH2–12024	12	6	24	100	12	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5＜R＜3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SH160–B4

4 刃球头

4 Flute, Ballnose

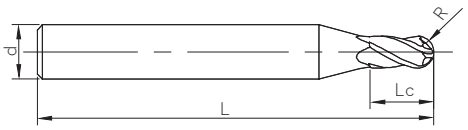


Fig1

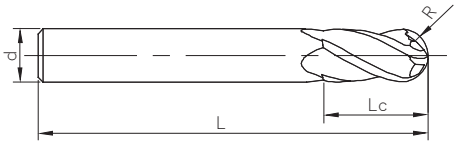


Fig2





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	L	d	图号 Figure No.	库存 Stock
SH160–B4–02004	2	1	4	50	4	1	○
SH160–B4–03006	3	1.5	6	50	4	1	○
SH160–B4–04008	4	2	8	50	4	2	○
SH160–B4–05010	5	2.5	10	50	6	1	○
SH160–B4–06012	6	3	12	50	6	2	○
SH160–B4–07014	7	3.5	14	60	8	1	○
SH160–B4–08014	8	4	14	60	8	2	○
SH160–B4–09016	9	4.5	16	75	10	1	○
SH160–B4–10018	10	5	18	75	10	2	○
SH160–B4–11020	11	5.5	20	75	12	1	○
SH160–B4–12022	12	6	22	75	12	2	○
SH160–B4–16026	16	8	26	100	16	2	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
R≤1.5	$^{0}_{-0.01}$
1.5＜R＜3	$^{0}_{-0.015}$
R≥3	$^{0}_{-0.02}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (＜35HRC) Carbon Steel,Alloy Steel(＜35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P483

SHM100–BN2

2刃微小径长颈球头

2 Flute Ballnose, Miniature Sizes with Neck

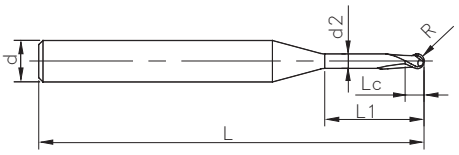


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	R	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SHM100–BN2–00401	0.4	0.2	0.3	0.35	1	50	4	1	○
SHM100–BN2–00402	0.4	0.2	0.3	0.35	2	50	4	1	○
SHM100–BN2–00403	0.4	0.2	0.3	0.35	3	50	4	1	○
SHM100–BN2–00601	0.6	0.3	0.4	0.55	1	50	4	1	○
SHM100–BN2–00602	0.6	0.3	0.4	0.55	2	50	4	1	○
SHM100–BN2–00603	0.6	0.3	0.4	0.55	3	50	4	1	○
SHM100–BN2–00802	0.8	0.4	0.6	0.75	2	50	4	1	○
SHM100–BN2–00804	0.8	0.4	0.6	0.75	4	50	4	1	○
SHM100–BN2–00806	0.8	0.4	0.6	0.75	6	50	4	1	●
SHM100–BN2–01006	1.0	0.5	0.8	0.95	6	50	4	1	○
SHM100–BN2–01008	1.0	0.5	0.8	0.95	8	50	4	1	○

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
0.2≤R≤1	$^{0}_{-0.01}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P485

SHM100–BN2

2刃微小径长颈球头

2 Flute Ballnose, Miniature Sizes with Neck

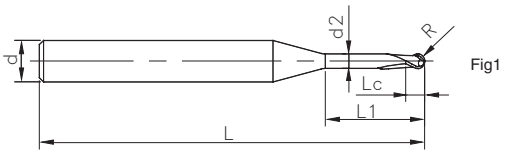


Fig1





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D	R	Lc	d2	L1	L	d	图号 Figure No.	库存 Stock
SHM100–BN2–01010	1.0	0.5	0.8	0.95	10	50	4	1	●
SHM100–BN2–01206	1.2	0.6	1.0	1.15	6	50	4	1	○
SHM100–BN2–01208	1.2	0.6	1.0	1.15	8	50	4	1	●
SHM100–BN2–01210	1.2	0.6	1.0	1.15	10	50	4	1	●
SHM100–BN2–01508	1.5	0.75	1.4	1.44	8	50	4	1	○
SHM100–BN2–01510	1.5	0.75	1.4	1.44	10	50	4	1	●
SHM100–BN2–01512	1.5	0.75	1.4	1.44	12	50	4	1	●
SHM100–BN2–02008	2.0	1.0	1.6	1.92	8	50	4	1	○
SHM100–BN2–02010	2.0	1.0	1.6	1.92	10	50	4	1	●
SHM100–BN2–02012	2.0	1.0	1.6	1.92	12	50	4	1	●

●标准库存 Stock
○需预定 Available upon Order

R	公差 Tol
0.2≤R≤1	$^{0}_{-0.01}$

单位unit (mm)

工件材料 Workpiece Material					
P		M	K	H	
1234	5	123	123	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铸铁 Cast Iron	高硬钢 Hardened Steel (45–55HRC)	高硬钢 Hardened Steel (55–60HRC)
				◎	○

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P485

SD200–KDA

12刃菱齿铣刀

12 Flute, Ling Tooth

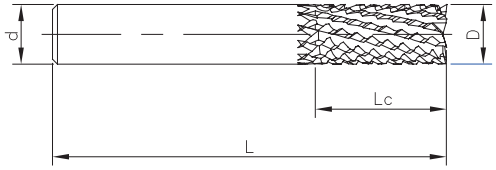


Fig1



SHANK h6 | 12 | U-DIA | 15°/40° Helix

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d	图号 Figure No.	库存 Stock
SD200–KDA–06015	6	15	60	6	1	○
SD200–KDA–08020	8	20	60	8	1	○
SD200–KDA–10025	10	25	75	10	1	○
SD200–KDA–12030	12	30	85	12	1	○

●标准库存 Stock
○需预定 Available upon Order

D	公差 Tol
6≤D≤12	0 −0.04

单位unit (mm)

工件材料 Workpiece Material					
P		M	N		
1234	5	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel,Tool Steel(48HRC以下)	不锈钢 Stainless Steel	铝合金 Aluminium Alloys	铜合金 Copper Alloys	碳纤维、玻璃纤、复合材料 CFRP,GFRP,Composite Material
					◎

◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P474

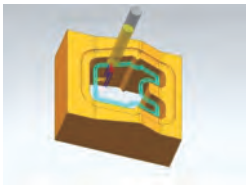
UP210

案例一：UP210系列冲压模加工
Case 1: UP210 Endmills for Stamping die Machining

刀具型号 Type	UP210–SL4–12045
刀具规格 Size	D12*45*100*d12
加工材料 Workpiece	H13（45HRC）
切削速度 Cutting Speed	2600RPM(100m/min)
进给速度 Feed Rate	0.15mm/z(1600mm/min)
切削方式 Cutting Method	侧铣 Side Milling
切削量 Cutting Depth	ap=30mm，ae=0.05~0.2mm
冷却方式 Cooling Method	气冷 Air Cooling
刀具寿命 Tool Life	加工1.5小时后，我司刀具圆周刃口无明显崩口，磨损小，而KY公司刀具出现较大崩口和磨损。 Processing exactly the same part,KY tool shows chipping and poor surface quality,can not continue machining.GESAC tool cutting edges are still in good condition, able to continue milling.



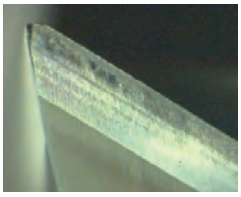
加工工件图片
Workpiece



仿形加工图片
Profiling



KY公司



GESAC

加工1.5小时后刀具磨损量
Wear Condition of Cutting 1.5H

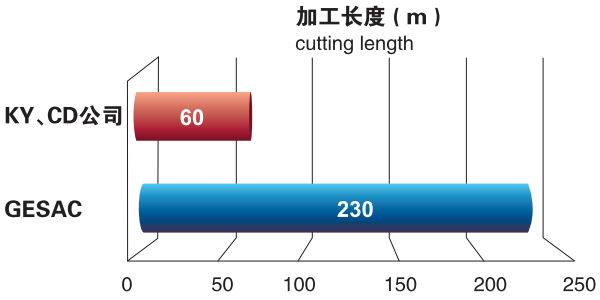
SP210

案例一：SP210系列活字块精铣外形轮廓加工

Case 1 : SP210 Endmills for Type Block Contour Finishing

刀具型号 Type	SP210–S4–10025
刀具规格 Size	D10*25*100*d10
加工材料 Workpiece	Q235A（HB200）
切削速度 Cutting Speed	5100RPM(160m/min)
进给速度 Feed Rate	0.078mm/z(1600mm/min)
切削方式 Cutting Method	外形轮廓精加工 Contour Finishing
切削量 Cutting Depth	ap=5–12mm，ae=0.15mm
冷却方式 Cooling Method	乳化液 Emulsion
刀具寿命 Tool Life	韩国KY公司和台湾CD公司刀具在同样环境下，n=1800rpm，F=600mm/min只能加工60米，出现崩刃现象；GESAC刀具在高转速高进给条件下可切削230米，效率提高近2倍，并且寿命是原来4倍。 KY Company and CD Company tool in the same environment，n=1800rpm，F=600mm/min，only machining 60 meters and appeared chipping. GESAC tool in the high speed and high feed condition, machining 230 meters, Efficiency increased by nearly 2 times, Life has increased four times.



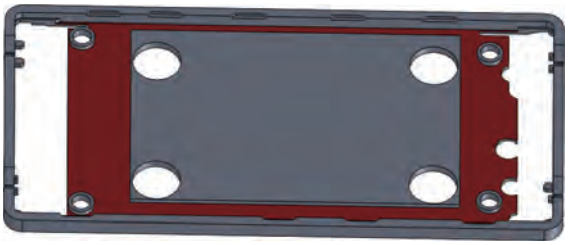


效率Efficiency +167%，
寿命Life+283%

US200

案例一：US200系列手机中框内腔粗加工
Case 1: US200 Endmills for Roughing of Phone box cavity

刀具型号 Type	US200-R4-06005
刀具规格 Size	D6*R0.5*16*50*d6
加工材料 Workpiece	SUS304
切削速度 Cutting Speed	8000RPM(150m/min)
进给速度 Feed Rate	0.125mm/z(4000mm/min)
切削方式 Cutting Method	面铣 Side Milling
切削参数	ap=0.3mm， ae=4mm
冷却方式 Cooling Method	油雾 Oil Mist
刀具寿命 Tool Life	在工艺1下，GESAC刀具寿命约80件，CQ的刀具只有45件； Under the No.1 process technology, GESAC tool life is about 80 parts, CQ tool life is only 45 parts. 在提升加工效率后,CQ刀具寿命只有15件且不稳定,GESAC刀具寿命50件且稳定。 After improving the processing efficiency,CQ tool life is only 15 parts and not stable,GESAC tool life 50 parts and stable.

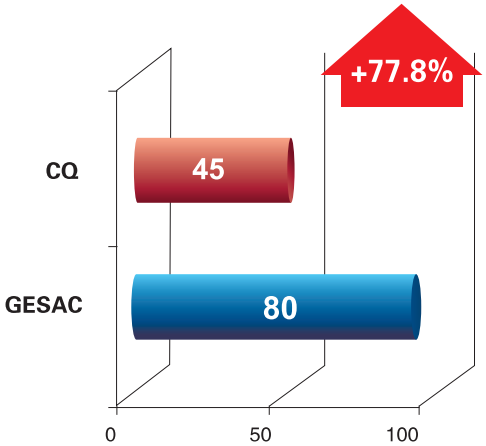


红色为加工部位
red range is cutting path

加工位置cutting path：
使用D6*R0.5*16*50*d6刀具，做手机中框内腔的面铣粗加工。
Using D6*R0.5*16*50*d6 tool for Roughing of Phone box cavity

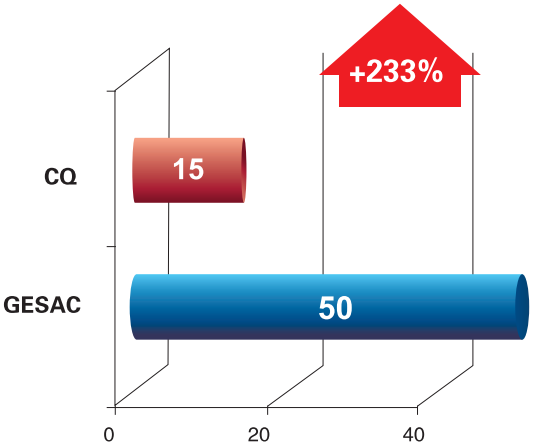
加工工艺
Processing technology：

工艺1寿命（件）
The No.1 process technology life（pcs）



客户端原切削方案
Client original cutting program：
n=6000rpm，F=2000mm/min

工艺2寿命（件）
The No.2 process technology life（pcs）

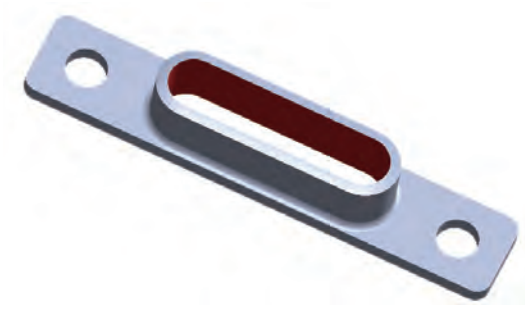


提升效率后新切削方案
Improve the efficiency of the new cutting scheme：
n=8000rpm，F=4000mm/min

US300

案例一：US300系列手机充电接口加工
Case 1: US300 Endmills for Phone Charging Port Machining

刀具型号 Type	US300–S4–01503
刀具规格 Size	D1.5*3*50*d4
加工材料 Workpiece	SUS316L（150–200HB）
切削速度 Cutting Speed	8000RPM(37.68m/min)
进给速度 Feed Rate	插铣Plunge Milling 0.0006mm/z(20mm/min)
	侧铣 Side Milling 0.00625mm/z(200mm/min)
切削方式 Cutting Method	插铣、侧铣加工 Plunge Milling,Side Milling
切削量 Cutting Depth	ap=2.6 mm，ae=0.32 mm
冷却方式 Cooling Method	油雾 Oil Mist
刀具寿命 Tool Life	GESAC刀具在切削寿命上，远超CS和CT刀具，并为客户提出新方案，提高了加工效率和刀具使用寿命，降低了加工成本. GESAC cutting tool on cutting life, far more than CS and CT cutting tools, and put forward a new scheme for the customer, improves the machining efficiency and cutting tool life, reduce the processing cost.

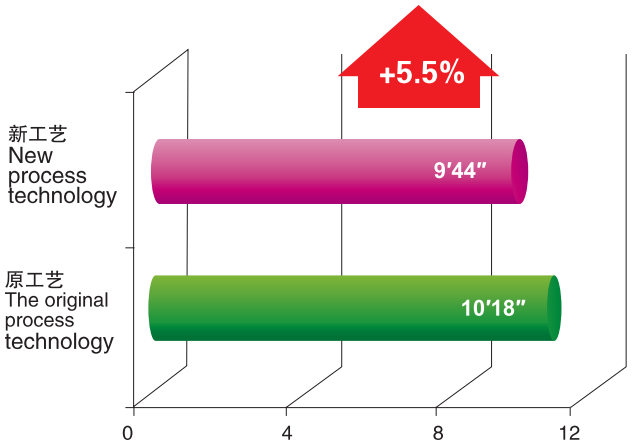


红色为加工部位
red range is cutting path

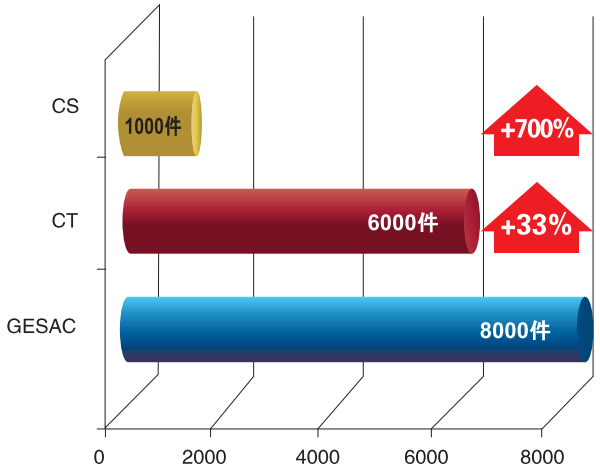
刀具寿命 Tool Life：
客户端原先采用工艺为D1刀具分层侧铣，效率低，刀具寿命不良；
根据以上情况，我司提出新工艺：结合插铣和侧铣 ，改用D1.5刀具保证刚性，替换客户原有的分层侧铣 ，提升加工效率的同时也提升了刀具的寿命。
Client by using process for D1 original layered Side Milling Side Milling, low efficiency, bad tool life.
According to the above situation, we put forward a new process, insert plunge milling and side milling, switch to D1.5 cutting tool rigidity, replace the customer original layered side milling, improve processing efficiency but also improve the service life of cutter.

加工工艺
Processing technology：

加工效率
Machining Efficiency



加工寿命
Tool Life



客户要求3000件
Customer request processing 3000 parts

US300–S4–01503该款刀具在客户端使用中，效果表现优异，客户给予很高的评价。
能够满足高效率的加工需求，同时寿命较竞争对手有明显优势。
US300–S4–01503 in the client has excellent performance，customers give a high evaluation.
Able to meet the needs of high–efficiency machining, the tool life is obviously superior to the competitors at the same time.

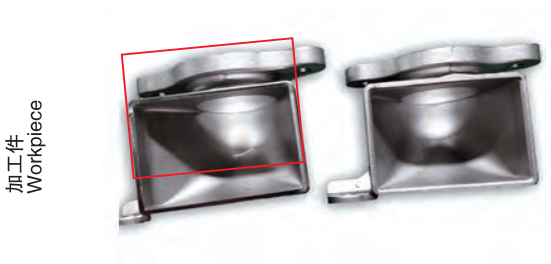
SS200

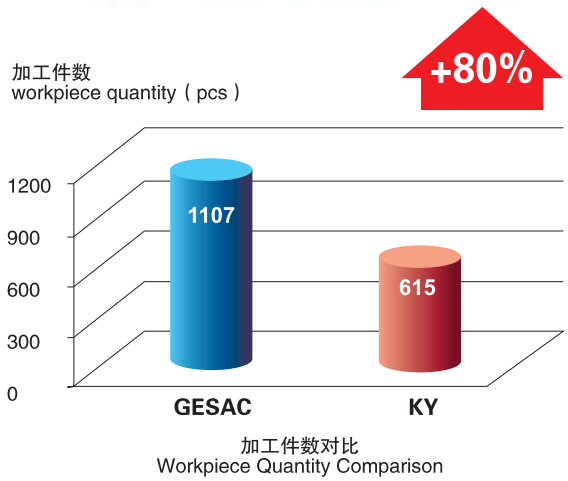
案例一：SS200系列汽车零件侧铣加工

CASE 1: SS200 Endmills for Side Milling of Auto Parts

刀具型号 Type	SS200–C4–06006
刀具规格 Size	D6*C0.06*15*50*d6
加工材料 Workpiece	SUS304(HB180)
切削速度 Cutting Speed	4000RPM(75m/min)
进给速度 Feed Rate	0.063mm/z(1000mm/min)
切削方式 Cutting Method	侧铣 Side Milling
切削量 Cutting Depth	ap=6mm，ae=0.4mm
冷却方式 Cooling Method	乳化液 Emulsion
刀具寿命 Tool Life	GESAC刀具加工寿命较KY刀具有较大的优势，加工表现优秀 GESAC’s tool showed fine wear resistance and long tool life.

红色为加工部位
Red Range Is Cutting Path





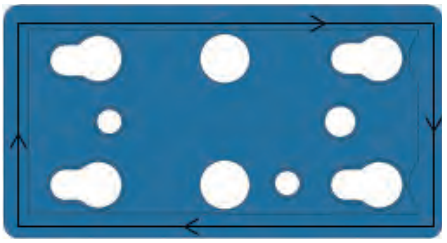
加工件数对比
Workpiece Quantity Comparison

UA100

案例一：UA100智能手机中框加工

Case 1： UA100 Endmills for Smart phone box processing

刀具型号 Type	UA100–S3–10025
刀具规格 Size	D10*25*75*d10
加工材料 Workpiece	AL6063
切削速度 Cutting Speed	8000RPM(251m/min)
进给速度 Feed Rate	0.21mm/z(5000mm/min)
切削量 Cutting Depth	ap=0.5mm，ae=8mm
冷却方式 Cooling Method	乳化液 Emulsion
刀具寿命 Tool Life	该款刀具用于加工手机中框上表面（压爪夹持面），对工件表面质量无要求，但对寿命要求较高，要求刀具在加工5000件内无毛刺。我司刀具满足客户需求。 The cutting tool is used to process the surface of a cell phone（Press jaw clamp）. It has no surface quality of workpiece, but require a higher life. Requirements tool in the machining 5000 parts without burr。 GESAC ´ s tool meet customer needs.



工件模型图
Workpiece model diagram

UA160

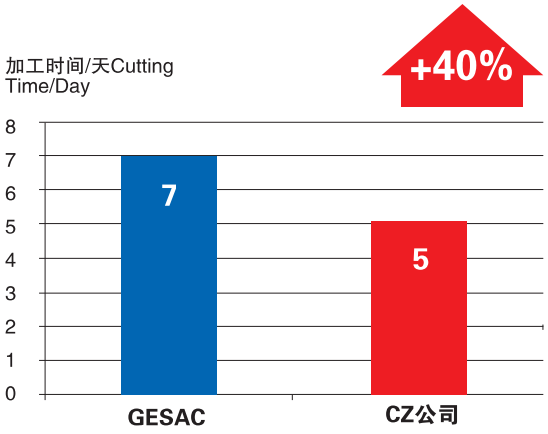
案例一：UA160侧铣 半精加工（客户端）

Case 1: UA160 Endmills for Semi-finishing in Side Milling (The Client Test)

刀具型号 Type	UA160–S3–06016
刀具规格 Size	D6*16*50*d6
加工材料 Workpiece	AL6061
切削速度 Cutting Speed	1062RPM(40m/min)
进给速度 Feed Rate	0.0625mm/z(265mm/min)
切削方式 Cutting Method	仿型铣 Profiling
切削量 Cutting Depth	ap=1mm，ae=1~6mm
冷却方式 Cooling Method	乳化液，外冷 Emulsion, External Cooling

红色为加工部位
Red Range Is Cutting Path



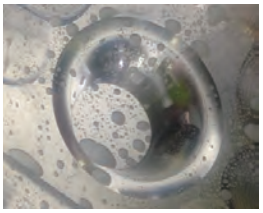


SN200

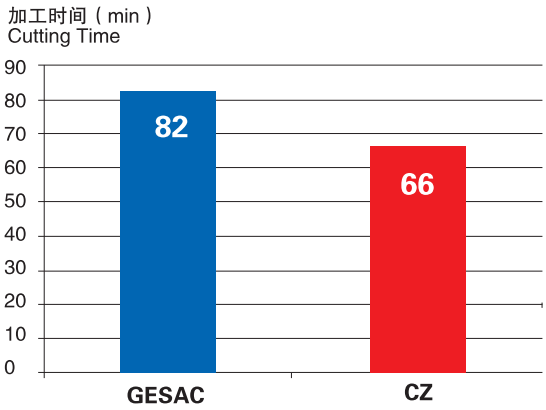
案例一：SN200系列机匣凸台清根

Case 1: SN200 Endmills for Machining of Cartridge Receiver Boss

刀具型号 Type	SN200–B4–12022
刀具规格 Size	R6*22*75*d12
加工材料 Workpiece	Inconel1718
切削速度 Cutting Speed	1062RPM(40m/min)
进给速度 Feed Rate	0.0625mm/z(265mm/min)
切削方式 Cutting Method	仿型铣 Profiling
切削量 Cutting Depth	ap=1mm，ae=1~6mm
冷却方式 Cooling Method	乳化液，外冷 Emulsion, External Cooling
刀具寿命 Tool Life	我司刀具可加工82min， CZ公司刀具仅能加工66min，SN200刀具性能比CZ公司提升24.2%。 Under the same cutting conditions, SN200 can finish 82min while CZ can only finish 66min, showing 24.2% longer tool life.



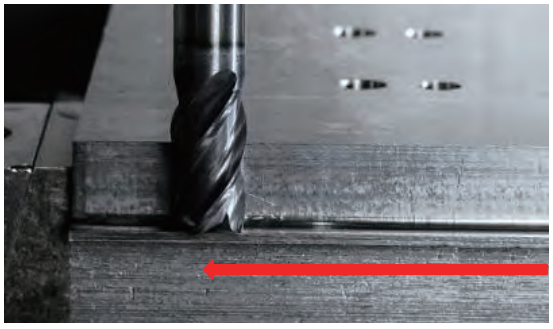


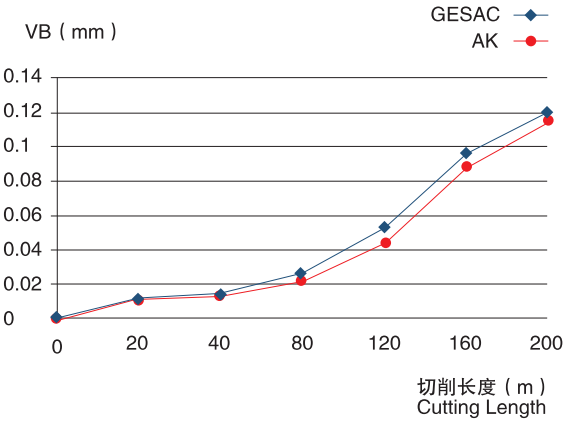


ST200

案例一：ST200系列TC4半精加工
Case 1: ST200 Endmills for Semi-finishing of TC4

刀具型号 Type	ST200–RN4–10020
刀具规格 Size	D10*R2*20*35*75*d10*D9
加工材料 Workpiece	TC4(35HRC)
切削速度 Cutting Speed	2548RPM(80m/min)
进给速度 Feed Rate	0.06mm/z(610mm/min)
切削方式 Cutting Method	侧铣 Side Milling
切削量 Cutting Depth	ap=10mm，ae=1mm
冷却方式 Cooling Method	乳化液，外冷 Emulsion, External Cooling
刀具寿命 Tool Life	GESAC公司ST200系列刀具与AK公司刀具磨损情况基本一致，刀具性能达到进口同类刀具95.3%。 The wear condition of ST200 is just the same as that of AK company. ST200 shows 95.3% tool life of the world top brand tool.





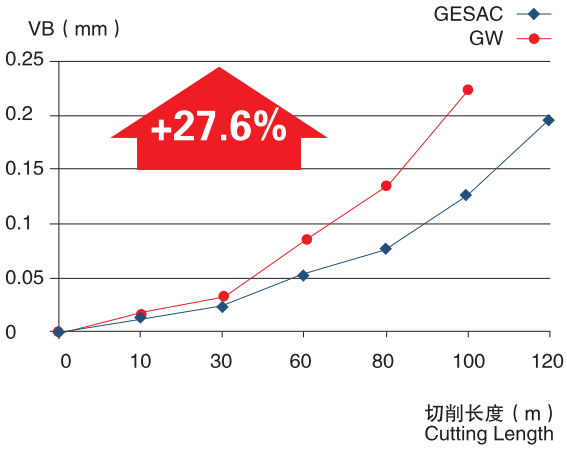
ST260

案例一：ST260系列TC18半精加工

Case 1: ST260 Endmills for Semi-finishing of TC18

刀具型号 Type	ST260–RN4–10010
刀具规格 Size	D10*R1*20*70*d10
加工材料 Workpiece	TC18（36HRC）
切削速度 Cutting Speed	3185RPM(100m/min)
进给速度 Feed Rate	0.05mm/z(250mm/min)
切削方式 Cutting Method	型腔铣 Cavity Milling
切削量 Cutting Depth	ap=10mm，ae=1.2mm
冷却方式 Cooling Method	乳化液，内冷 Emulsion, Internal Cooling
刀具寿命 Tool Life	在相同条件下，GESAC公司ST260系列刀具可切削120m，GW公司刀具仅能切削94m，寿命增加27.6%。 Under the same cutting conditions, ST260 can finish 120m while GW can only finish 95m，showing 27.6% longer tool life.



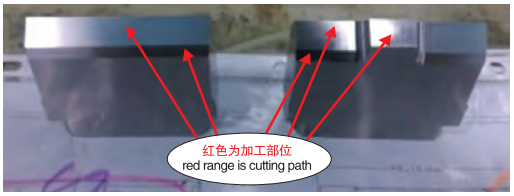


SH160

案例一：SH160系列加工滑块主镶件
Case 1: SH160 Endmills for Slide block Machining

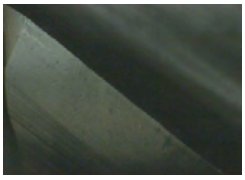
刀具型号 Type	SH160–R4–06005
刀具规格 Size	D6*R0.5*15*50*d50
加工材料 Workpiece	德国2343模具钢（52HRC） Germany 2343 die steel（52HRC）
切削速度 Cutting Speed	12000RPM(226m/min)
进给速度 Feed Rate	0.044mm/z(2100mm/min)
切削方式 Cutting Method	仿形铣 Profiling
切削量 Cutting Depth	ap=0.03mm，ae=0.08mm
冷却方式 Cooling Method	乳化液 Emulsion
刀具寿命 Tool Life	GESAC刀具连续加工2个滑块主镶件，工件表面光洁度良好，刀具底刃和周刃无明显磨损，与日本JH刀具性能相当。 GESAC tool Continuous processing two Slide blocks, Good surface quality, end relief and peripheral edgeline has no obvious wear and with the Japanese JH tool considerable performance.

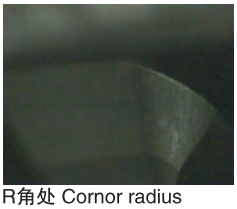
加工后滑块主镶件
After Cutting

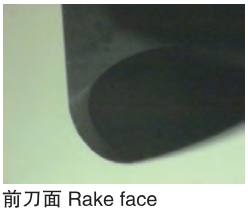


GESAC加工后刀具
GESAC Tool


底刃 End Relief


周刃 Peripheral edgeline

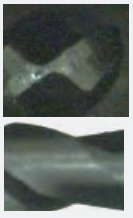
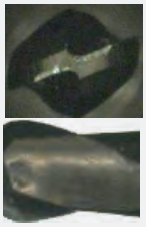
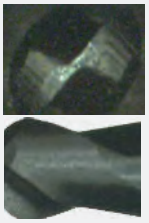

R角处 Cornor radius


前刀面 Rake face

SHM100

案例一：SHM100系列深沟槽加工
Case 1: SHM100 Endmills for Micro Machining

刀具型号 Type	SHM100-SN2-04001
刀具规格 Size	R0.2*0.3*1*50*d4
加工材料 Workpiece	SKD61(52HRC)
机床转速	28000 RPM(35.17m/min)
进给速度 Feed Rate	0.02mm/z(1800 mm/min)
切削方式 Cutting Method	仿形铣 Profiling
切削量 Cutting Depth	ap=0.015 mm，ae=0.02 mm
冷却方式 Cooling Method	气冷 Air Cooling
刀具寿命 Tool Life	日本JM品牌刀具加工表面粗糙，加工72min后断刀; GESAC微小径刀具在切削180min时，工件表面质量良好。 Japanese JM tool machining surface is roughness, and break after processing 72min. When GESAC tool micro radius tool’s cutting time is 180min, the workpiece surface has good quality.

磨损状况 Wear Condition			
切削cutting 60min		切削cutting180min	
GESAC	JM公司	GESAC	JM公司
			无法使用 Unable to continue

推荐切削参数
Recommended Cutting Data

UP100–SS2、S2、SL2、SH2、R2、RH2

钢件、铸铁For Steels, Cast Iron —— 侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	170	转速 (min–1)	50000	27070	13540	9020	6770	5410	4510	3380	2710
		ae≤0.12D		进给速度 (mm/min)	1410	1080	890	810	840	810	770	740	650
	合金钢 (35–48HRC)	ap≤1D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.1D		进给速度 (mm/min)	540	460	480	480	550	500	450	360	330
M	不锈钢	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ap≤0.12D		进给速度 (mm/min)	830	620	620	550	620	580	550	470	410
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	150	转速 (min–1)	47770	23890	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	960	760	720	720	660	620	600	540	480
	高合金铸铁 (35–45HRC)	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ae≤0.1D		进给速度 (mm/min)	660	540	500	550	520	500	480	410	370

UP100–S3

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	170	转速 (min–1)	50000	27070	13540	9020	6770	5410	4510	3380	2710
		ae≤0.12D		进给速度 (mm/min)	2110	1620	1340	1220	1260	1220	1150	1120	980
	合金钢 (35–48HRC)	ap≤1D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.1D		进给速度 (mm/min)	800	690	720	730	830	750	670	540	490
M	不锈钢	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ap≤0.12D		进给速度 (mm/min)	1240	930	930	830	930	870	830	700	620
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	150	转速 (min–1)	47770	23890	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1430	1150	1080	1080	990	930	900	810	720
	高合金铸铁 (35–45HRC)	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ae≤0.1D		进给速度 (mm/min)	990	810	750	830	780	750	730	620	560

推荐切削参数
Recommended Cutting Data

UP100–SS4、S4、SL4、SH4、R4、RH4

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	170	转速 (min–1)	50000	27070	13540	9020	6770	5410	4510	3380	2710
		ae≤0.12D		进给速度 (mm/min)	2820	2170	1790	1620	1680	1620	1530	1490	1300
	合金钢 (35–48HRC)	ap≤1D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.1D		进给速度 (mm/min)	1070	920	960	970	1110	990	890	720	650
M	不锈钢	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ap≤0.12D		进给速度 (mm/min)	1660	1240	1240	1100	1240	1160	1100	930	830
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	150	转速 (min–1)	47770	23890	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1910	1530	1430	1430	1310	1240	1190	1080	960
	高合金铸铁 (35–45HRC)	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ae≤0.1D		进给速度 (mm/min)	1330	1080	990	1100	1040	990	970	830	750

UP100–S6

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	170	转速 (min–1)	50000	27070	13540	9020	6770	5410	4510	3380	2710
		ae≤0.12D		进给速度 (mm/min)	4220	3250	2680	2440	2520	2440	2300	2230	1950
	合金钢 (35–48HRC)	ap≤1D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.1D		进给速度 (mm/min)	1610	1380	1430	1450	1660	1490	1340	1080	980
M	不锈钢	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ap≤0.12D		进给速度 (mm/min)	2480	1860	1860	1660	1860	1740	1660	1400	1240
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	150	转速 (min–1)	47770	23890	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	2870	2290	2150	2150	1970	1860	1790	1610	1430
	高合金铸铁 (35–45HRC)	ap≤1D	130	转速 (min–1)	41400	20700	10350	6900	5180	4140	3450	2590	2070
		ae≤0.1D		进给速度 (mm/min)	1990	1620	1490	1660	1550	1490	1450	1240	1120

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UP100–SS2、S2、SL2、SH2、R2、RH2

钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	80	转速 (min–1)	25480	12740	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	510	510	510	430	380	360	340	380	380
	合金钢 (35–48HRC)	ap≤0.5D	60	转速 (min–1)	19110	9550	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	230	230	290	260	220	210	210	220	210
M	不锈钢	ap≤0.3D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	250	180	150	190	190	190	190	160	150
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.8D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	320	210	180	210	210	200	200	180	160
	高合金铸铁 (35–45HRC)	ap≤0.5D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	250	180	150	190	190	190	190	160	150

UP100–S3

钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	80	转速 (min–1)	25480	12740	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	760	760	760	640	570	540	510	570	570
	合金钢 (35–48HRC)	ap≤0.5D	60	转速 (min–1)	19110	9550	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	340	340	430	380	320	320	310	320	320
M	不锈钢	ap≤0.3D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	370	260	220	290	290	280	280	250	220
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.8D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	470	320	260	320	310	310	300	260	240
	高合金铸铁 (35–45HRC)	ap≤0.5D	55	转速 (min–1)	17520	8760	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	370	260	220	290	290	280	280	250	220

推荐切削参数
Recommended Cutting Data

UP100–B2、BH2
钢件、铸铁For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤0.2D	160	转速 (min–1)	50000	25480	12740	8490	6370	5100	4250	3190	2550
		ae≤0.3D		进给速度 (mm/min)	920	920	970	990	970	970	980	960	920
	合金钢 (35–48HRC)	ap≤0.2D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.25D		进给速度 (mm/min)	460	460	540	590	620	610	640	570	570
M	不锈钢	ap≤0.2D	110	转速 (min–1)	35030	17520	8760	5840	4380	3500	2920	2190	1750
		ap≤0.2D		进给速度 (mm/min)	490	530	560	610	610	600	610	570	560
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.2D	140	转速 (min–1)	44590	22290	11150	7430	5570	4460	3720	2790	2230
		ae≤0.2D		进给速度 (mm/min)	620	670	710	770	780	760	780	730	710
	高合金铸铁 (35–45HRC)	ap≤0.3D	110	转速 (min–1)	35030	17520	8760	5840	4380	3500	2920	2190	1750
		ae≤0.4D		进给速度 (mm/min)	1400	1400	1400	1400	1400	1400	1400	1400	1400

UP100–B4
钢件、铸铁For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤0.2D	160	转速 (min–1)	50000	25480	12740	8490	6370	5100	4250	3190	2550
		ae≤0.3D		进给速度 (mm/min)	1830	1830	1940	1970	1940	1940	1950	1910	1830
	合金钢 (35–48HRC)	ap≤0.2D	120	转速 (min–1)	38220	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.25D		进给速度 (mm/min)	920	920	1070	1170	1240	1220	1270	1150	1150
M	不锈钢	ap≤0.2D	110	转速 (min–1)	35030	17520	8760	5840	4380	3500	2920	2190	1750
		ap≤0.2D		进给速度 (mm/min)	980	1050	1120	1210	1230	1190	1230	1140	1120
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.2D	140	转速 (min–1)	44590	22290	11150	7430	5570	4460	3720	2790	2230
		ae≤0.2D		进给速度 (mm/min)	1250	1340	1430	1550	1560	1520	1560	1450	1430
	高合金铸铁 (35–45HRC)	ap≤0.3D	110	转速 (min–1)	35030	17520	8760	5840	4380	3500	2920	2190	1750
		ae≤0.4D		进给速度 (mm/min)	2800	2800	2800	2800	2800	2800	2800	2800	2800

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UP210–SS2、S2、SL2、SH2、R2、RH2

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	180	转速 (min–1)	19110	14330	9550	7170	5730	4780	3580	2870
		ae≤0.15D		进给速度 (mm/min)	1070	1030	920	930	920	860	860	860
	合金钢 (35–48HRC)	ap≤1D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ae≤0.12D		进给速度 (mm/min)	610	580	550	620	560	500	410	370
M	不锈钢	ap≤1.5D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.15D		进给速度 (mm/min)	690	660	590	650	610	590	490	460
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	160	转速 (min–1)	16990	12740	8490	6370	5100	4250	3190	2550
		ae≤0.15D		进给速度 (mm/min)	850	820	820	750	700	680	610	560
	高合金铸铁 (35–45HRC)	ap≤1D	140	转速 (min–1)	14860	11150	7430	5570	4460	3720	2790	2230
		ae≤0.12D		进给速度 (mm/min)	650	670	670	620	580	560	500	460

UP210–S3

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	180	转速 (min–1)	19110	14330	9550	7170	5730	4780	3580	2870
		ae≤0.15D		进给速度 (mm/min)	1610	1550	1380	1400	1380	1290	1290	1290
	合金钢 (35–48HRC)	ap≤1D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ae≤0.12D		进给速度 (mm/min)	910	870	830	930	850	760	620	560
M	不锈钢	ap≤1.5D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.15D		进给速度 (mm/min)	1040	990	890	980	920	880	740	680
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	160	转速 (min–1)	16990	12740	8490	6370	5100	4250	3190	2550
		ae≤0.15D		进给速度 (mm/min)	1270	1220	1220	1130	1060	1020	910	840
	高合金铸铁 (35–45HRC)	ap≤1D	140	转速 (min–1)	14860	11150	7430	5570	4460	3720	2790	2230
		ae≤0.12D		进给速度 (mm/min)	980	1000	1000	940	870	840	750	680

推荐切削参数
Recommended Cutting Data

UP210–SS4、S4、SL4、SH4、R4、RH4

钢件、铸铁 For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	180	转速 (min–1)	19110	14330	9550	7170	5730	4780	3580	2870
		ae≤0.15D		进给速度 (mm/min)	2140	2060	1830	1860	1830	1720	1720	1720
	合金钢 (35–48HRC)	ap≤1D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ae≤0.12D		进给速度 (mm/min)	1210	1160	1100	1240	1130	1010	830	750
M	不锈钢	ap≤1.5D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.15D		进给速度 (mm/min)	1380	1330	1190	1300	1230	1170	980	910
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	160	转速 (min–1)	16990	12740	8490	6370	5100	4250	3190	2550
		ae≤0.15D		进给速度 (mm/min)	1700	1630	1630	1500	1410	1360	1210	1120
	高合金铸铁 (35–45HRC)	ap≤1D	140	转速 (min–1)	14860	11150	7430	5570	4460	3720	2790	2230
		ae≤0.12D		进给速度 (mm/min)	1310	1340	1340	1250	1160	1120	1000	910

UP210–S6

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	180	转速 (min–1)	19110	14330	9550	7170	5730	4780	3580	2870
		ae≤0.15D		进给速度 (mm/min)	3210	3100	2750	2800	2750	2580	2580	2580
	合金钢 (35–48HRC)	ap≤1D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ae≤0.12D		进给速度 (mm/min)	1820	1740	1660	1860	1690	1510	1240	1120
M	不锈钢	ap≤1.5D	130	转速 (min–1)	13800	10350	6900	5180	4140	3450	2590	2070
		ap≤0.15D		进给速度 (mm/min)	2070	1990	1780	1960	1840	1760	1480	1370
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	160	转速 (min–1)	16990	12740	8490	6370	5100	4250	3190	2550
		ae≤0.15D		进给速度 (mm/min)	2550	2450	2450	2260	2110	2040	1820	1680
	高合金铸铁 (35–45HRC)	ap≤1D	140	转速 (min–1)	14860	11150	7430	5570	4460	3720	2790	2230
		ae≤0.12D		进给速度 (mm/min)	1960	2010	2010	1870	1740	1670	1510	1360

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UP210–SS2、S2、SL2、SH2、R2、RH2

钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤0.8D	80	转速 (min–1)	8490	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	430	540	440	400	370	350	400	410
	合金钢 (35–48HRC)	ap≤0.3D	60	转速 (min–1)	6370	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	260	310	270	230	220	220	230	230
M	不锈钢	ap≤0.3D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	140	160	200	200	200	190	170	160
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.5D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	210	250	250	220	210	200	190	170
	高合金铸铁 (35–45HRC)	ap≤0.3D	50	转速 (min–1)	5310	3980	2650	1990	1590	1330	1000	800
				进给速度 (mm/min)	160	180	210	180	180	170	160	140

UP210–S3

钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤0.8D	80	转速 (min–1)	8490	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	640	800	660	590	550	520	600	610
	合金钢 (35–48HRC)	ap≤0.3D	60	转速 (min–1)	6370	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	380	460	400	340	330	330	340	340
M	不锈钢	ap≤0.3D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	210	240	310	300	290	290	260	240
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.5D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	320	370	380	330	320	310	280	250
	高合金铸铁 (35–45HRC)	ap≤0.3D	50	转速 (min–1)	5310	3980	2650	1990	1590	1330	1000	800
				进给速度 (mm/min)	240	280	320	270	260	260	240	220

推荐切削参数
Recommended Cutting Data

UP210–B2、BH2
钢件、铸铁 For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	4	5	6	7	8	9	10	11	12
P	碳钢合金钢 (<35HRC)	ap≤0.2D	160	转速 (min–1)	12740	10190	8490	7280	6370	5660	5100	4630	4250
		ae≤0.3D		进给速度 (mm/min)	1020	1020	1020	1020	1020	1020	1020	1020	1020
	合金钢 (35–48HRC)	ap≤0.15D	120	转速 (min–1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ae≤0.15D		进给速度 (mm/min)	610	640	660	630	620	610	610	610	610
M	不锈钢	ap≤0.2D	110	转速 (min–1)	8760	7010	5840	5010	4380	3890	3500	3190	2920
		ap≤0.2D		进给速度 (mm/min)	610	630	640	630	630	620	630	640	640
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.2D	140	转速 (min–1)	11150	8920	7430	6370	5570	4950	4460	4050	3720
		ae≤0.2D		进给速度 (mm/min)	780	800	820	800	800	790	800	810	820
	高合金铸铁 (35–45HRC)	ap≤0.1D	120	转速 (min–1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ae≤0.1D		进给速度 (mm/min)	610	640	660	660	670	650	650	660	670

UP210–B4
钢件、铸铁 For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	4	5	6	7	8	9	10	11	12
P	碳钢合金钢 (<35HRC)	ap≤0.2D	160	转速 (min–1)	12740	10190	8490	7280	6370	5660	5100	4630	4250
		ae≤0.3D		进给速度 (mm/min)	2040	2040	2040	2040	2040	2040	2040	2040	2040
	合金钢 (35–48HRC)	ap≤0.15D	120	转速 (min–1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ae≤0.15D		进给速度 (mm/min)	1220	1280	1330	1270	1240	1220	1220	1210	1210
M	不锈钢	ap≤0.2D	110	转速 (min–1)	8760	7010	5840	5010	4380	3890	3500	3190	2920
		ap≤0.2D		进给速度 (mm/min)	1230	1260	1290	1260	1260	1250	1260	1270	1290
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.2D	140	转速 (min–1)	11150	8920	7430	6370	5570	4950	4460	4050	3720
		ae≤0.2D		进给速度 (mm/min)	1560	1610	1640	1610	1610	1590	1610	1620	1640
	高合金铸铁 (35–45HRC)	ap≤0.1D	120	转速 (min–1)	9550	7640	6370	5460	4780	4250	3820	3470	3190
		ae≤0.1D		进给速度 (mm/min)	1220	1280	1330	1310	1340	1310	1300	1320	1340

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SP210–S3、C3
钢件、铸铁 For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	200	转速 (min–1)	21230	15920	10620	7960	6370	5310	3980	3190
		ae≤0.15D		进给速度 (mm/min)	2040	1960	1690	1670	1620	1590	1490	1480
	合金钢 (35–48HRC)	ap≤1D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1290	1180	1080	1160	1050	930	760	680
M	不锈钢	ap≤1.5D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ap≤0.15D		进给速度 (mm/min)	1580	1330	1150	1220	1130	1080	900	820
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	170	转速 (min–1)	18050	13540	9020	6770	5410	4510	3380	2710
		ae≤0.15D		进给速度 (mm/min)	1620	1500	1440	1300	1200	1150	1020	930
	高合金铸铁 (35–45HRC)	ap≤1D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1290	1250	1190	1090	1000	960	850	770

SP210–C4、CN4、R4、S4
钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1.5D	200	转速 (min–1)	21230	15920	10620	7960	6370	5310	3980	3190
		ae≤0.15D		进给速度 (mm/min)	2720	2610	2250	2230	2170	2120	1990	1980
	合金钢 (35–48HRC)	ap≤1D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1720	1580	1430	1550	1400	1240	1020	910
M	不锈钢	ap≤1.5D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ap≤0.15D		进给速度 (mm/min)	2100	1770	1530	1620	1510	1430	1190	1100
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1.5D	170	转速 (min–1)	18050	13540	9020	6770	5410	4510	3380	2710
		ae≤0.15D		进给速度 (mm/min)	2170	2000	1910	1730	1600	1530	1350	1250
	高合金铸铁 (35–45HRC)	ap≤1D	150	转速 (min–1)	15920	11940	7960	5970	4780	3980	2990	2390
		ae≤0.12D		进给速度 (mm/min)	1720	1670	1590	1460	1340	1270	1140	1020

推荐切削参数
Recommended Cutting Data

SP210–S3、C3
钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	80	转速 (min–1)	8490	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	790	920	730	640	590	570	640	650
	合金钢 (35–48HRC)	ap≤0.5D	60	转速 (min–1)	6370	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	500	550	450	370	360	360	370	370
M	不锈钢	ap≤0.3D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	320	320	350	340	320	320	280	260
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.8D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	420	450	420	360	340	340	310	280
	高合金铸铁 (35–45HRC)	ap≤0.5D	50	转速 (min–1)	5310	3980	2650	1990	1590	1330	1000	800
				进给速度 (mm/min)	330	350	360	300	290	290	260	240

SP210–C4、CN4、R4、S4
钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	3	4	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	80	转速 (min–1)	8490	6370	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	1050	1220	970	850	790	760	850	870
	合金钢 (35–48HRC)	ap≤0.5D	60	转速 (min–1)	6370	4780	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	660	730	600	500	470	480	490	500
M	不锈钢	ap≤0.3D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	420	420	470	450	430	430	380	350
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.8D	55	转速 (min–1)	5840	4380	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	560	600	560	480	460	450	410	370
	高合金铸铁 (35–45HRC)	ap≤0.5D	50	转速 (min–1)	5310	3980	2650	1990	1590	1330	1000	800
				进给速度 (mm/min)	450	460	480	400	380	380	350	320

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SP210–B2、BH2
钢件、铸铁 For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	3	4	6	8	10	12
P	碳钢合金钢 (<35HRC)	ap≤0.04D	220	转速 (min–1)	50000	35030	23360	17520	11680	8760	7010	5840
		ae≤0.04D		进给速度 (mm/min)	2800	2800	2800	2800	2800	2800	2800	2800
	合金钢 (35–48HRC)	ap≤0.02D	180	转速 (min–1)	50000	28660	19110	14330	9550	7170	5730	4780
		ae≤0.02D		进给速度 (mm/min)	1950	2010	1990	2010	2010	2010	2000	2000
M	不锈钢	ap≤0.04D	220	转速 (min–1)	50000	35030	23360	17520	11680	8760	7010	5840
		ae≤0.04D		进给速度 (mm/min)	2520	2450	2570	2630	2570	2540	2520	2530
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.04D	220	转速 (min–1)	50000	35030	23360	17520	11680	8760	7010	5840
		ae≤0.04D		进给速度 (mm/min)	2520	2450	2570	2630	2570	2540	2520	2530
	高合金铸铁 (35–45HRC)	ap≤0.04D	220	转速 (min–1)	50000	35030	23360	17520	11680	8760	7010	5840
		ae≤0.04D		进给速度 (mm/min)	2380	2450	2430	2450	2450	2450	2440	2440

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Make sure work piece and machine are stable and use a precision holder.

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Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UPR100–S4
钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	140	转速 (min–1)	7430	5570	4460	3720	2790	2230
		ae≤0.2D		进给速度 (mm/min)	1250	1250	1250	1190	1120	980
	合金钢 (35–48HRC)	ap≤1D	110	转速 (min–1)	5840	4380	3500	2920	2190	1750
		ae≤0.12D		进给速度 (mm/min)	700	700	700	700	700	630
M	不锈钢	ap≤1D	130	转速 (min–1)	6900	5180	4140	3450	2590	2070
		ap≤0.2D		进给速度 (mm/min)	990	990	990	990	930	830
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	140	转速 (min–1)	7430	5570	4460	3720	2790	2230
		ae≤0.2D		进给速度 (mm/min)	1250	1250	1250	1190	1120	980
	高合金铸铁 (35–45HRC)	ap≤1D	130	转速 (min–1)	6900	5180	4140	3450	2590	2070
		ae≤0.12D		进给速度 (mm/min)	990	990	990	990	930	830
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	350	转速 (min–1)	18580	13930	11150	9290	6970	5570
		ae≤0.3D		进给速度 (mm/min)	4460	4460	4460	4460	4460	4460
	铜合金 (<HB200)	ap≤1.5D	300	转速 (min–1)	15920	11940	9550	7960	5970	4780
		ae≤0.3D		进给速度 (mm/min)	3500	3340	3440	3190	3110	3060

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UPR100–S4
钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20
P	碳钢合金钢 (<35HRC)	ap≤1D	80	转速 (min–1)	4250	3190	2550	2120	1590	1270
				进给速度 (mm/min)	760	700	660	640	700	710
	合金钢 (35–48HRC)	ap≤0.5D	60	转速 (min–1)	3190	2390	1910	1590	1190	960
				进给速度 (mm/min)	380	380	380	380	330	310
M	不锈钢	ap≤0.5D	55	转速 (min–1)	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	350	350	350	350	310	280
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤1D	55	转速 (min–1)	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	370	370	360	350	310	280
	高合金铸铁 (35–45HRC)	ap≤0.8D	55	转速 (min–1)	2920	2190	1750	1460	1100	880
				进给速度 (mm/min)	350	350	350	320	290	260
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1D	180	转速 (min–1)	9550	7170	5730	4780	3580	2870
				进给速度 (mm/min)	1910	1720	1610	1530	1860	1830
	铜合金 (<HB200)	ap≤1D	160	转速 (min–1)	8490	6370	5100	4250	3190	2550
				进给速度 (mm/min)	1530	1400	1330	1270	1400	1430

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Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UPM100–SN2
钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.8	0.9	1	1.2	1.4	1.6	1.8	2
P	碳钢合金钢 (<35HRC)	ap≤0.5D	90	转速 (min–1)	35830	31850	28660	23890	20470	17910	15920	14330
		ae≤0.05D		进给速度 (mm/min)	1150	1150	1150	1100	1110	1070	1110	1150
	合金钢 (35–48HRC)	ap≤0.5D	70	转速 (min–1)	27870	24770	22290	18580	15920	13930	12380	11150
		ae≤0.05D		进给速度 (mm/min)	840	840	850	820	800	780	820	850
M	不锈钢	ap≤0.5D	60	转速 (min–1)	23890	21230	19110	15920	13650	11940	10620	9550
		ap≤0.03D		进给速度 (mm/min)	760	760	760	730	740	720	740	760
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.5D	90	转速 (min–1)	35830	31850	28660	23890	20470	17910	15920	14330
		ae≤0.05D		进给速度 (mm/min)	1150	1150	1150	1100	1110	1070	1110	1150
	高合金铸铁 (35–45HRC)	ap≤0.5D	80	转速 (min–1)	31850	28310	25480	21230	18200	15920	14150	12740
		ae≤0.03D		进给速度 (mm/min)	830	850	820	760	800	860	910	940

UPM100–SN2
钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.8	0.9	1	1.2	1.4	1.6	1.8	2
P	碳钢合金钢 (<35HRC)	ap≤0.3D	50	转速 (min–1)	19900	17690	15920	13270	11370	9950	8850	7960
				进给速度 (mm/min)	400	390	380	370	390	400	410	400
	合金钢 (35–48HRC)	ap≤0.1D	40	转速 (min–1)	15920	14150	12740	10620	9100	7960	7080	6370
				进给速度 (mm/min)	250	250	250	250	270	290	300	290
M	不锈钢	ap≤0.2D	40	转速 (min–1)	13930	12380	11150	9290	7960	6970	6190	5570
				进给速度 (mm/min)	250	250	250	240	250	260	270	270
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.3D	40	转速 (min–1)	15920	14150	12740	10620	9100	7960	7080	6370
				进给速度 (mm/min)	320	310	310	300	310	320	330	320
	高合金铸铁 (35–45HRC)	ap≤0.2D	30	转速 (min–1)	11940	10620	9550	7960	6820	5970	5310	4780
				进给速度 (mm/min)	210	210	210	210	220	230	230	230

1、铣刀装夹时，刃部的径向跳动控制在0.01mm以下。
Maximum T.I.R. in when tool is chucked is 0.01mm(0.01mm maximum recommended).

2、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

3、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

4、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia). When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

5、如果机床转速低于表中所列数值，则进给速度应与转速按同一比例降低。
If the rpm of the machine is low, lower the feed rate also to put the rpm and feed rate in the same ratio.

推荐切削参数
Recommended Cutting Data

UPM100–BN2

钢件、铸铁For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.6	0.8	1	1.2	1.6	2
P	碳钢合金钢 (<35HRC)	ap≤0.02D	80	转速 (min–1)	42460	31850	25480	21230	15920	12740
		ae≤0.02D		进给速度 (mm/min)	1440	1460	1430	1490	1430	1400
	合金钢 (35–48HRC)	ap≤0.01D	70	转速 (min–1)	37150	27870	22290	18580	13930	11150
		ae≤0.01D		进给速度 (mm/min)	1190	1170	1160	1190	1170	1160
M	不锈钢	ap≤0.02D	70	转速 (min–1)	34500	25880	20700	17250	12940	10350
		ap≤0.02D		进给速度 (mm/min)	1170	1190	1160	1210	1160	1140
K	灰铸铁 球墨铸铁 (<32HRC)	ap≤0.02D	80	转速 (min–1)	42460	31850	25480	21230	15920	12740
		ae≤0.02D		进给速度 (mm/min)	1440	1460	1430	1490	1430	1400
	高合金铸铁 (35–45HRC)	ap≤0.02D	70	转速 (min–1)	37150	27870	22290	18580	13930	11150
		ae≤0.02D		进给速度 (mm/min)	1190	1170	1160	1190	1170	1160

1、铣刀装夹时，刃部的径向跳动控制在0.01mm以下。
Maximum T.I.R. in when tool is chucked is 0.01mm(0.01mm maximum recommended).

2、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

3、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

4、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia). When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

5、如果机床转速低于表中所列数值，则进给速度应与转速按同一比例降低。
If the rpm of the machine is low, lower the feed rate also to put the rpm and feed rate in the same ratio.

推荐切削参数
Recommended Cutting Data

US200–S2、R2
不锈钢 For Stainless Steels ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤1D	100 (80–120)	转速 (min–1)	25000	15900	7960	5300	3980	3180	2650	1990	1590
		ae≤0.1D		进给速度 (mm/min)	350	320	350	340	365	330	300	245	230

US200–S2、R2
不锈钢 For Stainless Steels ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤0.1D	45 (35–55)	转速 (min–1)	14330	7165	3580	2390	1790	1430	1195	895	715
		ae≤1D		进给速度 (mm/min)	200	140	120	155	155	155	155	135	120

US200–R3
不锈钢 For Stainless Steels ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤1D	100 (80–120)	转速 (min–1)	25000	15900	7960	5300	3980	3180	2650	1990	1590
		ae≤0.1D		进给速度 (mm/min)	525	480	525	510	550	500	450	370	340

US200–R3
不锈钢 For Stainless Steels ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤0.1D	45 (35–55)	转速 (min–1)	14330	7165	3580	2390	1790	1430	1195	895	715
		ae≤1D		进给速度 (mm/min)	300	215	180	235	235	230	230	200	180

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

US200–SS4、S4、SN4、R4
不锈钢 For Stainless Steels ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤1D	100 (80–120)	转速 (min–1)	25000	15900	7960	5300	3980	3180	2650	1990	1590
		ae≤0.1D		进给速度 (mm/min)	700	635	700	680	730	660	600	490	460

US200–R4
不锈钢 For Stainless Steels ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤0.1D	45 (35–55)	转速 (min–1)	14330	7165	3580	2390	1790	1430	1195	895	715
		ae≤1D		进给速度 (mm/min)	400	280	240	310	310	310	310	270	240

US200–B2
不锈钢 For Stainless Steels —— 仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤0.2D	100 (80–120)	转速 (min–1)	25000	15900	7960	5300	3980	3180	2650	1990	1590
		ae≤0.2D		进给速度 (mm/min)	280	480	510	550	560	540	560	520	510

US200–B4
不锈钢 For Stainless Steels —— 仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
M	不锈钢	ap≤0.2D	100 (80–120)	转速 (min–1)	25000	15900	7960	5300	3980	3180	2650	1990	1590
		ae≤0.2D		进给速度 (mm/min)	560	955	1020	1100	1110	1080	1115	1030	1020

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

US300–SS4、S4
不锈钢 For Stainless Steels —— 侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12
M	不锈钢	ap≤1D	100 (80–120)	转速 (min–1)	20000	15900	7960	5300	3980	3180	2650
		ae≤0.1D		进给速度 (mm/min)	960	950	1110	950	950	890	850

US300–SS4、S4
不锈钢 For Stainless Steels —— 槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12
M	不锈钢	ap≤0.3D	45 (35–55)	转速 (min–1)	14300	7160	3580	2390	1790	1400	1200
		ae≤1D		进给速度 (mm/min)	340	250	215	300	300	300	300

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Make sure work piece and machine are stable and use a precision holder.

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Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SS200–CS4、C4
不锈钢 For Stainless Steels ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
M	不锈钢	ap≤1D	80 (60–100)	转速 (min–1)	15900	7960	5300	3980	3180	2650
		ae≤0.5D		进给速度 (mm/min)	600	480	500	510	490	480

SS200–CS4、C4
不锈钢 For Stainless Steels ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
M	不锈钢	ap≤1D	60 (50–70)	转速 (min–1)	9550	4780	3180	2390	1900	1590
		ae≤1D		进给速度 (mm/min)	500	350	350	380	350	350

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Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UA100–S2、SH2、R2、RH2
铝合金 For Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ae≤0.2D		进给速度 (mm/min)	580	710	1200	1280	1390	1720	2400	2500	2450
	铜合金 (<HB200)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	12700	12000	10600	10000	9500	9280	7000	5600
		ae≤0.2D		进给速度 (mm/min)	520	650	1070	1150	1250	1550	2170	2250	2200

UA100–S2、SH2、R2、RH2
铝合金 For Aluminium Alloy ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		进给速度 (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
	铜合金 (<HB200)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		进给速度 (mm/min)	380	450	800	830	1000	1150	1130	1000	1080

UA100– SL2
铝合金 Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤2.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ae≤0.15D		进给速度 (mm/min)	400	500	810	920	1100	1280	1300	1310	1200
	铜合金 (<HB200)	ap≤2.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ae≤0.15D		进给速度 (mm/min)	380	450	800	830	1000	1150	1130	1000	1080

1、请使用刚性较高的机床和刀柄。
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Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UA100–S3、SH3、R3、RH3
铝合金 For Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ae≤0.2D		进给速度 (mm/min)	650	850	1430	1530	1670	2050	2800	3000	3150
	铜合金 (<HB200)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	13000	12000	10600	10000	9500	9280	7000	5600
		ae≤0.2D		进给速度 (mm/min)	720	900	1200	1200	1500	1800	2225	2500	3000

UA100–S3、SH3、R3、RH3
铝合金 For Aluminium Alloy ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		进给速度 (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
	铜合金 (<HB200)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		Ae=1D		进给速度 (mm/min)	450	520	860	830	960	1240	1500	1550	1510

UA100– SL3
铝合金 Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16	20
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤2.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ae≤0.15D		进给速度 (mm/min)	450	570	960	1050	1300	1500	1620	1680	1800
	铜合金 (<HB200)	ap≤2.5D	150 (60–350)	转速 (min–1)	16000	10000	9000	8000	7800	8000	6800	5000	4000
		ae≤0.15D		进给速度 (mm/min)	450	520	860	830	960	1240	1500	1550	1510

推荐切削参数
Recommended Cutting Data

UA100–B2
铝合金 For Aluminium Alloy ——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12	16
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤0.3D	150 (60–350)	转速 (min–1)	19000	15900	11900	10600	8000	7950	7950	7000
		ae≤0.3D		进给速度 (mm/min)	950	1600	1900	2500	2550	3200	3800	4450
	铜合金 (<HB200)	ap≤0.3D	150 (60–350)	转速 (min–1)	19000	15900	11900	10600	8000	7950	7950	7000
		ae≤0.3D		进给速度 (mm/min)	860	1430	1720	2300	2300	2850	3450	4010

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UA160–S2
铝合金 For Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	150 (60–350)	转速 (min–1)	19000	16000	12000	10600	10000	9500	9300
		ae≤0.2D		进给速度 (mm/min)	760	950	1300	1380	1500	1900	2600
	铜合金 (<HB200)	ap≤1.5D	150 (60–350)	转速 (min–1)	19000	16000	12000	10600	10000	9500	9300
		ae≤0.2D		进给速度 (mm/min)	690	860	1180	1240	1340	1720	2340

UA160–S2
铝合金 For Aluminium Alloy ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	1	2	4	6	8	10	12
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	12800	10000	9300	8750	8000	7450
		Ae=1D		进给速度 (mm/min)	350	650	900	1100	1230	1280	1410
	铜合金 (<HB200)	ap≤0.5D	150 (60–350)	转速 (min–1)	16000	12800	10000	9300	8750	8000	7450
		Ae=1D		进给速度 (mm/min)	300	570	800	970	1100	1150	1270

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

UA160–S3
铝合金 For Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	12000	10600	10000	9500	9300
		ae≤0.2D		进给速度 (mm/min)	1150	1570	1650	1800	2300	3100
	铜合金 (<HB200)	ap≤1.5D	150 (60–350)	转速 (min–1)	16000	12000	10600	10000	9500	9300
		ae≤0.2D		进给速度 (mm/min)	1030	1420	1490	1610	2060	2800

UA160–S3
铝合金 For Aluminium Alloy ——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤0.5D	150 (60–350)	转速 (min–1)	12800	10000	9300	8750	8000	7450
		Ae=1D		进给速度 (mm/min)	760	1080	1300	1470	1530	1700
	铜合金 (<HB200)	ap≤0.5D	150 (60–350)	转速 (min–1)	12800	10000	9300	8750	8000	7450
		Ae=1D		进给速度 (mm/min)	690	970	1160	1320	1380	1530

UA160–S4
铝合金 For Aluminium Alloy ——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	4	6	8	10	12
N	锻造铝合金 铸造铝合金 (Si<12%)	ap≤1.5D	200 (120–350)	转速 (min–1)	16000	12000	10000	8000	6600
		ae≤0.1D		进给速度 (mm/min)	1500	1800	2000	2250	2500

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

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The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SA300–RN2
航空铝合金 For Aluminium Alloy——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20
N	铝合金7075，7050等 (Si<6%)	ap≤0.25D	400 (300–500)	转速 (min–1)	12000	10000	8000	7000
		ae≤0.5D		进给速度 (mm/min)	3600	3300	3200	3080

SA300–RN2
航空铝合金 For Aluminium Alloy——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20
N	铝合金7075，7050等 (Si<6%)	ap≤0.2D	400 (300–500)	转速 (min–1)	12000	10000	8000	7000
		ae≤1D		进给速度 (mm/min)	3360	3200	3040	2940

1、请使用刚性较高的机床和刀柄。
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Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SA300–RN3
航空铝合金 For Aluminium Alloy——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20
N	铝合金7075，7050等 (Si<6%)	ap≤0.25D	400 (300–500)	转速 (min–1)	10000	8000	7000
		ae≤0.5D		进给速度 (mm/min)	4500	4250	4100

SA300–RN3
航空铝合金 For Aluminium Alloy——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20
N	铝合金7075，7050等 (Si<6%)	ap≤0.2D	400 (300–500)	转速 (min–1)	10000	8000	7000
		ae≤1D		进给速度 (mm/min)	4200	3960	3880

SA300–BN2
航空铝合金 For Aluminium Alloy——仿形铣Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20
N	铝合金7075，7050等 (Si<6%)	ap≤0.1D	400 (300–500)	转速 (min–1)	12000	12000	8000	8000
		ae≤0.2D		进给速度 (mm/min)	3840	4320	3520	4000

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SA310–RN2
航空铝合金 For Aluminium Alloy——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20	25	32
N	铝合金7075，7050等 (Si<6%)	ap≤0.25D	900 (700–1100)	转速 (min–1)	20000	20000	20000	20000	18000	18000
		ae≤0.5D		进给速度 (mm/min)	5200	6000	6600	6800	7560	7920

SA310–RN3
航空铝合金 For Aluminium Alloy——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20	25	32
N	铝合金7075，7050等 (Si<6%)	ap≤0.25D	900 (700–1100)	转速 (min–1)	20000	20000	20000	18000	18000
		ae≤0.5D		进给速度 (mm/min)	8400	9000	9000	10000	10800

SA360–RN2
航空铝合金 For Aluminium Alloy——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20	25
N	铝合金7075，7050等 (Si<6%)	ap≤0.25D	1300 (1100–-1500)	转速 (min–1)	22000	20000	20000	18000
		ae≤0.5D		进给速度 (mm/min)	6160	6400	7800	8000

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SG200–S2、R2
石墨 For Graphite——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤1D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
		ae≤0.15D		进给速度 (mm/min)	1910	1590	1270	1120	1080	1380
	石墨	ap≤1.5D	250	转速 (min–1)	39810	19900	13270	9950	7960	6640
		ae≤0.5D		进给速度 (mm/min)	3980	2790	2390	2190	2390	2390

SG200–S3
石墨 For Graphite——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤1D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
		ae≤0.15D		进给速度 (mm/min)	2870	2390	1910	1670	1620	2070
	石墨	ap≤1.5D	250	转速 (min–1)	39810	19900	13270	9950	7960	6640
		ae≤0.5D		进给速度 (mm/min)	5970	4180	3580	3280	3580	3580

SG200–S4、R4
石墨 For Graphite——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤1D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
		ae≤0.15D		进给速度 (mm/min)	3820	3190	2550	2230	2170	2760
	石墨	ap≤1.5D	250	转速 (min–1)	39810	19900	13270	9950	7960	6640
		ae≤0.5D		进给速度 (mm/min)	7960	5570	4780	4380	4780	4780

推荐切削参数
Recommended Cutting Data

SG200–S2、R2
石墨 For Graphite——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤0.5D	180	转速 (min–1)	28660	14330	9550	7170	5730	4780
				进给速度 (mm/min)	1150	1150	960	860	800	860
	石墨	ap≤0.5D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
				进给速度 (mm/min)	1910	1430	1380	1350	1400	1590

SG200–S3
石墨 For Graphite——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤0.5D	180	转速 (min–1)	28660	14330	9550	7170	5730	4780
				进给速度 (mm/min)	1720	1720	1430	1290	1200	1290
	石墨	ap≤0.5D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
				进给速度 (mm/min)	2870	2150	2070	2030	2100	2390

SG200–B2
钢件、铸铁 For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
N	铸造铝合金 (Si>12%)	ap≤0.3D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310
		ae≤0.3D		进给速度 (mm/min)	2040	1430	1270	1270	1400	1380
	石墨	ap≤0.5D	250	转速 (min–1)	39810	19900	13270	9950	7960	6640
		ae≤0.4D		进给速度 (mm/min)	2790	1990	1860	1790	1910	1990

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SD200-KDA
复合材料For Composite material——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12
N	碳纤维 CFRP	ap≤2D	140 (80–200)	转速 (min–1)	7430	5570	4460	3715
		ae≤0.2D		进给速度 (mm/min)	445	445	445	370
	玻璃纤维 GFRP	ap≤2D	150 (100–200)	转速 (min–1)	7960	5970	4775	3980
		ae≤0.2D		进给速度 (mm/min)	475	475	475	400

SD200-KDA
复合材料For Composite material——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12
N	碳纤维 CFRP	ap≤1D	120 (80–160)	转速 (min–1)	6370	4775	3820	3185
		ae≤1D		进给速度 (mm/min)	255	285	305	320
	玻璃纤维 GFRP	ap≤1D	150 (100–200)	转速 (min–1)	7960	5970	4775	3980
		ae≤1D		进给速度 (mm/min)	320	360	380	400

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SN200–R4
高温合金 For HRSA——侧铣Sidemilling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20
S	铁基高温合金	ap≤1D	25 (15–35)	转速 (min–1)	1325	995	795	660	495	400
		ae≤0.1D		进给速度 (mm/min)	160	160	190	185	160	160
	钴基高温合金	ap≤1D	20 (15–30)	转速 (min–1)	1060	795	635	530	400	320
		ae≤0.1D		进给速度 (mm/min)	125	125	150	145	125	125
	镍基高温合金	ap≤1D	25 (15–30)	转速 (min–1)	1325	995	795	660	495	400
		ae≤0.1D		进给速度 (mm/min)	160	160	190	185	160	160

SN200–R4
高温合金 For HRSA——槽铣 Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20
S	铁基高温合金	ap≤0.5D	20 (10–30)	转速 (min–1)	1060	795	635	530	400	320
		ae≤1D		进给速度 (mm/min)	105	95	90	95	80	70
	钴基高温合金	ap≤0.5D	15 (10–25)	转速 (min–1)	795	600	475	400	300	240
		ae≤1D		进给速度 (mm/min)	65	60	60	60	60	50
	镍基高温合金	ap≤0.5D	20 (10–30)	转速 (min–1)	1060	795	635	530	400	320
		ae≤1D		进给速度 (mm/min)	105	95	90	95	80	70

推荐切削参数
Recommended Cutting Data

SN200–B4
高温合金 For HRSA——仿型铣Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20
S	铁基高温合金	ap≤0.04D	40 (30–50)	转速 (min–1)	2120	1590	1270	1060	795	635
		ae≤0.04D		进给速度 (mm/min)	255	285	305	340	320	305
	钴基高温合金	ap≤0.04D	35 (25–45)	转速 (min–1)	1855	1390	1115	930	695	555
		ae≤0.04D		进给速度 (mm/min)	220	220	265	260	280	265
	镍基高温合金	ap≤0.03D	40 (30–50)	转速 (min–1)	2120	1590	1270	1060	795	635
		ae≤0.03D		进给速度 (mm/min)	255	285	305	320	320	305

1、铣刀装夹时，刃部的径向跳动控制在0.01mm以下。
Maximum T.I.R. in when tool is chucked is 0.01mm(0.01mm maximum recommended).

2、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

3、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

4、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia). When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

ST200—S4、R4、RN4
钛合金 For Titanium Alloys——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20	25
S	TA 钛合金	ap≤1.5D	75 (60–90)	转速 (min–1)	3980	2985	2390	1990	1490	1195	955
		ae≤0.1D		进给速度 (mm/min)	715	655	575	555	480	450	360
	TC 钛合金	ap≤1.5D	70 (60–80)	转速 (min–1)	3715	2785	2230	1855	1390	1115	890
		ae≤0.1D		进给速度 (mm/min)	670	610	535	480	445	420	340
	TB 钛合金	ap≤1.5D	45 (40–60)	转速 (min–1)	2390	1790	1430	1195	895	715	570
		ae≤0.1D		进给速度 (mm/min)	430	395	340	310	285	270	215

ST200–S4、R4、RN4
钛合金 For Titanium Alloys——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16	20	25
S	TA 钛合金	ap≤0.3D	65 (50–80)	转速 (min–1)	3450	2585	2070	1725	1290	1035	830
		ae≤1D		进给速度 (mm/min)	620	570	495	480	415	370	300
	TC 钛合金	ap≤0.3D	60 (50–70)	转速 (min–1)	3185	2390	1910	1590	1195	955	765
		ae≤1D		进给速度 (mm/min)	570	525	460	415	380	340	275
	TB 钛合金	ap≤0.25D	40 (30–50)	转速 (min–1)	2120	1590	1270	1060	795	635	510
		ae≤1D		进给速度 (mm/min)	380	350	305	275	255	230	180

1.请使用刚性较高的机床，建议采用强力铣削刀柄。
Make sure workpiece and machine are suitable, use high quality collect chucks.

2.请根据实际加工工况、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed feed and cutting depth according to actual cutting conditions.

3.上表按照刀具悬长为直径4倍以下是所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速、进给速度和切深量。
The milling cindition are for an endmill where the tool overhang length ie less than 4D. When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

4.如果刀具r值大于直径的15%，那么切深ap减少30%，每齿进给量fz降低20%。
If corner radius is ＞15% of D then ap=–30%，fz=–20%.

推荐切削参数
Recommended Cutting Data

ST200—RN5
钛合金 For Titanium Alloys——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	16	20	25
S	TA 钛合金	ap≤1.5D	75 (60–90)	转速 (min–1)	1490	1195	955
		ae≤0.1D		进给速度 (mm/min)	600	565	450
	TC 钛合金	ap≤1.5D	70 (60–80)	转速 (min–1)	1390	1115	890
		ae≤0.1D		进给速度 (mm/min)	560	530	420
	TB 钛合金	ap≤1.5D	45 (40–60)	转速 (min–1)	895	715	570
		ae≤0.1D		进给速度 (mm/min)	360	340	270

ST200–RN5
钛合金 For Titanium Alloys——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	16	20	25
S	TA 钛合金	ap≤0.3D	65 (50–80)	转速 (min–1)	1290	1035	830
		ae≤1D		进给速度 (mm/min)	515	465	370
	TC 钛合金	ap≤0.3D	60 (50–70)	转速 (min–1)	1195	955	765
		ae≤1D		进给速度 (mm/min)	475	430	340
	TB 钛合金	ap≤0.25D	40 (30–50)	转速 (min–1)	795	635	510
		ae≤1D		进给速度 (mm/min)	320	285	230

1.请使用刚性较高的机床，建议采用强力铣削刀柄。
Make sure workpiece and machine are suitable, use high quality collect chucks.

2.请根据实际加工工况、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed feed and cutting depth according to actual cutting conditions.

3.上表按照刀具悬长为直径4倍以下是所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速、进给速度和切深量。
The milling cindition are for an endmill where the tool overhang length ie less than 4D. When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

4.如果刀具r值大于直径的15%，那么切深ap减少30%，每齿进给量fz降低20%。
If corner radius is ＞15% of D then ap=–30%，fz=–20%.

推荐切削参数
Recommended Cutting Data

ST200–B4
钛合金 For Titanium Alloys——仿形铣Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	6	8	10	12	16
S	TA 钛合金	ap≤0.2D	75 (60–90)	转速 (min–1)	3980	2985	2390	1990	1490
		ae≤0.3D		进给速度 (mm/min)	795	715	670	600	480
	TC 钛合金	ap≤0.2D	70 (60–80)	转速 (min–1)	3715	2785	2230	1860	1390
		ae≤0.3D		进给速度 (mm/min)	670	610	535	480	445
	TB 钛合金	ap≤0.2D	45 (40–60)	转速 (min–1)	2390	1790	1430	1195	895
		ae≤0.3D		进给速度 (mm/min)	430	395	345	310	285

1.请使用刚性较高的机床，建议采用强力铣削刀柄。
Make sure workpiece and machine are suitable, use high quality collect chucks.

2.请根据实际加工工况、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed feed and cutting depth according to actual cutting conditions.

3.上表按照刀具悬长为直径4倍以下是所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速、进给速度和切深量。
The milling cindition are for an endmill where the tool overhang length ie less than 4D. When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

4.如果刀具r值大于直径的15%，那么切深ap减少30%，每齿进给量fz降低20%。
If corner radius is ＞15% of D then ap=–30%，fz=–20%.

推荐切削参数
Recommended Cutting Data

ST260-RN4
钛合金 For Titanium Alloys——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20	25
S	TA 钛合金	ap≤1.5D	85 (60–110)	转速 (min–1)	2705	2255	1690	1350	1080
		ae≤0.2D		进给速度 (mm/min)	650	630	540	515	410
	TC 钛合金	ap≤1.5D	80 (60–100)	转速 (min–1)	2550	2120	1590	1275	1020
		ae≤0.2D		进给速度 (mm/min)	610	550	510	485	385
	TB 钛合金	ap≤1.5D	50 (40–60)	转速 (min–1)	1590	1325	995	795	635
		ae≤0.2D		进给速度 (mm/min)	380	345	320	300	240

ST260-RN4
钛合金 For Titanium Alloys——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	10	12	16	20	25
S	TA 钛合金	ap≤0.3D	75 (50–90)	转速 (min–1)	2390	1990	1490	1195	955
		ae≤1D		进给速度 (mm/min)	570	560	475	430	345
	TC 钛合金	ap≤0.3D	70 (50–80)	转速 (min–1)	2230	1860	1390	1115	890
		ae≤1D		进给速度 (mm/min)	535	480	445	400	320
	TB 钛合金	ap≤0.25D	50 (40–60)	转速 (min–1)	1590	1325	995	795	635
		ae≤1D		进给速度 (mm/min)	380	345	320	285	230

1.请使用刚性较高的机床，建议采用强力铣削刀柄。
Make sure workpiece and machine are suitable, use high quality collect chucks.

2.请根据实际加工工况、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed feed and cutting depth according to actual cutting conditions.

3.上表按照刀具悬长为直径4倍以下是所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速、进给速度和切深量。
The milling cindition are for an endmill where the tool overhang length ie less than 4D. When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

4.如果刀具r值大于直径的15%，那么切深ap减少30%，每齿进给量fz降低20%。
If corner radius is ＞15% of D then ap=–30%，fz=–20%.

推荐切削参数
Recommended Cutting Data

ST300–RN4
钛合金 For Titanium Alloys——侧铣 Side Milling



工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20
S	TA 钛合金	ap≤1.5D	100 (80–120)	转速 (min–1)	2650	1990	1590
		ae≤0.2D		进给速度 (mm/min)	740	635	605
	TC 钛合金	ap≤1.5D	100 (80–120)	转速 (min–1)	2650	1990	1590
		ae≤0.2D		进给速度 (mm/min)	690	635	570
	TB 钛合金	ap≤1.5D	80 (60–100)	转速 (min–1)	2120	1590	1270
		ae≤0.2D		进给速度 (mm/min)	550	510	460

ST300–RN4
钛合金 For Titanium Alloys——槽铣Slotting



工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	12	16	20
S	TA 钛合金	ap≤1D	80 (60–100)	转速 (min–1)	2120	1590	1275
		ae≤1D		进给速度 (mm/min)	595	510	485
	TC 钛合金	ap≤1D	80 (60–100)	转速 (min–1)	2120	1590	1275
		ae≤1D		进给速度 (mm/min)	550	510	460
	TB 钛合金	ap≤1D	50 (40–60)	转速 (min–1)	1460	1095	875
		ae≤1D		进给速度 (mm/min)	380	350	315

推荐切削参数
Recommended Cutting Data

ST300–RN5
钛合金 For Titanium Alloys——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	16	20	25
S	TA 钛合金	ap≤1.5D	100 (80–120)	转速 (min–1)	1990	1590	1270
		ae≤0.2D		进给速度 (mm/min)	795	755	605
	TC 钛合金	ap≤1.5D	100 (80–120)	转速 (min–1)	1990	1590	1270
		ae≤0.2D		进给速度 (mm/min)	795	715	570
	TB 钛合金	ap≤1.5D	80 (60–100)	转速 (min–1)	1590	1270	1020
		ae≤0.2D		进给速度 (mm/min)	635	570	460

ST300–RN5
钛合金 For Titanium Alloys——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	16	20	25
S	TA 钛合金	ap≤1D	80 (60–100)	转速 (min–1)	1590	1275	1020
		ae≤1D		进给速度 (mm/min)	635	605	485
	TC 钛合金	ap≤1D	80 (60–100)	转速 (min–1)	1590	1275	1020
		ae≤1D		进给速度 (mm/min)	635	570	460
	TB 钛合金	ap≤1D	50 (40–60)	转速 (min–1)	1095	875	700
		ae≤1D		进给速度 (mm/min)	435	395	315

1.请使用刚性较高的机床，建议采用强力铣削刀柄。
Make sure workpiece and machine are suitable, use high quality collect chucks.

2.请根据实际加工工况、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed feed and cutting depth according to actual cutting conditions.

3.上表按照刀具悬长为直径4倍以下是所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速、进给速度和切深量。
The milling cindition are for an endmill where the tool overhang length ie less than 4D. When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

4.如果刀具r值大于直径的15%，那么切深ap减少30%，每齿进给量fz降低20%。
If corner radius is ＞15% of D then ap=–30%，fz=–20%.

推荐切削参数
Recommended Cutting Data

SH160–S2、R2
合金钢、淬硬钢For Alloy Steel, Hardened Steel——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12	16	20
H	合金钢 淬硬钢 (<55HRC)	ap≤1D	120	转速 (min–1)	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.05D		进给速度 (mm/min)	380	380	380	380	370	360	310	290

SH160–S4、SH4、R4、RH4
合金钢、淬硬钢For Alloy Steel, Hardened Steel——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12	16	20
H	合金钢 淬硬钢 (<55HRC)	ap≤1D	120	转速 (min–1)	19110	9550	6370	4780	3820	3190	2390	1910
		ae≤0.05D		进给速度 (mm/min)	760	760	760	760	730	710	620	570

SH160–B2、BH2
合金钢、淬硬钢For Alloy Steel, Hardened Steel——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12	14	16
H	合金钢 淬硬钢 (<55HRC)	ap≤0.03D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310	4550	3980
		ae≤0.03D		进给速度 (mm/min)	510	570	590	610	570	570	530	490

SH160–B4
合金钢、淬硬钢For Alloy Steel, Hardened Steel——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12	14	16
H	合金钢 淬硬钢 (<55HRC)	ap≤0.03D	200	转速 (min–1)	31850	15920	10620	7960	6370	5310	4550	3980
		ae≤0.03D		进给速度 (mm/min)	1020	1150	1190	1210	1150	1150	1060	990

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia).
When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SH200–S4–H、SH4–H、R4–H、RH4–H

合金钢、淬硬钢For Alloy Steel, Hardened Steel——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	2	4	6	8	10	12
H	合金钢 淬硬钢 (<55HRC)	ap≤1D	120	转速 (min–1)	19110	9550	6370	4780	3820	3190
		ae≤0.05D		进给速度 (mm/min)	760	760	760	760	730	710
	合金钢 淬硬钢 (55–60HRC)	ap≤0.7D	90	转速 (min–1)	15920	11940	7960	5970	4780	3980
		ae≤0.03D		进给速度 (mm/min)	510	720	730	720	730	670

1、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

2、根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed, feed and cutting depth according to actual cutting conditons.

3、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(milldia).When the tool overhang length is longer, please adjust the speed, feed and cutting depth.

推荐切削参数
Recommended Cutting Data

SHM100–SN2
钢件、铸铁For Steels, Cast Iron——侧铣 Side Milling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.4	0.6	0.8	1	1.5	2
H	合金钢 淬硬钢 (<55HRC)	ap≤0.7D	60	转速 (min–1)	47770	31850	23890	19110	12740	9550
		ae≤0.08D		进给速度 (mm/min)	1050	890	810	880	710	630
	合金钢 淬硬钢 (55–60HRC)	ap≤0.5D	50	转速 (min–1)	39810	26540	19900	15920	10620	7960
		ae≤0.05D		进给速度 (mm/min)	960	800	760	800	640	560

SHM100– SN2
钢件、铸铁For Steels, Cast Iron——槽铣Slotting

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.4	0.6	0.8	1	1.5	2
H	合金钢 淬硬钢 (<55HRC)	ap≤0.1D	35	转速 (min–1)	27870	18580	13930	11150	7430	5570
				进给速度 (mm/min)	450	410	390	450	370	330
	合金钢 淬硬钢 (55–60HRC)	ap≤0.05D	30	转速 (min–1)	23890	15920	11940	9550	6370	4780
				进给速度 (mm/min)	430	380	380	420	340	310

SHM100–BN2
钢件、铸铁For Steels, Cast Iron——仿形铣 Profiling

工件材料 Workpiece Material		切削量 (mm)	Vc m/min	刃径 Tool Diameter(mm)	0.4	0.6	0.8	1	1.2	1.5	2
H	合金钢 淬硬钢 (<55HRC)	ap≤0.03D	40	转速 (min–1)	31850	21230	15920	12740	10620	8490	6370
		ae≤0.03D		进给速度 (mm/min)	1150	890	760	660	640	590	570
	合金钢 淬硬钢 (55–60HRC)	ap≤0.02D	35	转速 (min–1)	27870	18580	13930	11150	9290	7430	5570
		ae≤0.02D		进给速度 (mm/min)	1170	890	730	620	630	590	560

1、铣刀装夹时，刃部的径向跳动控制在0.01mm以下。
Maximum T.I.R. in when tool is chucked is 0.01mm(0.01mm maximum recommended).

2、请使用刚性较高的机床和刀柄。
Make sure work piece and machine are stable and use a precision holder.

3、请根据切削速度、设备刚性等情况可适当调整转速和进给速度。
Please adjust the speed,feed and cutting depth according to actual cutting conditons.

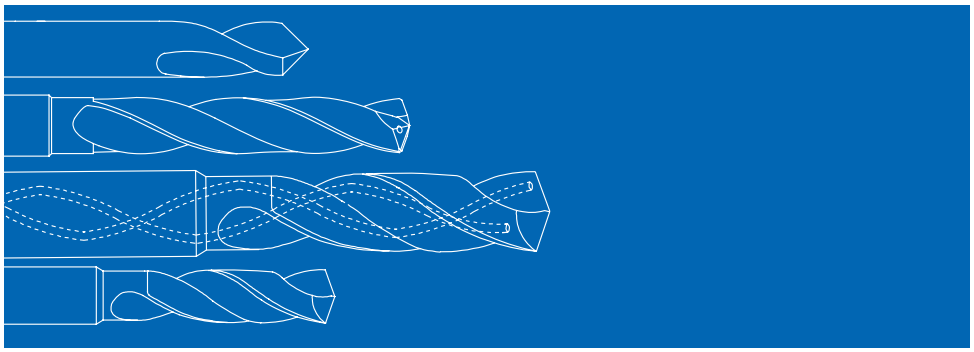
4、上表是按照刀具悬长为直径4倍以下时所制订的，如果刀具悬长过长，加工时易产生振动，此时，请适当调整转速，进给速度和切深量。
The milling conditions are for an end mill where the tool overhang length is less than 4*D(mill dia). When the tool overhang length is longer, please adjust the speed,feed and cutting depth.

5、如果机床转速低于表中所列数值，则进给速度应与转速按同一比例降低。
If the rpm of the machine is low, lower the feed rate also to put the rpm and feed rate in the same ratio.

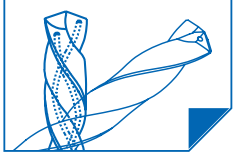


HOLEMAKING TOOLS

孔加工刀具



钻削 Drilling



■ 基本信息 Basic Information

整体硬质合金钻头型号（订货号）命名规则 Solid Carbide Drills Identification System	488–489
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钻头产品应用一览表 Application Summary of Solid Carbide Drills	491
系列介绍 Series Introduction	492–495
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■ 整体合金钻头 Solid Carbide Drills

NC 定心钻系列 NC Centre Drills Series	499–501
通用加工麻花钻 Twist Drills for General Purpose	502–521
普通钢加工麻花钻 Twist Drills for Steel	522–547
不锈钢加工麻花钻 Twist Drills for Stainless Steel	548–562
铸铁加工麻花钻 Twist Drills for Cast Iron	563–570
高硬钢加工麻花钻 Twist Drills for Hardened Steel	571
直槽钻系列 Straight Flute Drills Series	572–575
匕首钻系列 Triple–angle Drill Series	576

■ 整体合金钻头切削参数 Solid Carbide Drills Cutting Parameters

应用案例 Application Case	577–578
推荐切削参数 Recommended Cutting Parameters	579–591

整体硬质合金钻头型号（订货号）命名规则
Solid Carbide Drills Identification System

D938–

①

工件材料 Workpiece Material	①钻头系列号 Code of Drills	
钢件、铸铁、非铁材料 Steel,Cast Iron, Non–steel Material	D101	直柄90° NC定心钻 Straight Shank 90° NC Centre Drills
	D102	直柄120° NC定心钻 Straight Shank 120° NC Centre Drills
	D103	直柄145° NC定心钻 Straight Shank 145° NC Centre Drills
钢件 Steel	D918	通用加工麻花钻 Twist Drills for General Purpose
	D938	NEW 普通钢加工麻花钻 Twist Drills for Steel
不锈钢 Stainless Steel	D968	不锈钢加工麻花钻 Twist Drills for Stainless Steel
铸铁 Cast Iron	D928	铸铁加工麻花钻 Twist Drills for Cast Iron
高硬钢 Hardened Steel	D998	高硬钢加工麻花钻 Twist Drills for Hardened Steel
铸铁 Cast Iron	D713	铸铁加工直槽钻 Straight Flute Drills for Cast Iron
复合材料 Composite Material	D612	复合材料加工匕首钻 Triple–angle Drill for Composite Material

A 5 C– 1200

② ③ ④ ⑤

②柄部类型 Shank Type	
A	圆柱直柄: DIN6535HA
E	斜削柄: DIN6535HE
B	削平柄: DIN6535HB
Y	普通圆柱直柄 Continuous Parallel Shank
M	莫氏锥柄 Mose Shank

③钻孔深度 Drilling Depth	
3	钻深≤3D Drilling Depth≤3D
5	钻深≤5D Drilling Depth≤5D
7	钻深≤7D Drilling Depth≤7D
A	钻深≤10D Drilling Depth≤10D
M	90° 顶角 90° Point Angle
N	120° 顶角 120° Point Angle
P	145° 顶角 145° Point Angle

④冷却方式 Coolant Type	
C	内冷 Inner Cooling
N	外冷 External Cooling

⑤刃部直径 Drills Diameter	
0325	刃径为Φ3.25 Dia：Φ3.25
0600	刃径为Φ6.00 Dia：Φ6.00
1200	刃径为Φ12.00 Dia：Φ12.00

标记说明
Guidelines to Icons

	标示 Mark	说明 Description
柄部形状 Shank	SHANK h6	ISO 标准柄部 ISO Standard Shank
	SHANK DIN 6535HA	DIN6535 HA 圆柱直柄 DIN6535 HA Straight Shank
涂层 Coating	HELICA	HELICA 涂层 HELICA Coating
	TiAlN	TiAlN 涂层 TiAlN Coating
	AlTiN nano	AlTiN纳米涂层 Nano Coating AlTiN
	U-DIA	超细晶金刚石涂层 Ultra Fine Grain Diamond Coating
钻孔深度 Drilling Depth	3D	钻孔深度为钻头直径的3倍 The Maximum Depth of Drilling is 3D
	5D	钻孔深度为钻头直径的5倍 The Maximum Depth of Drilling is 5D
钻头类型 Drills Type		定心钻 NC Centre Drills
		外冷麻花钻 Twist Drills
		内冷麻花钻 Twist Drills with Inner Cooling
		外冷直槽钻 Straight Flute Drills
		内冷直槽钻 Straight Flute Drills with Inner Cooling
		4刃匕首钻 4 Flute, Triple–angle drill

	标示 Mark	说明 Description
工件材料 Workpiece Material	P	钢 Steels
	M	不锈钢 Stainless Steels
	K	铸铁 Cast Iron
	N	非铁材料 Non–ferrous Materials
	S	高温合金、钛合金 Heat–resistant Super Alloys,Titanium Alloys
	H	高硬度材料 High Hardened Materials

钻头产品应用一览表
Application Summary of Solid Carbide Drills

材料组 ISO Material Group		金鹭材料 分组 MC GESAC	内冷钻孔加工 Inner Coolant Drilling		外冷钻孔加工 External Coolant Drilling			干切钻孔加工 Dry Drilling
			3*D	5*D	倒角/中心孔 Chamfer and Center Hole	3*D	5*D	3*D
P	1 2 3 4	碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	D918 D938 NEW		D101 D102 D103	D918 D938 NEW		
	5	合金钢 (35–48HRC) Alloy Steel (35–48HRC)						
	6	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel(<35HRC)						
M	1 2 3	不锈钢 Stainless Steel	D968			D968		
K	1 2	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron,Nodular Cast Iron(<32HRC)	D928 D713		D101 D102 D103	D928 D713		
	3	高合金铸铁(35–45HRC) High–alloy Cast Iron (35–45HRC)						
N	1 2	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys/ Cast Aluminium Alloys (Si≤12%)			D101 D102 D103			
	3	铸造铝合金(Si>12%) Cast Aluminium Alloys (Si>12%)	D713			D713		
	4	铜合金 (<200HB) Copper Alloys (<200HB)						
	5	复合材料 Composite Material						D612
S	1 2 3	高温合金 (<450HB) Heat–resistant Alloys (<450HB)						
	4	钛合金 (<400HB) Titanium Alloys (<400HB)						
H	1 2	淬硬钢(45–60HRC) Hardened Steel (45–60HRC)				D998		D998
	3	淬硬钢 (60–65HRC) Hardened Steel (60–65HRC)						

钻头目录
Content of Drills

适用加工材料 Workpiece Material	钻尖角 Point Angle	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	钻削深度 Drilling Depth	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page	
钢件、铸铁、非铁材料 For Steels, Cast Iron, Non-steel material	**D101**								
	90°	TiAlN	90° NC 定心钻 90° NC Centre Drill	D101-AMN	D5 ~ D20		499	579	
	D102								
	120°	TiAlN	120° NC 定心钻 120° NC Centre Drill	D102-ANN	D5 ~ D20		500	579	
	D103								
	145°	TiAlN	145° NC 定心钻 145° NC Centre Drill	D103-APN	D5 ~ D20		501	579	
钢件 For Steels	**D918**								
	140°	TiAlN	3D 外冷 麻花钻 3D, External Cooling,Twist Drill	D918-A3N	D3 ~ D20	3D	502	581	
	140°	TiAlN	3D 内冷 麻花钻 3D, Inner Cooling,Twist Drill	D918-A3C	D5 ~ D16	3D	508	581	
	140°	TiAlN	5D 外冷 麻花钻 5D, External Cooling,Twist Drill	D918-A5N	D3 ~ D20	5D	512	581	
	140°	TiAlN	5D 内冷 麻花钻 5D, Inner Cooling,Twist Drill	D918-A5C	D5 ~ D16	5D	518	581	
	D938								
	140°	AlTiN nano	3D 外冷 麻花钻 NEW 3D, External Cooling,Twist Drill	D938-A3N	D2-D20	3D	522	583	
	140°	AlTiN nano	3D 内冷 麻花钻 NEW 3D, Inner Cooling,Twist Drill	D938-A3C	D3-D20	3D	531	583	
	140°	AlTiN nano	5D 内冷 麻花钻 NEW 5D, Inner Cooling,Twist Drill	D938-A5C	D3-D20	5D	539	583	
不锈钢 For Stainless Steels	**D968**								
	140°	HELICA	3D 外冷 麻花钻 3D, External Cooling,Twist Drill	D968-A3N	D3 ~ D20	3D	547	585	
	140°	HELICA	3D 内冷 麻花钻 3D, Inner Cooling,Twist Drill	D968-A3C	D5 ~ D20	3D	553	585	
	140°	HELICA	5D 内冷 麻花钻 5D, Inner Cooling,Twist Drill	D968-A5C	D5 ~ D20	5D	558	585	

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

Composite Materials

	工件材料 Workpiece Material												
	P		M	K		N				S		H	
	1 2 3 4	5	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
	碳钢、合金钢 Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铸铁 Cast Iron	锻造铝合金、铸造铝合金 Wrought Aluminium Alloys,Cast Aluminium Alloys	铸造铝合金 Cast Aluminium Alloys	铜合金 Copper Alloys	复合材料 Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	淬硬钢 Hardened Steels	淬硬钢 Hardened Steels
	<35HRC	35–48HRC		<35HRC	35–45HRC	Si<12%	Si>12%	<200HB		<450HB	<400HB	45–55HRC	55–60HRC
	○	○		◎		◎	○						
	○	○		◎		◎	○						
	○	○		◎		◎	○						
	◎	○		○	○								
	◎	○	○	○	○	○	○	○					
	◎	○		○	○								
	◎	○	○	○	○	○	○	○					
	◎	◎		○	○								
	◎	◎		○	○								
	◎	◎		○	○								
	○		◎										
	○		◎			○	○	○		○	○		
	○		◎			○	○	○		○	○		

钻头目录
Content of Drills

适用加工材料 Workpiece Material	钻尖角 Point Angle	涂层 Coating	刀具名称及外形 Description	系列型号 Type	尺寸范围 Diameter Range	钻削深度 Drilling Depth	尺寸表页码 Dimension Page	切削参数页码 Cutting Parameters Page	
铸铁 For Cast Iron	**D928**								
	140°	HELICA	3D 外冷 麻花钻 3D, External Cooling,Twist Drill	D928–A3N	D3 ~ D20	3D	563	587	
	140°	HELICA	3D 内冷 麻花钻 3D, Inner Cooling,Twist Drill	D928–A3C	D5 ~ D20	3D	565	587	
	140°	HELICA	5D 外冷 麻花钻 5D, External Cooling,Twist Drill	D928–A5N	D3 ~ D20	5D	567	587	
	140°	HELICA	5D 内冷 麻花钻 5D, Inner Cooling,Twist Drill	D928–A5C	D5 ~ D20	5D	569	587	
高硬钢 For Hardened steels	**D998**								
	140°	AlTiN nano	3D 外冷 麻花钻 3D, External Cooling,Twist Drill	D998–Y3N	D4 ~ D16	3D	571	589	
铸铁 For Cast Iron	**D713**								
	130°	TiAlN	5D 外冷 直槽钻 5D, External Cooling,Stright Flute Drill	D713–A5N	D4 ~ D20	5D	572	590	
	130°	TiAlN	5D 内冷 直槽钻 5D,Inner Cooling,Stright Flute Drill	D713–A5C	D4 ~ D20	5D	574	590	
复合材料 Composite Material	**D612**								
	118°	U-DIA	4刃 匕首钻 4 Flute, Triple–angle Drill	D612–Y3N	D2.49–D6.35	3D	576	591	

◎ 非常适用 Most Suitable ○ 一般适用 Suitable

	工件材料 Workpiece Material												
	P		M	K		N				S		H	
	1 2 3 4	5	1 2 3	1 2	3	1 2	3	4	5	1 2 3	4	1	2
	碳钢、合金钢 Carbon Steel,Alloy	合金钢 Alloy Steel	不锈钢 Stainless Steel	铸铁 Cast Iron	铸铁 Cast Iron	锻造铝合金、铸造铝合金 Wrought Aluminium Alloys,Cast Aluminium Alloys	铸造铝合金 Cast Aluminium Alloys	铜合金 Copper Alloys	复合材料 Composite Materials	高温合金 Heat Resistant Super Alloys	钛合金 Titanium Alloys	淬硬钢 Hardened Steels	淬硬钢 Hardened Steels
	<35HRC	35–48HRC		<35HRC	35–45HRC	Si<12%	Si>12%	<200HB		<450HB	<400HB	45–55HRC	55–60HRC
	◎	○		○	○								
	◎	○	○	○	○	○	○	○					
	◎	○		○	○								
	◎	○	○	○	○	○	○	○					
												◎	○
				◎	◎		◎						
				◎	◎		◎						
									◎				

系列介绍
Series Introduction



D101/D102/D103 NC定心钻

D101/D102/D103 NC Centre Drills

- 适合于在数控机床上打中心孔和倒角；
Suitable for drilling the center hole and chamfer.
- 适用于钢件、铸铁、铝合金、铜合金的加工。
Suitable for drilling steel, cast iron, aluminum alloys, copper alloy.

D918通用加工麻花钻

D918 Twist Drills for General Purpose

- 适用于钢件、铸铁、不锈钢、有色金属加工；
Suitable for drilling steel, stainless steel, cast iron, non–ferrous material.
- 横刃短，定心性好；
Stub chisel, excellent self–center capability.
- 曲线刃口，切削力小；
Radial point, smaller cutting resistance.
- 独特的刃口处理，进给速度高，生产效率高。
Unique edge preparation, higher feed rate, higher efficiency.





D938 普通钢加工麻花钻

D938 Drills for Steel Applications

- 适用于P类钢（≤48HRC）、K类铸铁的钻削加工；
Suitable for drilling of Steel（≤48HRC）, Cast Iron.
- 独特刃口处理技术，强化刃口强度，提高性能稳定性；
Unique cutting edge preparation to add strength to the cutting edge, and improve the drilling stability.
- 新型AlTiN–nano涂层，刀具耐磨性优异；
New AlTiN–nano coating, superior wear resistance, longer tool life.
- 直线型切削刃，提高切削刃强度。
Straight cutting edge, improves tool strength.

系列介绍
Series Introduction



D968不锈钢加工麻花钻

D968 Twist Drills for Stainless Steel

- 适用于不锈钢的加工；
Suitable for drilling stainless steel.
- 钻尖强度高，自定心性能好；
Excellent edge strength, excellent self–centering capability.
- 直线刃口，采用形状和尺寸精确的刃口钝化，提高刃口强度和切削的形成；
Straight lips, precise edge preparation is adapted, reinforce the strength of edge.
- 小刃带，大倒锥，减少了摩擦，降低扭矩。
Small edge home, largeblack taper, reduce friction and torque impaction.

D928铸铁加工麻花钻

D928 Twist Drills for Cast Iron

- 适用于汽车发动机及其它行业的铸铁加工；
Suitable for drilling cast iron of automobile industry and other industries.
- 波形刃口，降低加工扭矩；
Wave formed cutting lips provides lowered machining torque.
- 四刃带设计，提高孔壁质量及孔精度；
Four margin design, improves hole wall quality and accuracy.
- 宽横刃设计，提高钻尖强度。
Increased Drills point strength through optimized chisel edge.





D998高硬钢加工麻花钻

D998 Twist Drills for Hardened Steel

- 适用于高硬钢的加工；
Suitable for drilling hardened steel.
- 大芯厚，小螺旋角，高刚性，高强度；
Large core thickness, small helix angle, high rigidity and strength.
- X形钻尖，出色的自定心能力；
X–shaped Drills tip, excellent self–center capability.
- 圆弧刀尖，优良的孔壁质量。
Radius Drills point, excellent hole wall quality.

系列介绍
Series Introduction



D713铸铁加工直槽钻

D713 Straight Flute Drills for Cast Iron

- 直刃设计，适用于铸铁加工；
Straight flute design, suitable for drilling cast iron.
- 四刃带设计，提高孔壁质量及孔精度；
Four margin design, improves hole wall quality and accuracy.
- X形钻尖，出色的自定心能力。
X–shaped Drills tip, excellent self–center capability.

D612复合材料加工匕首钻

D612 Triple–angle Drill for Composite Material

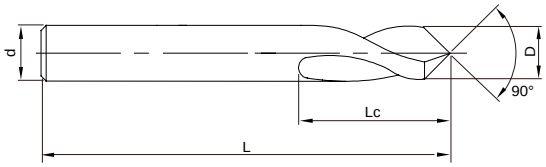
- 适用于航空复合材料的钻削加工;
Suitable for triple–angle drilling of Composite Material.
- 锋利的切削刃设计，保证了良好的孔加工质量;
Sharp cutting edge design, improves surface quality.
- 优异的刀具材质与涂层，保证了出色的刀具使用寿命。
Excellent substrate coating, prolongs cutting tool life.



D101–AMN

90° NC定心钻

90° NC Centre Drills





SHANK h6 | TiAlN

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d(h6)
D101–AMN–0500	5.00	10	62	5
D101–AMN–0600	6.00	15	66	6
D101–AMN–0800	8.00	17	79	8
D101–AMN–1000	10.00	20	89	10
D101–AMN–1200	12.00	25	102	12
D101–AMN–1400	14.00	30	107	14
D101–AMN–1600	16.00	35	115	16
D101–AMN–2000	20.00	40	131	20

单位unit (mm)

工件材料 Workpiece Material								
P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
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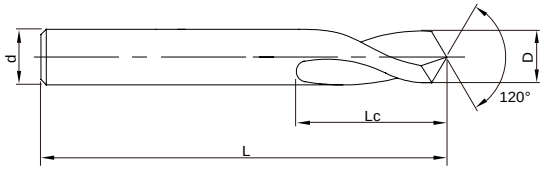
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P579

D102–ANN

120° NC定心钻

120° NC Centre Drills





SHANK h6 | TiAlN

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d(h6)
D102–ANN–0500	5.00	10	62	5
D102–ANN–0600	6.00	15	66	6
D102–ANN–0800	8.00	17	79	8
D102–ANN–1000	10.00	20	89	10
D102–ANN–1200	12.00	25	102	12
D102–ANN–1400	14.00	30	107	14
D102–ANN–1600	16.00	35	115	16
D102–ANN–2000	20.00	40	131	20

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○	○	○		◎		◎	○	○

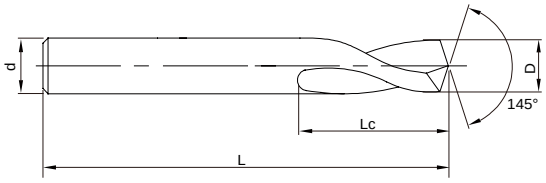
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P579

D103–APN

145° NC定心钻

145° NC Centre Drills





SHANK h6 | TiAlN

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d(h6)
D103–APN–0500	5.00	10	62	5
D103–APN–0600	6.00	15	66	6
D103–APN–0800	8.00	17	79	8
D103–APN–1000	10.00	20	89	10
D103–APN–1200	12.00	25	102	12
D103–APN–1400	14.00	30	107	14
D103–APN–1600	16.00	35	115	16
D103–APN–2000	20.00	40	131	20

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○	○	○		◎		◎	○	○

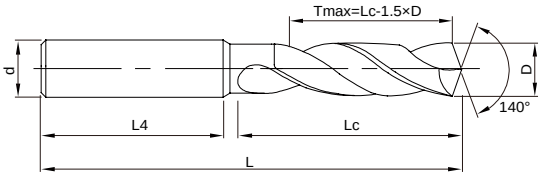
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P579

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–0300	3.00	20	36	62	6	
D918–A3N–0325	3.25	20	36	62	6	
D918–A3N–0330	3.30	20	36	62	6	M4
D918–A3N–0340	3.40	20	36	62	6	
D918–A3N–0350	3.50	20	36	62	6	
D918–A3N–0370	3.70	20	36	62	6	
D918–A3N–0400	4.00	24	36	66	6	
D918–A3N–0420	4.20	24	36	66	6	M5
D918–A3N–0430	4.30	24	36	66	6	
D918–A3N–0450	4.50	24	36	66	6	
D918–A3N–0465	4.65	24	36	66	6	
D918–A3N–0480	4.80	28	36	66	6	
D918–A3N–0500	5.00	28	36	66	6	M6
D918–A3N–0510	5.10	28	36	66	6	
D918–A3N–0520	5.20	28	36	66	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

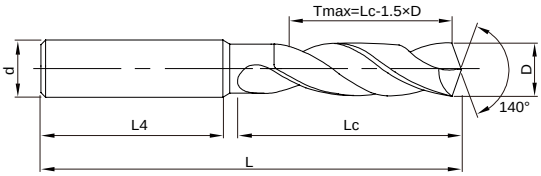
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–0550	5.50	28	36	66	6	
D918–A3N–0555	5.55	28	36	66	6	
D918–A3N–0580	5.80	28	36	66	6	
D918–A3N–0600	6.00	28	36	66	6	
D918–A3N–0610	6.10	34	36	79	8	
D918–A3N–0620	6.20	34	36	79	8	
D918–A3N–0630	6.30	34	36	79	8	
D918–A3N–0650	6.50	34	36	79	8	
D918–A3N–0660	6.60	34	36	79	8	
D918–A3N–0680	6.80	34	36	79	8	M8
D918–A3N–0690	6.90	34	36	79	8	
D918–A3N–0700	7.00	34	36	79	8	M8X1
D918–A3N–0710	7.10	41	36	79	8	
D918–A3N–0740	7.40	41	36	79	8	
D918–A3N–0750	7.50	41	36	79	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

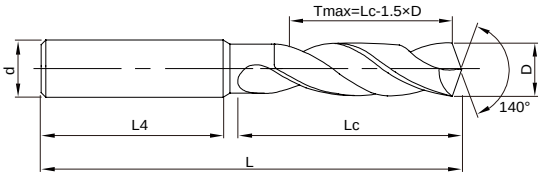
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 3D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–0780	7.80	41	36	79	8	
D918–A3N–0800	8.00	41	36	79	8	
D918–A3N–0810	8.10	47	40	89	10	
D918–A3N–0840	8.40	47	40	89	10	
D918–A3N–0850	8.50	47	40	89	10	M10
D918–A3N–0860	8.60	47	40	89	10	
D918–A3N–0870	8.70	47	40	89	10	
D918–A3N–0880	8.80	47	40	89	10	
D918–A3N–0900	9.00	47	40	89	10	M10X1
D918–A3N–0930	9.30	47	40	89	10	
D918–A3N–0950	9.50	47	40	89	10	
D918–A3N–0960	9.60	47	40	89	10	
D918–A3N–0980	9.80	47	40	89	10	
D918–A3N–1000	10.00	47	40	89	10	
D918–A3N–1025	10.25	55	45	102	12	M12

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

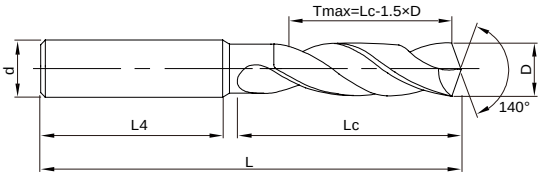
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–1040	10.40	55	45	102	12	
D918–A3N–1050	10.50	55	45	102	12	M12X1.5
D918–A3N–1060	10.60	55	45	102	12	
D918–A3N–1080	10.80	55	45	102	12	
D918–A3N–1100	11.00	55	45	102	12	
D918–A3N–1120	11.20	55	45	102	12	
D918–A3N–1150	11.50	55	45	102	12	
D918–A3N–1180	11.80	55	45	102	12	
D918–A3N–1200	12.00	55	45	102	12	M14
D918–A3N–1225	12.25	60	45	107	14	
D918–A3N–1250	12.50	60	45	107	14	M14X1.5
D918–A3N–1270	12.70	60	45	107	14	
D918–A3N–1275	12.75	60	45	107	14	
D918–A3N–1280	12.80	60	45	107	14	
D918–A3N–1300	13.00	60	45	107	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

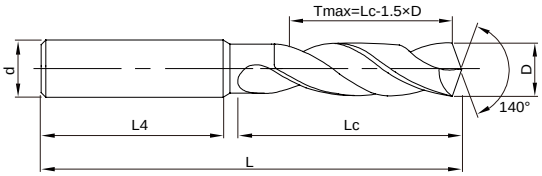
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–1310	13.10	60	45	107	14	
D918–A3N–1350	13.50	60	45	107	14	
D918–A3N–1380	13.80	60	45	107	14	
D918–A3N–1400	14.00	60	45	107	14	M16
D918–A3N–1425	14.25	65	48	115	16	
D918–A3N–1450	14.50	65	48	115	16	M16X1.5
D918–A3N–1475	14.75	65	48	115	16	
D918–A3N–1480	14.80	65	48	115	16	
D918–A3N–1500	15.00	65	48	115	16	
D918–A3N–1510	15.10	65	48	115	16	
D918–A3N–1550	15.50	65	48	115	16	
D918–A3N–1580	15.80	65	48	115	16	
D918–A3N–1600	16.00	65	48	115	16	
D918–A3N–1650	16.50	73	48	123	18	
D918–A3N–1675	16.75	73	48	123	18	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

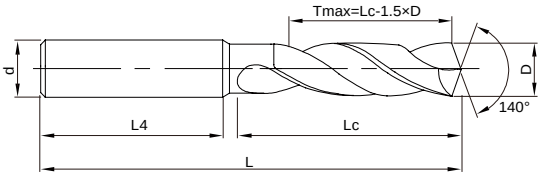
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3N

通用加工3D外冷麻花钻

3D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3N–1680	16.80	73	48	123	18	
D918–A3N–1700	17.00	73	48	123	18	
D918–A3N–1750	17.50	73	48	123	18	
D918–A3N–1780	17.80	73	48	123	18	
D918–A3N–1800	18.00	73	48	123	18	
D918–A3N–1850	18.50	79	50	131	20	
D918–A3N–1880	18.80	79	50	131	20	
D918–A3N–1900	19.00	79	50	131	20	
D918–A3N–1950	19.50	79	50	131	20	
D918–A3N–1980	19.80	79	50	131	20	
D918–A3N–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

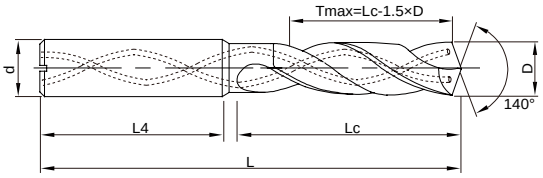
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3C

通用加工3D内冷麻花钻

3D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth





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订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3C–0500	5.00	28	36	66	6	M6
D918–A3C–0510	5.10	28	36	66	6	
D918–A3C–0520	5.20	28	36	66	6	
D918–A3C–0550	5.50	28	36	66	6	
D918–A3C–0555	5.55	28	36	66	6	
D918–A3C–0580	5.80	28	36	66	6	
D918–A3C–0600	6.00	28	36	66	6	
D918–A3C–0610	6.10	34	36	79	8	
D918–A3C–0620	6.20	34	36	79	8	
D918–A3C–0630	6.30	34	36	79	8	
D918–A3C–0650	6.50	34	36	79	8	
D918–A3C–0660	6.60	34	36	79	8	
D918–A3C–0680	6.80	34	36	79	8	M8
D918–A3C–0690	6.90	34	36	79	8	
D918–A3C–0700	7.00	34	36	79	8	M8X1

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

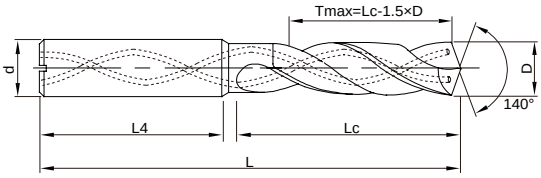
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3C

通用加工3D内冷麻花钻

3D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3C–0710	7.10	41	36	79	8	
D918–A3C–0740	7.40	41	36	79	8	
D918–A3C–0750	7.50	41	36	79	8	
D918–A3C–0780	7.80	41	36	79	8	
D918–A3C–0800	8.00	41	36	79	8	
D918–A3C–0810	8.10	47	40	89	10	
D918–A3C–0840	8.40	47	40	89	10	
D918–A3C–0850	8.50	47	40	89	10	M10
D918–A3C–0860	8.60	47	40	89	10	
D918–A3C–0870	8.70	47	40	89	10	
D918–A3C–0880	8.80	47	40	89	10	
D918–A3C–0900	9.00	47	40	89	10	M10X1
D918–A3C–0930	9.30	47	40	89	10	
D918–A3C–0950	9.50	47	40	89	10	
D918–A3C–0960	9.60	47	40	89	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

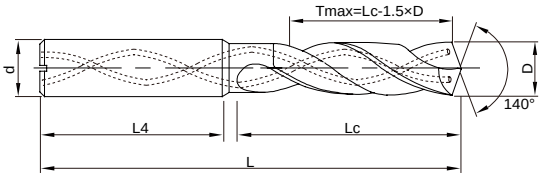
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3C

通用加工3D内冷麻花钻

3D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3C–0980	9.80	47	40	89	10	
D918–A3C–1000	10.00	47	40	89	10	
D918–A3C–1025	10.25	55	45	102	12	M12
D918–A3C–1040	10.40	55	45	102	12	
D918–A3C–1050	10.50	55	45	102	12	M12X1.5
D918–A3C–1060	10.60	55	45	102	12	
D918–A3C–1080	10.80	55	45	102	12	
D918–A3C–1100	11.00	55	45	102	12	
D918–A3C–1120	11.20	55	45	102	12	
D918–A3C–1150	11.50	55	45	102	12	
D918–A3C–1180	11.80	55	45	102	12	
D918–A3C–1200	12.00	55	45	102	12	M14
D918–A3C–1225	12.25	60	45	107	14	
D918–A3C–1250	12.50	60	45	107	14	M14X1.5
D918–A3C–1270	12.70	60	45	107	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

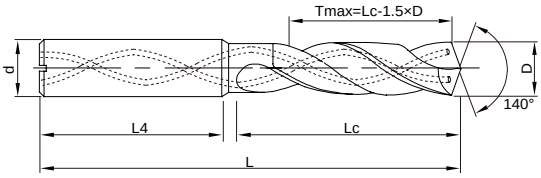
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A3C

通用加工3D内冷麻花钻

3D Inner Cooling Twist Drills for General Purpose





SHANK DIN 6535HA | TiAlN | 3D

Tmax –推荐最大钻深 Recommended Maximum Depth

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A3C–1275	12.75	60	45	107	14	
D918–A3C–1280	12.80	60	45	107	14	
D918–A3C–1300	13.00	60	45	107	14	
D918–A3C–1310	13.10	60	45	107	14	
D918–A3C–1350	13.50	60	45	107	14	
D918–A3C–1380	13.80	60	45	107	14	
D918–A3C–1400	14.00	60	45	107	14	M16
D918–A3C–1425	14.25	65	48	115	16	
D918–A3C–1450	14.50	65	48	115	16	M16X1.5
D918–A3C–1475	14.75	65	48	115	16	
D918–A3C–1480	14.80	65	48	115	16	
D918–A3C–1500	15.00	65	48	115	16	
D918–A3C–1510	15.10	65	48	115	16	
D918–A3C–1550	15.50	65	48	115	16	
D918–A3C–1580	15.80	65	48	115	16	
D918–A3C–1600	16.00	65	48	115	16	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

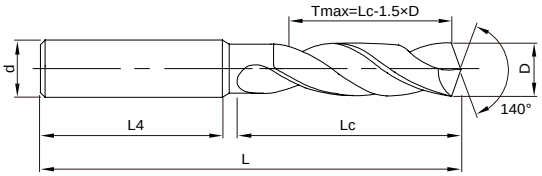
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–0300	3.00	28	36	66	6	
D918–A5N–0325	3.25	28	36	66	6	
D918–A5N–0330	3.30	28	36	66	6	M4
D918–A5N–0340	3.40	28	36	66	6	
D918–A5N–0350	3.50	28	36	66	6	
D918–A5N–0370	3.70	28	36	66	6	
D918–A5N–0400	4.00	36	36	74	6	
D918–A5N–0420	4.20	36	36	74	6	M5
D918–A5N–0430	4.30	36	36	74	6	
D918–A5N–0450	4.50	36	36	74	6	
D918–A5N–0465	4.65	36	36	74	6	
D918–A5N–0480	4.80	44	36	82	6	
D918–A5N–0500	5.00	44	36	82	6	M6
D918–A5N–0510	5.10	44	36	82	6	
D918–A5N–0520	5.20	44	36	82	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

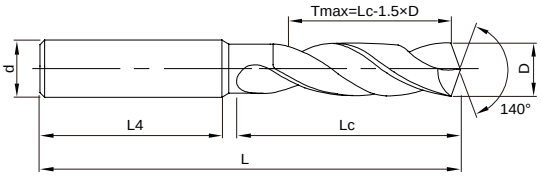
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–0550	5.50	44	36	82	6	
D918–A5N–0555	5.55	44	36	82	6	
D918–A5N–0580	5.80	44	36	82	6	
D918–A5N–0600	6.00	44	36	82	6	
D918–A5N–0610	6.10	53	36	91	8	
D918–A5N–0620	6.20	53	36	91	8	
D918–A5N–0630	6.30	53	36	91	8	
D918–A5N–0650	6.50	53	36	91	8	
D918–A5N–0660	6.60	53	36	91	8	
D918–A5N–0680	6.80	53	36	91	8	M8
D918–A5N–0690	6.90	53	36	91	8	
D918–A5N–0700	7.00	53	36	91	8	M8X1
D918–A5N–0710	7.10	53	36	91	8	
D918–A5N–0740	7.40	53	36	91	8	
D918–A5N–0750	7.50	53	36	91	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

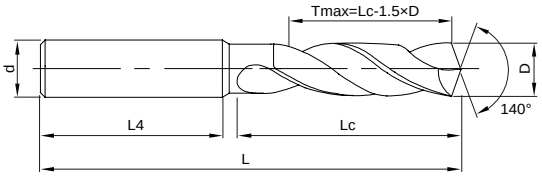
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–0780	7.80	53	36	91	8	
D918–A5N–0800	8.00	53	36	91	8	
D918–A5N–0810	8.10	61	40	103	10	
D918–A5N–0840	8.40	61	40	103	10	
D918–A5N–0850	8.50	61	40	103	10	M10
D918–A5N–0860	8.60	61	40	103	10	
D918–A5N–0870	8.70	61	40	103	10	
D918–A5N–0880	8.80	61	40	103	10	
D918–A5N–0900	9.00	61	40	103	10	M10X1
D918–A5N–0930	9.30	61	40	103	10	
D918–A5N–0950	9.50	61	40	103	10	
D918–A5N–0960	9.60	61	40	103	10	
D918–A5N–0980	9.80	61	40	103	10	
D918–A5N–1000	10.00	61	40	103	10	
D918–A5N–1025	10.25	71	45	118	12	M12

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

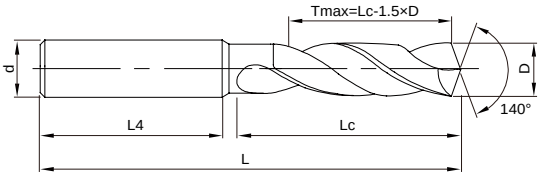
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–1040	10.40	71	45	118	12	
D918–A5N–1050	10.50	71	45	118	12	M12X1.5
D918–A5N–1060	10.60	71	45	118	12	
D918–A5N–1080	10.80	71	45	118	12	
D918–A5N–1100	11.00	71	45	118	12	
D918–A5N–1120	11.20	71	45	118	12	
D918–A5N–1150	11.50	71	45	118	12	
D918–A5N–1180	11.80	71	45	118	12	
D918–A5N–1200	12.00	71	45	118	12	M14
D918–A5N–1220	12.20	77	45	124	14	
D918–A5N–1225	12.25	77	45	124	14	
D918–A5N–1250	12.50	77	45	124	14	M14X1.5
D918–A5N–1270	12.70	77	45	124	14	
D918–A5N–1275	12.75	77	45	124	14	
D918–A5N–1280	12.80	77	45	124	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

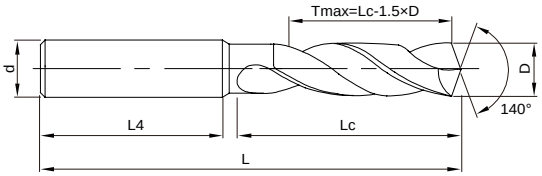
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–1300	13.00	77	45	124	14	
D918–A5N–1350	13.50	77	45	124	14	
D918–A5N–1380	13.80	77	45	124	14	
D918–A5N–1400	14.00	77	45	124	14	M16
D918–A5N–1425	14.25	83	48	133	16	
D918–A5N–1450	14.50	83	48	133	16	M16X1.5
D918–A5N–1475	14.75	83	48	133	16	
D918–A5N–1480	14.80	83	48	133	16	
D918–A5N–1500	15.00	83	48	133	16	
D918–A5N–1510	15.10	83	48	133	16	
D918–A5N–1550	15.50	83	48	133	16	
D918–A5N–1580	15.80	83	48	133	16	
D918–A5N–1600	16.00	83	48	133	16	
D918–A5N–1650	16.50	93	48	143	18	
D918–A5N–1675	16.75	93	48	143	18	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

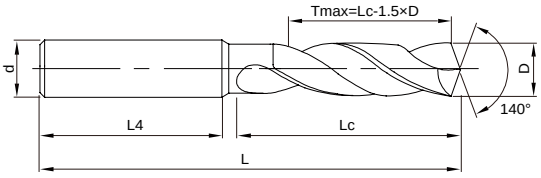
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5N

通用加工5D外冷麻花钻

5D External Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5N–1680	16.80	93	48	143	18	
D918–A5N–1700	17.00	93	48	143	18	
D918–A5N–1750	17.50	93	48	143	18	
D918–A5N–1780	17.80	93	48	143	18	
D918–A5N–1800	18.00	93	48	143	18	
D918–A5N–1850	18.50	101	50	153	20	
D918–A5N–1900	19.00	101	50	153	20	
D918–A5N–1950	19.50	101	50	153	20	
D918–A5N–1980	19.80	101	50	153	20	
D918–A5N–2000	20.00	101	50	153	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎		○	○			

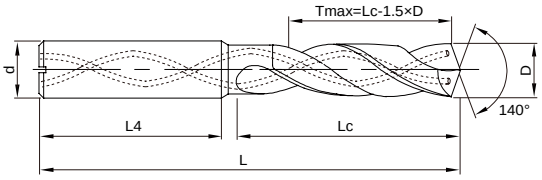
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5C

通用加工5D内冷麻花钻

5D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5C–0500	5.00	44	36	82	6	M6
D918–A5C–0510	5.10	44	36	82	6	
D918–A5C–0520	5.20	44	36	82	6	
D918–A5C–0550	5.50	44	36	82	6	
D918–A5C–0555	5.55	44	36	82	6	
D918–A5C–0580	5.80	44	36	82	6	
D918–A5C–0600	6.00	44	36	82	6	
D918–A5C–0610	6.10	53	36	91	8	
D918–A5C–0620	6.20	53	36	91	8	
D918–A5C–0630	6.30	53	36	91	8	
D918–A5C–0650	6.50	53	36	91	8	
D918–A5C–0660	6.60	53	36	91	8	
D918–A5C–0680	6.80	53	36	91	8	M8
D918–A5C–0690	6.90	53	36	91	8	
D918–A5C–0700	7.00	53	36	91	8	M8X1

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

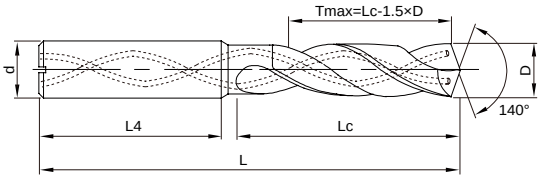
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5C

通用加工5D内冷麻花钻

5D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5C–0710	7.10	53	36	91	8	
D918–A5C–0740	7.40	53	36	91	8	
D918–A5C–0750	7.50	53	36	91	8	
D918–A5C–0780	7.80	53	36	91	8	
D918–A5C–0800	8.00	53	36	91	8	
D918–A5C–0810	8.10	61	40	103	10	
D918–A5C–0840	8.40	61	40	103	10	
D918–A5C–0850	8.50	61	40	103	10	M10
D918–A5C–0860	8.60	61	40	103	10	
D918–A5C–0870	8.70	61	40	103	10	
D918–A5C–0880	8.80	61	40	103	10	
D918–A5C–0900	9.00	61	40	103	10	M10X1
D918–A5C–0930	9.30	61	40	103	10	
D918–A5C–0950	9.50	61	40	103	10	
D918–A5C–0960	9.60	61	40	103	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

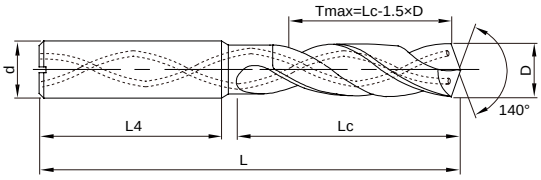
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5C

通用加工5D内冷麻花钻

5D Inner Cooling Twist Drills for General Purpose



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5C–0980	9.80	61	40	103	10	
D918–A5C–1000	10.00	61	40	103	10	
D918–A5C–1025	10.25	71	45	118	12	M12
D918–A5C–1040	10.40	71	45	118	12	
D918–A5C–1050	10.50	71	45	118	12	M12X1.5
D918–A5C–1060	10.60	71	45	118	12	
D918–A5C–1080	10.80	71	45	118	12	
D918–A5C–1100	11.00	71	45	118	12	
D918–A5C–1120	11.20	71	45	118	12	
D918–A5C–1150	11.50	71	45	118	12	
D918–A5C–1180	11.80	71	45	118	12	
D918–A5C–1200	12.00	71	45	118	12	M14
D918–A5C–1220	12.20	77	45	124	14	
D918–A5C–1225	12.25	77	45	124	14	
D918–A5C–1250	12.50	77	45	124	14	M14X1.5

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

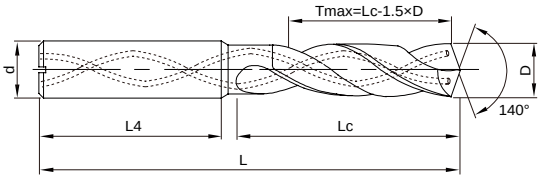
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D918–A5C

通用加工5D内冷麻花钻

5D Inner Cooling Twist Drills for General Purpose





SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

Tmax –推荐最大钻深 Recommended Maximum Depth

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D918–A5C–1270	12.70	77	45	124	14	
D918–A5C–1275	12.75	77	45	124	14	
D918–A5C–1280	12.80	77	45	124	14	
D918–A5C–1300	13.00	77	45	124	14	
D918–A5C–1350	13.50	77	45	124	14	
D918–A5C–1380	13.80	77	45	124	14	
D918–A5C–1400	14.00	77	45	124	14	M16
D918–A5C–1425	14.25	83	48	133	16	
D918–A5C–1450	14.50	83	48	133	16	M16X1.5
D918–A5C–1475	14.75	83	48	133	16	
D918–A5C–1480	14.80	83	48	133	16	
D918–A5C–1500	15.00	83	48	133	16	
D918–A5C–1510	15.10	83	48	133	16	
D918–A5C–1550	15.50	83	48	133	16	
D918–A5C–1580	15.80	83	48	133	16	
D918–A5C–1600	16.00	83	48	133	16	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
◎	○	◎	○	○	○	○	○	○

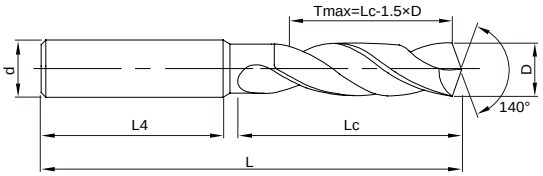
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P581

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0200	2.00	20	28	55	4	
D938–A3N–0210	2.10	20	28	55	4	
D938–A3N–0220	2.20	20	28	55	4	
D938–A3N–0230	2.30	20	28	55	4	
D938–A3N–0240	2.40	20	28	55	4	
D938–A3N–0250	2.50	20	28	55	4	
D938–A3N–0260	2.60	20	28	55	4	
D938–A3N–0270	2.70	20	28	55	4	
D938–A3N–0280	2.80	20	28	55	4	
D938–A3N–0290	2.90	20	28	55	4	
D938–A3N–0300	3.00	20	36	62	6	
D938–A3N–0310	3.10	20	36	62	6	
D938–A3N–0320	3.20	20	36	62	6	
D938–A3N–0330	3.30	20	36	62	6	M4
D938–A3N–0340	3.40	20	36	62	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

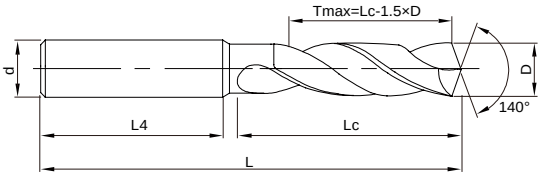
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0350	3.50	20	36	62	6	
D938–A3N–0360	3.60	20	36	62	6	
D938–A3N–0370	3.70	20	36	62	6	
D938–A3N–0380	3.80	24	36	66	6	
D938–A3N–0390	3.90	24	36	66	6	
D938–A3N–0400	4.00	24	36	66	6	
D938–A3N–0410	4.10	24	36	66	6	
D938–A3N–0420	4.20	24	36	66	6	M5
D938–A3N–0430	4.30	24	36	66	6	
D938–A3N–0440	4.40	24	36	66	6	
D938–A3N–0450	4.50	24	36	66	6	
D938–A3N–0460	4.60	24	36	66	6	
D938–A3N–0470	4.70	24	36	66	6	
D938–A3N–0480	4.80	28	36	66	6	
D938–A3N–0490	4.90	28	36	66	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

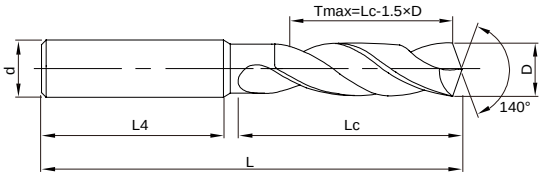
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0500	5.00	28	36	66	6	M6
D938–A3N–0510	5.10	28	36	66	6	
D938–A3N–0520	5.20	28	36	66	6	
D938–A3N–0530	5.30	28	36	66	6	
D938–A3N–0540	5.40	28	36	66	6	
D938–A3N–0550	5.50	28	36	66	6	
D938–A3N–0560	5.60	28	36	66	6	
D938–A3N–0570	5.70	28	36	66	6	
D938–A3N–0580	5.80	28	36	66	6	
D938–A3N–0590	5.90	28	36	66	6	
D938–A3N–0600	6.00	28	36	66	6	
D938–A3N–0610	6.10	34	36	79	8	
D938–A3N–0620	6.20	34	36	79	8	
D938–A3N–0630	6.30	34	36	79	8	
D938–A3N–0640	6.40	34	36	79	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

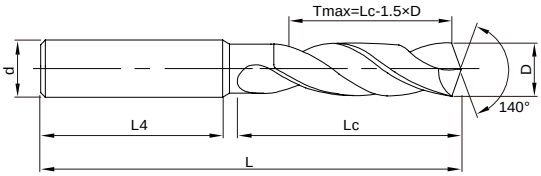
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　AlTiN nano　3D

标记说明请参考P8页　See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0650	6.50	34	36	79	8	
D938–A3N–0660	6.60	34	36	79	8	
D938–A3N–0670	6.70	34	36	79	8	
D938–A3N–0680	6.80	34	36	79	8	M8
D938–A3N–0690	6.90	34	36	79	8	
D938–A3N–0700	7.00	34	36	79	8	M8 × 1
D938–A3N–0710	7.10	41	36	79	8	
D938–A3N–0720	7.20	41	36	79	8	
D938–A3N–0730	7.30	41	36	79	8	
D938–A3N–0740	7.40	41	36	79	8	
D938–A3N–0750	7.50	41	36	79	8	
D938–A3N–0760	7.60	41	36	79	8	
D938–A3N–0770	7.70	41	36	79	8	
D938–A3N–0780	7.80	41	36	79	8	
D938–A3N–0790	7.90	41	36	79	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

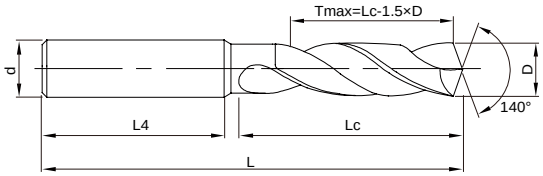
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0800	8.00	41	36	79	8	
D938–A3N–0810	8.10	47	40	89	10	
D938–A3N–0820	8.20	47	40	89	10	
D938–A3N–0830	8.30	47	40	89	10	
D938–A3N–0840	8.40	47	40	89	10	
D938–A3N–0850	8.50	47	40	89	10	M10
D938–A3N–0860	8.60	47	40	89	10	
D938–A3N–0870	8.70	47	40	89	10	
D938–A3N–0880	8.80	47	40	89	10	
D938–A3N–0890	8.90	47	40	89	10	
D938–A3N–0900	9.00	47	40	89	10	M10 × 1
D938–A3N–0910	9.10	47	40	89	10	
D938–A3N–0920	9.20	47	40	89	10	
D938–A3N–0925	9.25	47	40	89	10	
D938–A3N–0930	9.30	47	40	89	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

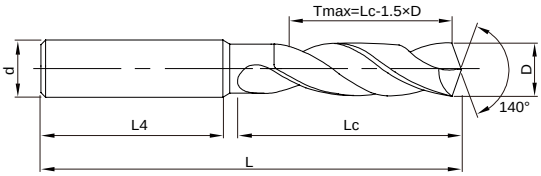
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–0940	9.40	47	40	89	10	
D938–A3N–0950	9.50	47	40	89	10	
D938–A3N–0960	9.60	47	40	89	10	
D938–A3N–0970	9.70	47	40	89	10	
D938–A3N–0980	9.80	47	40	89	10	
D938–A3N–0990	9.90	47	40	89	10	
D938–A3N–1000	10.00	47	40	89	10	
D938–A3N–1010	10.10	55	45	102	12	
D938–A3N–1020	10.20	55	45	102	12	
D938–A3N–1030	10.30	55	45	102	12	M12
D938–A3N–1040	10.40	55	45	102	12	
D938–A3N–1050	10.50	55	45	102	12	M12 × 1.5
D938–A3N–1060	10.60	55	45	102	12	
D938–A3N–1070	10.70	55	45	102	12	
D938–A3N–1080	10.80	55	45	102	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

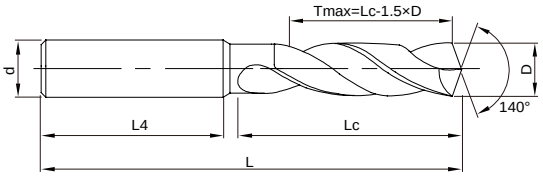
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–1090	10.90	55	45	102	12	
D938–A3N–1100	11.00	55	45	102	12	
D938–A3N–1110	11.10	55	45	102	12	
D938–A3N–1120	11.20	55	45	102	12	
D938–A3N–1130	11.30	55	45	102	12	
D938–A3N–1140	11.40	55	45	102	12	
D938–A3N–1150	11.50	55	45	102	12	
D938–A3N–1160	11.60	55	45	102	12	
D938–A3N–1170	11.70	55	45	102	12	
D938–A3N–1180	11.80	55	45	102	12	
D938–A3N–1190	11.90	55	45	102	12	
D938–A3N–1200	12.00	55	45	102	12	M14
D938–A3N–1250	12.50	60	45	107	14	M14 × 1.5
D938–A3N–1280	12.80	60	45	107	14	
D938–A3N–1300	13.00	60	45	107	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

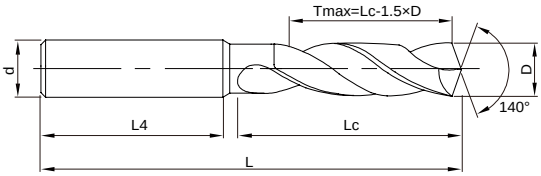
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–1350	13.50	60	45	107	14	
D938–A3N–1380	13.80	60	45	107	14	
D938–A3N–1400	14.00	60	45	107	14	M16
D938–A3N–1450	14.50	65	48	115	16	M16×1.5
D938–A3N–1480	14.80	65	48	115	16	
D938–A3N–1500	15.00	65	48	115	16	
D938–A3N–1550	15.50	65	48	115	16	
D938–A3N–1580	15.80	65	48	115	16	
D938–A3N–1600	16.00	65	48	115	16	
D938–A3N–1650	16.50	73	48	123	18	
D938–A3N–1680	16.80	73	48	123	18	
D938–A3N–1700	17.00	73	48	123	18	
D938–A3N–1750	17.50	73	48	123	18	
D938–A3N–1780	17.80	73	48	123	18	
D938–A3N–1800	18.00	73	48	123	18	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

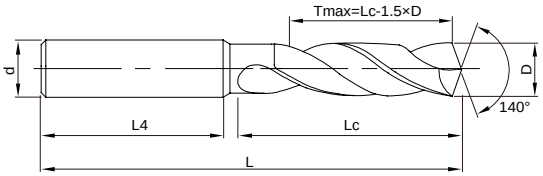
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3N NEW

普通钢加工3D外冷麻花钻

3D External Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3N–1850	18.50	79	50	131	20	
D938–A3N–1880	18.80	79	50	131	20	
D938–A3N–1900	19.00	79	50	131	20	
D938–A3N–1950	19.50	79	50	131	20	
D938–A3N–1980	19.80	79	50	131	20	
D938–A3N–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

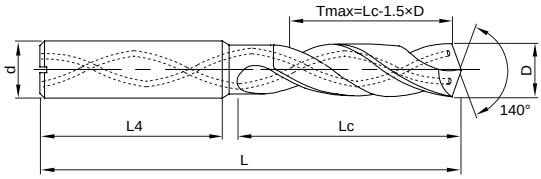
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–0300	3.00	20	36	62	6	
D938–A3C–0310	3.10	20	36	62	6	
D938–A3C–0320	3.20	20	36	62	6	
D938–A3C–0330	3.30	20	36	62	6	M4
D938–A3C–0340	3.40	20	36	62	6	
D938–A3C–0350	3.50	20	36	62	6	
D938–A3C–0360	3.60	20	36	62	6	
D938–A3C–0370	3.70	20	36	62	6	
D938–A3C–0380	3.80	24	36	66	6	
D938–A3C–0390	3.90	24	36	66	6	
D938–A3C–0400	4.00	24	36	66	6	
D938–A3C–0410	4.10	24	36	66	6	
D938–A3C–0420	4.20	24	36	66	6	M5
D938–A3C–0430	4.30	24	36	66	6	
D938–A3C–0440	4.40	24	36	66	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

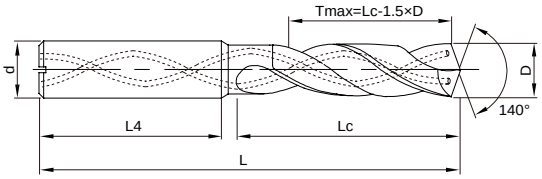
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–0450	4.50	24	36	66	6	
D938–A3C–0460	4.60	24	36	66	6	
D938–A3C–0470	4.70	24	36	66	6	
D938–A3C–0480	4.80	28	36	66	6	
D938–A3C–0490	4.90	28	36	66	6	
D938–A3C–0500	5.00	28	36	66	6	M6
D938–A3C–0510	5.10	28	36	66	6	
D938–A3C–0520	5.20	28	36	66	6	
D938–A3C–0530	5.30	28	36	66	6	
D938–A3C–0540	5.40	28	36	66	6	
D938–A3C–0550	5.50	28	36	66	6	
D938–A3C–0560	5.60	28	36	66	6	
D938–A3C–0570	5.70	28	36	66	6	
D938–A3C–0580	5.80	28	36	66	6	
D938–A3C–0590	5.90	28	36	66	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

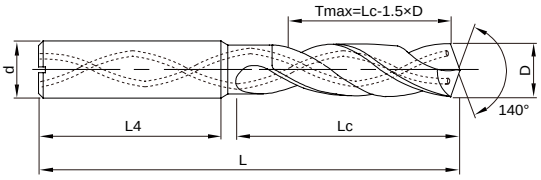
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–0600	6.00	28	36	66	6	
D938–A3C–0610	6.10	34	36	79	8	
D938–A3C–0620	6.20	34	36	79	8	
D938–A3C–0630	6.30	34	36	79	8	
D938–A3C–0640	6.40	34	36	79	8	
D938–A3C–0650	6.50	34	36	79	8	
D938–A3C–0660	6.60	34	36	79	8	
D938–A3C–0670	6.70	34	36	79	8	
D938–A3C–0680	6.80	34	36	79	8	M8
D938–A3C–0690	6.90	34	36	79	8	
D938–A3C–0700	7.00	34	36	79	8	M8 × 1
D938–A3C–0710	7.10	41	36	79	8	
D938–A3C–0720	7.20	41	36	79	8	
D938–A3C–0730	7.30	41	36	79	8	
D938–A3C–0740	7.40	41	36	79	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

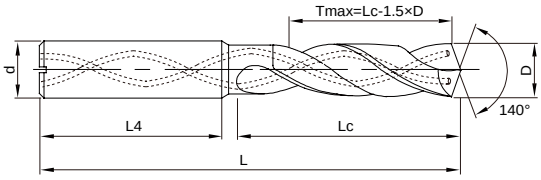
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–0750	7.50	41	36	79	8	
D938–A3C–0760	7.60	41	36	79	8	
D938–A3C–0770	7.70	41	36	79	8	
D938–A3C–0780	7.80	41	36	79	8	
D938–A3C–0790	7.90	41	36	79	8	
D938–A3C–0800	8.00	41	36	79	8	
D938–A3C–0810	8.10	47	40	89	10	
D938–A3C–0820	8.20	47	40	89	10	
D938–A3C–0830	8.30	47	40	89	10	
D938–A3C–0840	8.40	47	40	89	10	
D938–A3C–0850	8.50	47	40	89	10	M10
D938–A3C–0860	8.60	47	40	89	10	
D938–A3C–0870	8.70	47	40	89	10	
D938–A3C–0880	8.80	47	40	89	10	
D938–A3C–0890	8.90	47	40	89	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

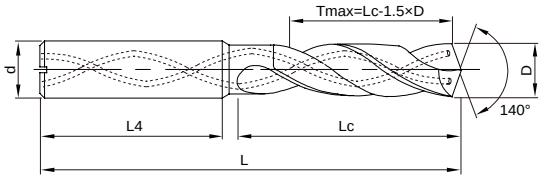
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel





SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

Tmax –推荐最大钻深 Recommended Maximum Depth

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–0900	9.00	47	40	89	10	M10 × 1
D938–A3C–0910	9.10	47	40	89	10	
D938–A3C–0920	9.20	47	40	89	10	
D938–A3C–0930	9.30	47	40	89	10	
D938–A3C–0940	9.40	47	40	89	10	
D938–A3C–0950	9.50	47	40	89	10	
D938–A3C–0960	9.60	47	40	89	10	
D938–A3C–0970	9.70	47	40	89	10	
D938–A3C–0980	9.80	47	40	89	10	
D938–A3C–0990	9.90	47	40	89	10	
D938–A3C–1000	10.00	47	40	89	10	
D938–A3C–1010	10.10	55	45	102	12	
D938–A3C–1020	10.20	55	45	102	12	
D938–A3C–1030	10.30	55	45	102	12	M12
D938–A3C–1040	10.40	55	45	102	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

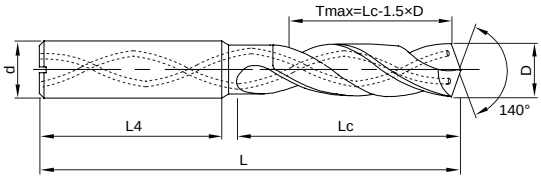
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–1050	10.50	55	45	102	12	M12 × 1.5
D938–A3C–1060	10.60	55	45	102	12	
D938–A3C–1070	10.70	55	45	102	12	
D938–A3C–1080	10.80	55	45	102	12	
D938–A3C–1090	10.90	55	45	102	12	
D938–A3C–1100	11.00	55	45	102	12	
D938–A3C–1110	11.10	55	45	102	12	
D938–A3C–1120	11.20	55	45	102	12	
D938–A3C–1130	11.30	55	45	102	12	
D938–A3C–1140	11.40	55	45	102	12	
D938–A3C–1150	11.50	55	45	102	12	
D938–A3C–1160	11.60	55	45	102	12	
D938–A3C–1170	11.70	55	45	102	12	
D938–A3C–1180	11.80	55	45	102	12	
D938–A3C–1190	11.90	55	45	102	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

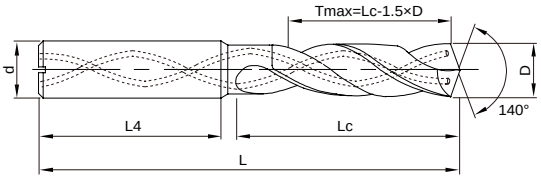
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–1200	12.00	55	45	102	12	M14
D938–A3C–1250	12.50	60	45	107	14	M14 × 1.5
D938–A3C–1280	12.80	60	45	107	14	
D938–A3C–1300	13.00	60	45	107	14	
D938–A3C–1350	13.50	60	45	107	14	
D938–A3C–1380	13.80	60	45	107	14	
D938–A3C–1400	14.00	60	45	107	14	M16
D938–A3C–1450	14.50	65	48	115	16	M16 × 1.5
D938–A3C–1480	14.80	65	48	115	16	
D938–A3C–1500	15.00	65	48	115	16	
D938–A3C–1550	15.50	65	48	115	16	
D938–A3C–1580	15.80	65	48	115	16	
D938–A3C–1600	16.00	65	48	115	16	
D938–A3C–1650	16.50	73	48	123	18	
D938–A3C–1680	16.80	73	48	123	18	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

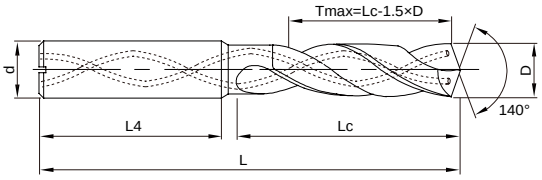
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A3C NEW

普通钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A3C–1700	17.00	73	48	123	18	
D938–A3C–1750	17.50	73	48	123	18	
D938–A3C–1780	17.80	73	48	123	18	
D938–A3C–1800	18.00	73	48	123	18	
D938–A3C–1850	18.50	79	50	131	20	
D938–A3C–1880	18.80	79	50	131	20	
D938–A3C–1900	19.00	79	50	131	20	
D938–A3C–1950	19.50	79	50	131	20	
D938–A3C–1980	19.80	79	50	131	20	
D938–A3C–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

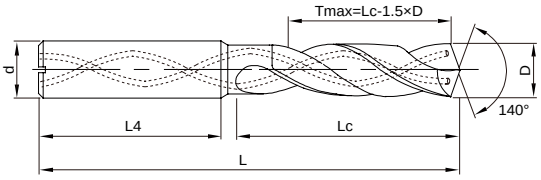
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–0300	3.00	28	36	66	6	
D938–A5C–0310	3.10	28	36	66	6	
D938–A5C–0320	3.20	28	36	66	6	
D938–A5C–0330	3.30	28	36	66	6	M4
D938–A5C–0340	3.40	28	36	66	6	
D938–A5C–0350	3.50	28	36	66	6	
D938–A5C–0360	3.60	28	36	66	6	
D938–A5C–0370	3.70	28	36	66	6	
D938–A5C–0380	3.80	36	36	74	6	
D938–A5C–0390	3.90	36	36	74	6	
D938–A5C–0400	4.00	36	36	74	6	
D938–A5C–0410	4.10	36	36	74	6	
D938–A5C–0420	4.20	36	36	74	6	M5
D938–A5C–0430	4.30	36	36	74	6	
D938–A5C–0440	4.40	36	36	74	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

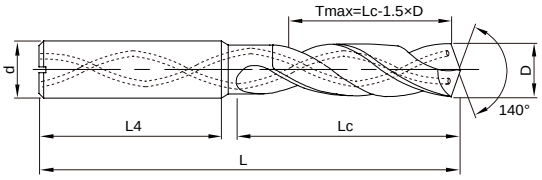
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–0450	4.50	36	36	74	6	
D938–A5C–0460	4.60	36	36	74	6	
D938–A5C–0465	4.65	36	36	74	6	
D938–A5C–0470	4.70	36	36	74	6	
D938–A5C–0480	4.80	44	36	82	6	
D938–A5C–0490	4.90	44	36	82	6	
D938–A5C–0500	5.00	44	36	82	6	M6
D938–A5C–0510	5.10	44	36	82	6	
D938–A5C–0520	5.20	44	36	82	6	
D938–A5C–0530	5.30	44	36	82	6	
D938–A5C–0540	5.40	44	36	82	6	
D938–A5C–0550	5.50	44	36	82	6	
D938–A5C–0555	5.55	44	36	82	6	
D938–A5C–0560	5.60	44	36	82	6	
D938–A5C–0570	5.70	44	36	82	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

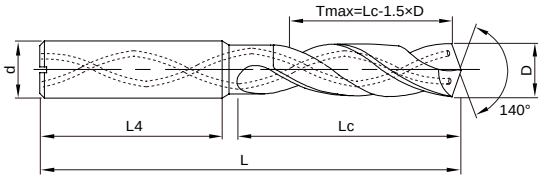
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–0580	5.80	44	36	82	6	
D938–A5C–0590	5.90	44	36	82	6	
D938–A5C–0600	6.00	44	36	82	6	
D938–A5C–0610	6.10	53	36	91	8	
D938–A5C–0620	6.20	53	36	91	8	
D938–A5C–0630	6.30	53	36	91	8	
D938–A5C–0640	6.40	53	36	91	8	
D938–A5C–0650	6.50	53	36	91	8	
D938–A5C–0660	6.60	53	36	91	8	
D938–A5C–0670	6.70	53	36	91	8	
D938–A5C–0680	6.80	53	36	91	8	M8
D938–A5C–0690	6.90	53	36	91	8	
D938–A5C–0700	7.00	53	36	91	8	M8 × 1
D938–A5C–0710	7.10	53	36	91	8	
D938–A5C–0720	7.20	53	36	91	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

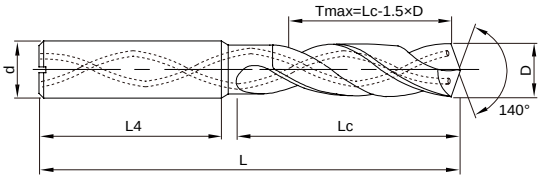
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–0730	7.30	53	36	91	8	
D938–A5C–0740	7.40	53	36	91	8	
D938–A5C–0745	7.45	53	36	91	8	
D938–A5C–0750	7.50	53	36	91	8	
D938–A5C–0760	7.60	53	36	91	8	
D938–A5C–0770	7.70	53	36	91	8	
D938–A5C–0780	7.80	53	36	91	8	
D938–A5C–0790	7.90	53	36	91	8	
D938–A5C–0800	8.00	53	36	91	8	
D938–A5C–0810	8.10	61	40	103	10	
D938–A5C–0820	8.20	61	40	103	10	
D938–A5C–0830	8.30	61	40	103	10	
D938–A5C–0840	8.40	61	40	103	10	
D938–A5C–0850	8.50	61	40	103	10	M10
D938–A5C–0860	8.60	61	40	103	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

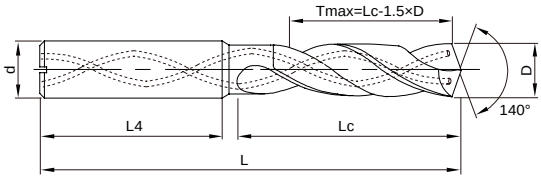
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–0870	8.70	61	40	103	10	
D938–A5C–0880	8.80	61	40	103	10	
D938–A5C–0890	8.90	61	40	103	10	
D938–A5C–0900	9.00	61	40	103	10	M10×1
D938–A5C–0910	9.10	61	40	103	10	
D938–A5C–0920	9.20	61	40	103	10	
D938–A5C–0930	9.30	61	40	103	10	
D938–A5C–0935	9.35	61	40	103	10	
D938–A5C–0940	9.40	61	40	103	10	
D938–A5C–0950	9.50	61	40	103	10	
D938–A5C–0960	9.60	61	40	103	10	
D938–A5C–0970	9.70	61	40	103	10	
D938–A5C–0980	9.80	61	40	103	10	
D938–A5C–0990	9.90	61	40	103	10	
D938–A5C–1000	10.00	61	40	103	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

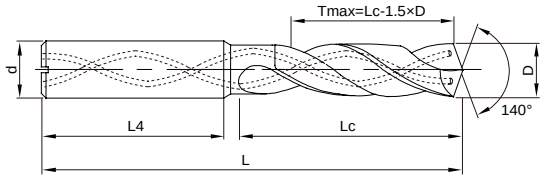
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–1010	10.10	71	45	118	12	
D938–A5C–1020	10.20	71	45	118	12	
D938–A5C–1030	10.30	71	45	118	12	M12
D938–A5C–1040	10.40	71	45	118	12	
D938–A5C–1050	10.50	71	45	118	12	M12 × 1.5
D938–A5C–1060	10.60	71	45	118	12	
D938–A5C–1070	10.70	71	45	118	12	
D938–A5C–1080	10.80	71	45	118	12	
D938–A5C–1090	10.90	71	45	118	12	
D938–A5C–1100	11.00	71	45	118	12	
D938–A5C–1110	11.10	71	45	118	12	
D938–A5C–1120	11.20	71	45	118	12	
D938–A5C–1130	11.30	71	45	118	12	
D938–A5C–1140	11.40	71	45	118	12	
D938–A5C–1150	11.50	71	45	118	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

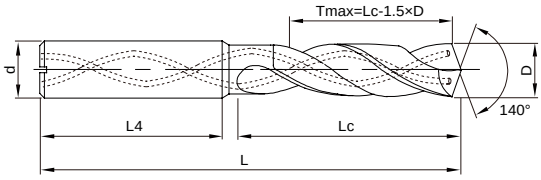
工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–1160	11.60	71	45	118	12	
D938–A5C–1170	11.70	71	45	118	12	
D938–A5C–1180	11.80	71	45	118	12	
D938–A5C–1190	11.90	71	45	118	12	
D938–A5C–1200	12.00	71	45	118	12	M14
D938–A5C–1250	12.50	77	45	124	14	M14 × 1.5
D938–A5C–1280	12.80	77	45	124	14	
D938–A5C–1300	13.00	77	45	124	14	
D938–A5C–1350	13.50	77	45	124	14	
D938–A5C–1380	13.80	77	45	124	14	
D938–A5C–1400	14.00	77	45	124	14	M16
D938–A5C–1450	14.50	83	48	133	16	M16 × 1.5
D938–A5C–1480	14.80	83	48	133	16	
D938–A5C–1500	15.00	83	48	133	16	
D938–A5C–1510	15.10	83	48	133	16	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

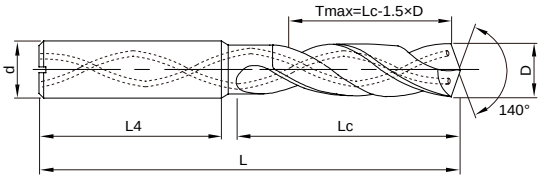
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

◎ 最适合 Most Suitable ○ 适合Suitable

D938–A5C NEW

普通钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills For Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | AlTiN nano | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D938–A5C–1550	15.50	83	48	133	16	
D938–A5C–1580	15.80	83	48	133	16	
D938–A5C–1600	16.00	83	48	133	16	
D938–A5C–1650	16.50	93	48	143	18	
D938–A5C–1680	16.80	93	48	143	18	
D938–A5C–1700	17.00	93	48	143	18	
D938–A5C–1750	17.50	93	48	143	18	
D938–A5C–1780	17.80	93	48	143	18	
D938–A5C–1800	18.00	93	48	143	18	
D938–A5C–1850	18.50	101	50	153	20	
D938–A5C–1880	18.80	101	50	153	20	
D938–A5C–1900	19.00	101	50	153	20	
D938–A5C–1950	19.50	101	50	153	20	
D938–A5C–1980	19.80	101	50	153	20	
D938–A5C–2000	20.00	101	50	153	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material				
P			K	
1234	5	67	12	3
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢(<48HRC) PH,Ferritic,Martensitic Steel (<48HRC)	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)
◎	◎	○	○	○

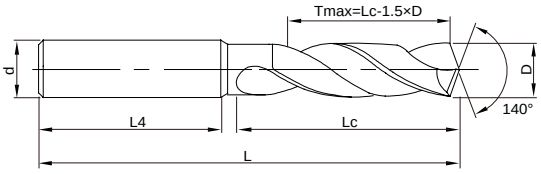
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P583

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–0300	3.00	20	36	62	6	
D968–A3N–0325	3.25	20	36	62	6	
D968–A3N–0330	3.30	20	36	62	6	M4
D968–A3N–0340	3.40	20	36	62	6	
D968–A3N–0350	3.50	20	36	62	6	
D968–A3N–0370	3.70	20	36	62	6	
D968–A3N–0400	4.00	24	36	66	6	
D968–A3N–0420	4.20	24	36	66	6	M5
D968–A3N–0430	4.30	24	36	66	6	
D968–A3N–0450	4.50	24	36	66	6	
D968–A3N–0465	4.65	24	36	66	6	
D968–A3N–0480	4.80	28	36	66	6	
D968–A3N–0500	5.00	28	36	66	6	M6
D968–A3N–0510	5.10	28	36	66	6	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎							

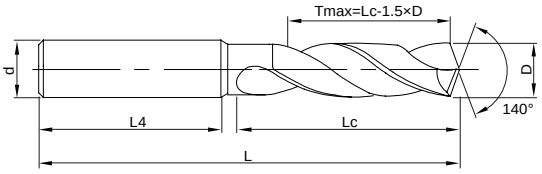
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–0520	5.20	28	36	66	6	
D968–A3N–0550	5.50	28	36	66	6	
D968–A3N–0555	5.55	28	36	66	6	
D968–A3N–0580	5.80	28	36	66	6	
D968–A3N–0600	6.00	28	36	66	6	
D968–A3N–0610	6.10	34	36	79	8	
D968–A3N–0620	6.20	34	36	79	8	
D968–A3N–0630	6.30	34	36	79	8	
D968–A3N–0650	6.50	34	36	79	8	
D968–A3N–0660	6.60	34	36	79	8	
D968–A3N–0680	6.80	34	36	79	8	M8
D968–A3N–0690	6.90	34	36	79	8	
D968–A3N–0700	7.00	34	36	79	8	M8X1
D968–A3N–0710	7.10	41	36	79	8	
D968–A3N–0740	7.40	41	36	79	8	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P		M	K		N			S	
1234		123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)		不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○		◎							

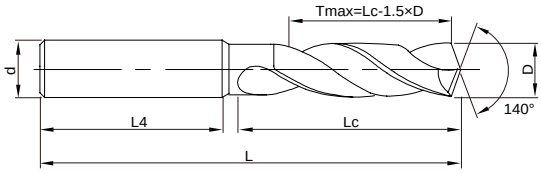
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel





SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

Tmax –推荐最大钻深 Recommended Maximum Depth

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–0750	7.50	41	36	79	8	
D968–A3N–0780	7.80	41	36	79	8	
D968–A3N–0800	8.00	41	36	79	8	
D968–A3N–0810	8.10	47	40	89	10	
D968–A3N–0840	8.40	47	40	89	10	
D968–A3N–0850	8.50	47	40	89	10	M10
D968–A3N–0860	8.60	47	40	89	10	
D968–A3N–0870	8.70	47	40	89	10	
D968–A3N–0880	8.80	47	40	89	10	
D968–A3N–0900	9.00	47	40	89	10	M10X1
D968–A3N–0930	9.30	47	40	89	10	
D968–A3N–0950	9.50	47	40	89	10	
D968–A3N–0960	9.60	47	40	89	10	
D968–A3N–0980	9.80	47	40	89	10	
D968–A3N–1000	10.00	47	40	89	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎							

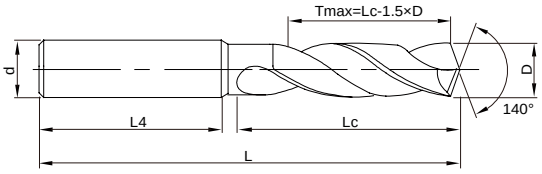
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–1025	10.25	55	45	102	12	M12
D968–A3N–1040	10.40	55	45	102	12	
D968–A3N–1050	10.50	55	45	102	12	M12X1.5
D968–A3N–1060	10.60	55	45	102	12	
D968–A3N–1080	10.80	55	45	102	12	
D968–A3N–1100	11.00	55	45	102	12	
D968–A3N–1120	11.20	55	45	102	12	
D968–A3N–1150	11.50	55	45	102	12	
D968–A3N–1180	11.80	55	45	102	12	
D968–A3N–1200	12.00	55	45	102	12	M14
D968–A3N–1225	12.25	60	45	107	14	
D968–A3N–1250	12.50	60	45	107	14	M14X1.5
D968–A3N–1270	12.70	60	45	107	14	
D968–A3N–1275	12.75	60	45	107	14	
D968–A3N–1280	12.80	60	45	107	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

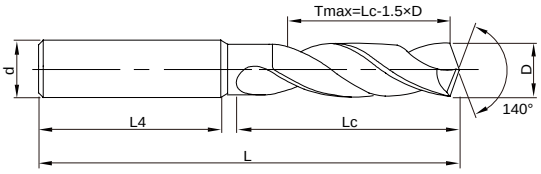
P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎							

◎ 最适合 Most Suitable ○ 适合Suitable

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel





SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

Tmax –推荐最大钻深 Recommended Maximum Depth

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–1300	13.00	60	45	107	14	
D968–A3N–1310	13.10	60	45	107	14	
D968–A3N–1350	13.50	60	45	107	14	
D968–A3N–1380	13.80	60	45	107	14	
D968–A3N–1400	14.00	60	45	107	14	M16
D968–A3N–1425	14.25	65	48	115	16	
D968–A3N–1450	14.50	65	48	115	16	M16X1.5
D968–A3N–1475	14.75	65	48	115	16	
D968–A3N–1480	14.80	65	48	115	16	
D968–A3N–1500	15.00	65	48	115	16	
D968–A3N–1510	15.10	65	48	115	16	
D968–A3N–1550	15.50	65	48	115	16	
D968–A3N–1580	15.80	65	48	115	16	
D968–A3N–1600	16.00	65	48	115	16	
D968–A3N–1650	16.50	73	48	123	18	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

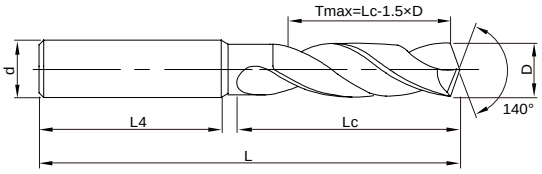
P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎							

◎ 最适合 Most Suitable ○ 适合Suitable

D968–A3N

不锈钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3N–1675	16.75	73	48	123	18	
D968–A3N–1680	16.80	73	48	123	18	
D968–A3N–1700	17.00	73	48	123	18	
D968–A3N–1750	17.50	73	48	123	18	
D968–A3N–1780	17.80	73	48	123	18	
D968–A3N–1800	18.00	73	48	123	18	
D968–A3N–1850	18.50	79	50	131	20	
D968–A3N–1880	18.80	79	50	131	20	
D968–A3N–1900	19.00	79	50	131	20	
D968–A3N–1950	19.50	79	50	131	20	
D968–A3N–1980	19.80	79	50	131	20	
D968–A3N–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material								
P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎							

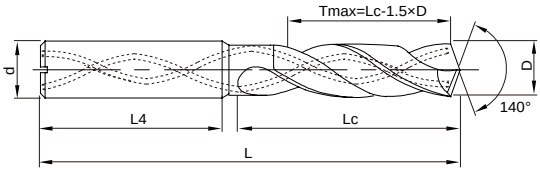
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3C

不锈钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

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订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3C–0500	5.00	28	36	66	6	M6
D968–A3C–0510	5.10	28	36	66	6	
D968–A3C–0520	5.20	28	36	66	6	
D968–A3C–0550	5.50	28	36	66	6	
D968–A3C–0555	5.55	28	36	66	6	
D968–A3C–0580	5.80	28	36	66	6	
D968–A3C–0600	6.00	28	36	66	6	
D968–A3C–0610	6.10	34	36	79	8	
D968–A3C–0620	6.20	34	36	79	8	
D968–A3C–0630	6.30	34	36	79	8	
D968–A3C–0650	6.50	34	36	79	8	
D968–A3C–0660	6.60	34	36	79	8	
D968–A3C–0680	6.80	34	36	79	8	M8
D968–A3C–0690	6.90	34	36	79	8	
D968–A3C–0700	7.00	34	36	79	8	M8X1

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

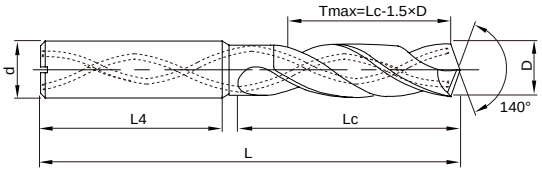
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3C

不锈钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3C–0710	7.10	41	36	79	8	
D968–A3C–0740	7.40	41	36	79	8	
D968–A3C–0750	7.50	41	36	79	8	
D968–A3C–0780	7.80	41	36	79	8	
D968–A3C–0800	8.00	41	36	79	8	
D968–A3C–0810	8.10	47	40	89	10	
D968–A3C–0840	8.40	47	40	89	10	
D968–A3C–0850	8.50	47	40	89	10	M10
D968–A3C–0860	8.60	47	40	89	10	
D968–A3C–0870	8.70	47	40	89	10	
D968–A3C–0880	8.80	47	40	89	10	
D968–A3C–0900	9.00	47	40	89	10	M10X1
D968–A3C–0930	9.30	47	40	89	10	
D968–A3C–0950	9.50	47	40	89	10	
D968–A3C–0960	9.60	47	40	89	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P		M	K		N			S	
1234		123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)		不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○		◎			○	○	○	○	○

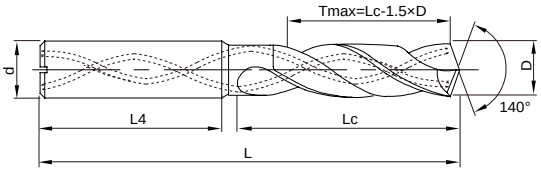
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3C

不锈钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3C–0980	9.80	47	40	89	10	
D968–A3C–1000	10.00	47	40	89	10	
D968–A3C–1025	10.25	55	45	102	12	M12
D968–A3C–1040	10.40	55	45	102	12	
D968–A3C–1050	10.50	55	45	102	12	M12X1.5
D968–A3C–1060	10.60	55	45	102	12	
D968–A3C–1080	10.80	55	45	102	12	
D968–A3C–1100	11.00	55	45	102	12	
D968–A3C–1120	11.20	55	45	102	12	
D968–A3C–1150	11.50	55	45	102	12	
D968–A3C–1180	11.80	55	45	102	12	
D968–A3C–1200	12.00	55	45	102	12	M14
D968–A3C–1225	12.25	60	45	107	14	
D968–A3C–1250	12.50	60	45	107	14	M14X1.5
D968–A3C–1270	12.70	60	45	107	14	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

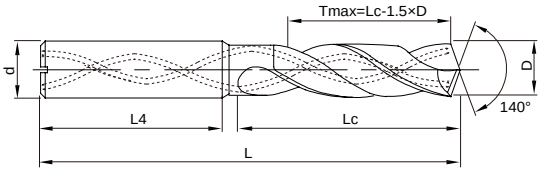
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3C

不锈钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3C–1275	12.75	60	45	107	14	
D968–A3C–1280	12.80	60	45	107	14	
D968–A3C–1300	13.00	60	45	107	14	
D968–A3C–1310	13.10	60	45	107	14	
D968–A3C–1350	13.50	60	45	107	14	
D968–A3C–1380	13.80	60	45	107	14	
D968–A3C–1400	14.00	60	45	107	14	M16
D968–A3C–1425	14.25	65	48	115	16	
D968–A3C–1450	14.50	65	48	115	16	M16X1.5
D968–A3C–1475	14.75	65	48	115	16	
D968–A3C–1480	14.80	65	48	115	16	
D968–A3C–1500	15.00	65	48	115	16	
D968–A3C–1510	15.10	65	48	115	16	
D968–A3C–1550	15.50	65	48	115	16	
D968–A3C–1580	15.80	65	48	115	16	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P		M	K		N			S	
1234		123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)		不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○		◎			○	○	○	○	○

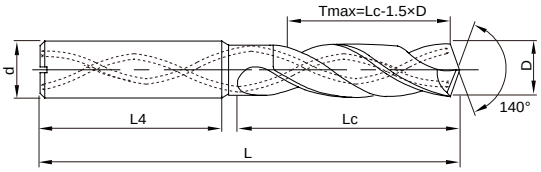
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A3C

不锈钢加工3D内冷麻花钻

3D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A3C–1600	16.00	65	48	115	16	
D968–A3C–1700	17.00	73	48	123	18	
D968–A3C–1800	18.00	73	48	123	18	
D968–A3C–1900	19.00	79	50	131	20	
D968–A3C–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

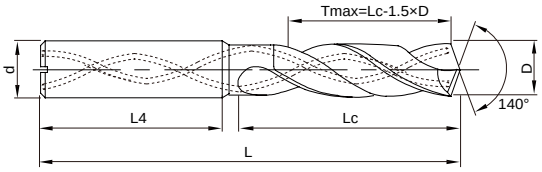
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A5C

不锈钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

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订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A5C–0500	5.00	44	36	82	6	M6
D968–A5C–0510	5.10	44	36	82	6	
D968–A5C–0520	5.20	44	36	82	6	
D968–A5C–0550	5.50	44	36	82	6	
D968–A5C–0555	5.55	44	36	82	6	
D968–A5C–0580	5.80	44	36	82	6	
D968–A5C–0600	6.00	44	36	82	6	
D968–A5C–0610	6.10	53	36	91	8	
D968–A5C–0620	6.20	53	36	91	8	
D968–A5C–0630	6.30	53	36	91	8	
D968–A5C–0650	6.50	53	36	91	8	
D968–A5C–0660	6.60	53	36	91	8	
D968–A5C–0680	6.80	53	36	91	8	M8
D968–A5C–0690	6.90	53	36	91	8	
D968–A5C–0700	7.00	53	36	91	8	M8X1

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

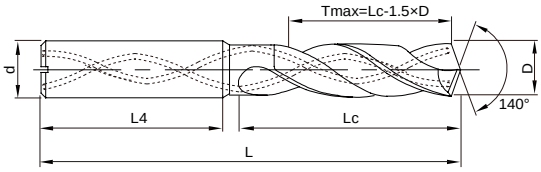
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A5C

不锈钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A5C–0710	7.10	53	36	91	8	
D968–A5C–0740	7.40	53	36	91	8	
D968–A5C–0750	7.50	53	36	91	8	
D968–A5C–0780	7.80	53	36	91	8	
D968–A5C–0800	8.00	53	36	91	8	
D968–A5C–0810	8.10	61	40	103	10	
D968–A5C–0840	8.40	61	40	103	10	
D968–A5C–0850	8.50	61	40	103	10	M10
D968–A5C–0860	8.60	61	40	103	10	
D968–A5C–0870	8.70	61	40	103	10	
D968–A5C–0880	8.80	61	40	103	10	
D968–A5C–0900	9.00	61	40	103	10	M10X1
D968–A5C–0930	9.30	61	40	103	10	
D968–A5C–0950	9.50	61	40	103	10	
D968–A5C–0960	9.60	61	40	103	10	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
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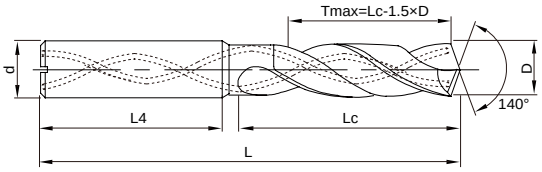
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A5C

不锈钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A5C–0980	9.80	61	40	103	10	
D968–A5C–1000	10.00	61	40	103	10	
D968–A5C–1025	10.25	71	45	118	12	M12
D968–A5C–1040	10.40	71	45	118	12	
D968–A5C–1050	10.50	71	45	118	12	M12X1.5
D968–A5C–1060	10.60	71	45	118	12	
D968–A5C–1080	10.80	71	45	118	12	
D968–A5C–1100	11.00	71	45	118	12	
D968–A5C–1120	11.20	71	45	118	12	
D968–A5C–1150	11.50	71	45	118	12	
D968–A5C–1180	11.80	71	45	118	12	
D968–A5C–1200	12.00	71	45	118	12	M14
D968–A5C–1220	12.20	77	45	124	14	
D968–A5C–1225	12.25	77	45	124	14	
D968–A5C–1250	12.50	77	45	124	14	M14X1.5

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

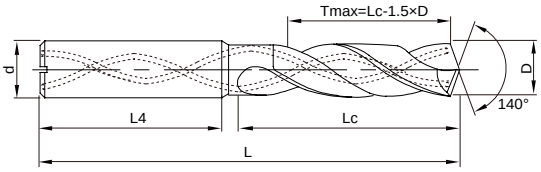
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A5C

不锈钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills for Stainless Steel



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

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》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A5C–1270	12.70	77	45	124	14	
D968–A5C–1275	12.75	77	45	124	14	
D968–A5C–1280	12.80	77	45	124	14	
D968–A5C–1300	13.00	77	45	124	14	
D968–A5C–1350	13.50	77	45	124	14	
D968–A5C–1380	13.80	77	45	124	14	
D968–A5C–1400	14.00	77	45	124	14	M16
D968–A5C–1425	14.25	83	48	133	16	
D968–A5C–1450	14.50	83	48	133	16	M16X1.5
D968–A5C–1475	14.75	83	48	133	16	
D968–A5C–1480	14.80	83	48	133	16	
D968–A5C–1500	15.00	83	48	133	16	
D968–A5C–1510	15.10	83	48	133	16	
D968–A5C–1550	15.50	83	48	133	16	
D968–A5C–1580	15.80	83	48	133	16	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

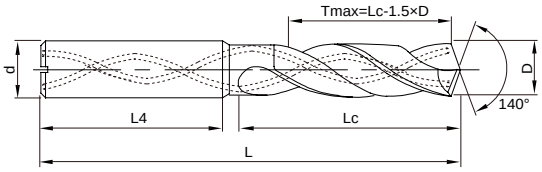
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D968–A5C

不锈钢加工5D内冷麻花钻

5D Inner Cooling Twist Drills for Stainless Steel





SHANK DIN 6535HA | HELICA | 5D

Tmax –推荐最大钻深 Recommended Maximum Depth

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D968–A5C–1600	16.00	83	48	133	16	
D968–A5C–1700	17.00	93	48	143	18	
D968–A5C–1800	18.00	93	48	143	18	
D968–A5C–1900	19.00	101	50	153	20	
D968–A5C–2000	20.00	101	50	153	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material								
P	M	K		N			S	
1234	123	12	3	12	3	4	123	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)	高温合金 (<450HB) Heat–resistant Alloys (<450HB)	钛合金 (<400HB) Titanium Alloys (<400HB)
○	◎			○	○	○	○	○

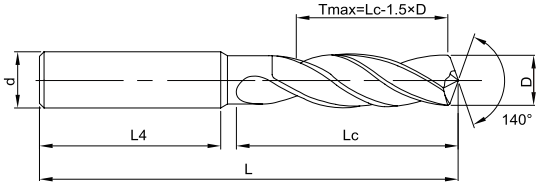
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P585

D928–A3N

铸铁加工3D外冷麻花钻

3D External Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　HELICA　3D

标记说明请参考P8页　See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A3N–0300	3.00	20	36	62	6	
D928–A3N–0330	3.30	20	36	62	6	M4
D928–A3N–0400	4.00	24	36	66	6	
D928–A3N–0420	4.20	24	36	66	6	M5
D928–A3N–0500	5.00	28	36	66	6	M6
D928–A3N–0600	6.00	28	36	66	6	
D928–A3N–0680	6.80	34	36	79	8	M8
D928–A3N–0700	7.00	34	36	79	8	M8X1
D928–A3N–0800	8.00	41	36	79	8	
D928–A3N–0850	8.50	47	40	89	10	M10
D928–A3N–0900	9.00	47	40	89	10	M10X1
D928–A3N–1000	10.00	47	40	89	10	
D928–A3N–1025	10.25	55	45	102	12	M12
D928–A3N–1050	10.50	55	45	102	12	M12X1.5
D928–A3N–1100	11.00	55	45	102	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎			

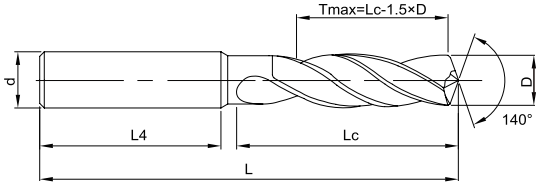
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A3N

铸铁加工3D外冷麻花钻

3D External Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A3N–1200	12.00	55	45	102	12	M14
D928–A3N–1250	12.50	60	45	107	14	M14X1.5
D928–A3N–1300	13.00	60	45	107	14	
D928–A3N–1400	14.00	60	45	107	14	M16
D928–A3N–1450	14.50	65	48	115	16	M16X1.5
D928–A3N–1500	15.00	65	48	115	16	
D928–A3N–1600	16.00	65	48	115	16	
D928–A3N–1700	17.00	73	48	123	18	
D928–A3N–1800	18.00	73	48	123	18	
D928–A3N–1900	19.00	79	50	131	20	
D928–A3N–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎			

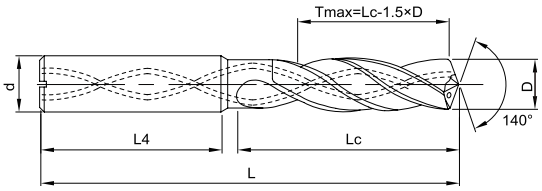
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A3C

铸铁加工3D内冷麻花钻

3D inner Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　HELICA　3D

标记说明请参考P8页　See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A3C–0500	5.00	28	36	66	6	M6
D928–A3C–0600	6.00	28	36	66	6	
D928–A3C–0680	6.80	34	36	79	8	M8
D928–A3C–0700	7.00	34	36	79	8	M8X1
D928–A3C–0800	8.00	41	36	79	8	
D928–A3C–0850	8.50	47	40	89	10	M10
D928–A3C–0900	9.00	47	40	89	10	M10X1
D928–A3C–1000	10.00	47	40	89	10	
D928–A3C–1025	10.25	55	45	102	12	M12
D928–A3C–1050	10.50	55	45	102	12	M12X1.5
D928–A3C–1100	11.00	55	45	102	12	
D928–A3C–1200	12.00	55	45	102	12	M14
D928–A3C–1250	12.50	60	45	107	14	M14X1.5
D928–A3C–1300	13.00	60	45	107	14	
D928–A3C–1400	14.00	60	45	107	14	M16

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎	○	○	

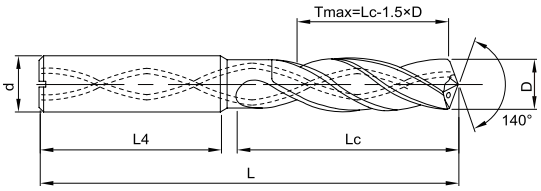
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A3C

铸铁加工3D内冷麻花钻

3D inner Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A3C–1450	14.50	65	48	115	16	M16X1.5
D928–A3C–1500	15.00	65	48	115	16	
D928–A3C–1600	16.00	65	48	115	16	
D928–A3C–1700	17.00	73	48	123	18	
D928–A3C–1800	18.00	73	48	123	18	
D928–A3C–1900	19.00	79	50	131	20	
D928–A3C–2000	20.00	79	50	131	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material								
P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎	○	○	

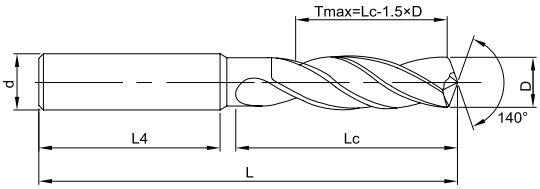
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A5N

铸铁加工5D外冷麻花钻

5D External Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A5N–0300	3.00	28	36	66	6	
D928–A5N–0330	3.30	28	36	66	6	M4
D928–A5N–0400	4.00	36	36	74	6	
D928–A5N–0420	4.20	36	36	74	6	M5
D928–A5N–0500	5.00	44	36	82	6	M6
D928–A5N–0600	6.00	44	36	82	6	
D928–A5N–0680	6.80	53	36	91	8	M8
D928–A5N–0700	7.00	53	36	91	8	M8X1
D928–A5N–0800	8.00	53	36	91	8	
D928–A5N–0850	8.50	61	40	103	10	M10
D928–A5N–0900	9.00	61	40	103	10	M10X1
D928–A5N–1000	10.00	61	40	103	10	
D928–A5N–1025	10.25	71	45	118	12	M12
D928–A5N–1050	10.50	71	45	118	12	M12X1.5
D928–A5N–1100	11.00	71	45	118	12	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎			

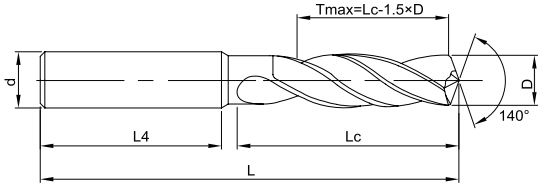
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A5N

铸铁加工5D外冷麻花钻

5D External Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | HELICA | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A5N–1200	12.00	71	45	118	12	M14
D928–A5N–1250	12.50	77	45	124	14	M14X1.5
D928–A5N–1300	13.00	77	45	124	14	
D928–A5N–1400	14.00	77	45	124	14	M16
D928–A5N–1450	14.50	83	48	133	16	M16X1.5
D928–A5N–1500	15.00	83	48	133	16	
D928–A5N–1600	16.00	83	48	133	16	
D928–A5N–1700	17.00	93	48	143	18	
D928–A5N–1800	18.00	93	48	143	18	
D928–A5N–1900	19.00	101	50	153	20	
D928–A5N–2000	20.00	101	50	153	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
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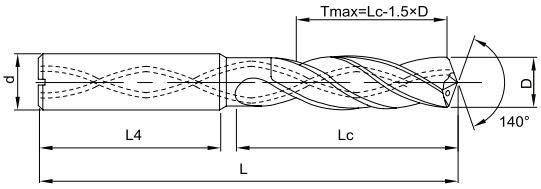
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A5C

铸铁加工5D内冷麻花钻

5D inner Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　HELICA　5D

标记说明请参考P8页　See page 8 for guidelines to icons

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A5C–0500	5.00	44	36	82	6	M6
D928–A5C–0600	6.00	44	36	82	6	
D928–A5C–0680	6.80	53	36	91	8	M8
D928–A5C–0700	7.00	53	36	91	8	M8X1
D928–A5C–0800	8.00	53	36	91	8	
D928–A5C–0850	8.50	61	40	103	10	M10
D928–A5C–0900	9.00	61	40	103	10	M10X1
D928–A5C–1000	10.00	61	40	103	10	
D928–A5C–1025	10.25	71	45	118	12	M12
D928–A5C–1050	10.50	71	45	118	12	M12X1.5
D928–A5C–1100	11.00	71	45	118	12	
D928–A5C–1200	12.00	71	45	118	12	M14
D928–A5C–1250	12.50	77	45	124	14	M14X1.5
D928–A5C–1300	13.00	77	45	124	14	
D928–A5C–1400	14.00	77	45	124	14	M16

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
> 3—6	+0.004/+0.016	0.000/–0.008
> 6—10	+0.006/+0.021	0.000/–0.009
> 10—18	+0.007/+0.025	0.000/–0.011
> 18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎	○	○	

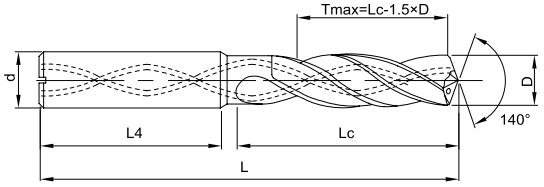
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D928–A5C

铸铁加工5D内冷麻花钻

5D inner Cooling Twist Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth





标记说明请参考P8页 See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(m7)	Lc	L4	L	d(h6)	螺纹尺寸 Screw Thread Dim
D928–A5C–1450	14.50	83	48	133	16	M16X1.5
D928–A5C–1500	15.00	83	48	133	16	
D928–A5C–1600	16.00	83	48	133	16	
D928–A5C–1700	17.00	93	48	143	18	
D928–A5C–1800	18.00	93	48	143	18	
D928–A5C–1900	19.00	101	50	153	20	
D928–A5C–2000	20.00	101	50	153	20	

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	+0.002/+0.012	0.000/–0.006
>3—6	+0.004/+0.016	0.000/–0.008
>6—10	+0.006/+0.021	0.000/–0.009
>10—18	+0.007/+0.025	0.000/–0.011
>18—20	+0.008/+0.029	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material								
P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
○				◎	◎	○	○	

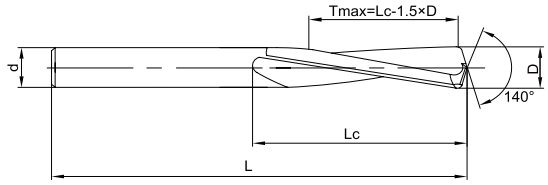
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P587

D998–Y3N

高硬钢加工3D外冷麻花钻

3D External Cooling Twist Drills for Hardened Steel



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK h6 | AlTiN nano | 3D

标记说明请参考P8页　See page 8 for guidelines to icons

订货号 Ordering code	D(h7)	Lc	L	d(h6)
D998–Y3N–0400	4.0	22	55	4
D998–Y3N–0500	5.0	26	62	5
D998–Y3N–0600	6.0	28	66	6
D998–Y3N–0700	7.0	34	74	7
D998–Y3N–0800	8.0	37	79	8
D998–Y3N–0900	9.0	40	84	9
D998–Y3N–1000	10.0	43	89	10
D998–Y3N–1100	11.0	47	95	11
D998–Y3N–1200	12.0	51	102	12
D998–Y3N–1300	13.0	51	102	13
D998–Y3N–1400	14.0	54	107	14
D998–Y3N–1500	15.0	56	111	15
D998–Y3N–1600	16.0	58	115	16

尺寸范围 nominal size range	D(m7)	d(h6)
≥2—3	0.000/–0.010	0.000/–0.006
> 3—6	0.000/–0.012	0.000/–0.008
> 6—10	0.000/–0.015	0.000/–0.009
> 10—18	0.000/–0.018	0.000/–0.011
> 18—20	0.000/–0.021	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material							
P			M	K		H	
1234	5	6	123	12	3	1	2
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	淬硬钢 (45–55HRC) Hardened Steels (45–55HRC)	淬硬钢 (55–60HRC) Hardened Steels (55–60HRC)
						◎	○

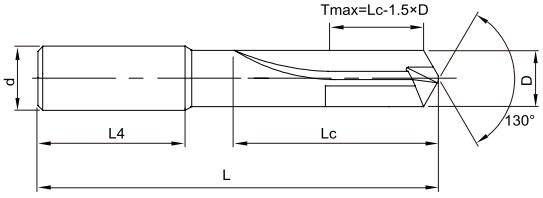
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P589

D713–A5N

铸铁加工5D外冷直槽钻

5D External Cooling Straight Fluted Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(k6)	Lc	L4	L	d(h6)
D713–A5N–0400	4.00	36	36	74	6
D713–A5N–0420	4.20	36	36	74	6
D713–A5N–0500	5.00	44	36	82	6
D713–A5N–0600	6.00	44	36	82	6
D713–A5N–0680	6.80	53	36	91	8
D713–A5N–0700	7.00	53	36	91	8
D713–A5N–0800	8.00	53	36	91	8
D713–A5N–0850	8.50	61	40	103	10
D713–A5N–0900	9.00	61	40	103	10
D713–A5N–1000	10.00	61	40	103	10
D713–A5N–1025	10.25	71	45	118	12
D713–A5N–1100	11.00	71	45	118	12
D713–A5N–1200	12.00	71	45	118	12

尺寸范围 nominal size range	D(k6)	d(h6)
≥2—3	+0.006/+0.000	0.000/–0.006
>3—6	+0.009/+0.001	0.000/–0.008
>6—10	+0.010/+0.001	0.000/–0.009
>10—18	+0.012/+0.001	0.000/–0.011
>18—20	+0.015/+0.002	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
				◎	◎		◎	

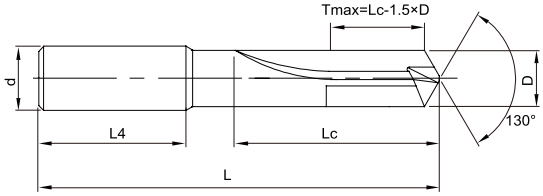
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P590

D713–A5N

铸铁加工5D外冷直槽钻

5D External Cooling Straight Fluted Drills for Cast Iron



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　TiAlN　5D

标记说明请参考P8页　See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(k6)	Lc	L4	L	d(h6)
D713–A5N–1300	13.00	77	45	124	14
D713–A5N–1400	14.00	77	45	124	14
D713–A5N–1500	15.00	83	48	133	16
D713–A5N–1550	15.50	83	48	133	16
D713–A5N–1600	16.00	83	48	133	16
D713–A5N–1700	17.00	93	48	143	18
D713–A5N–1750	17.50	93	48	143	18
D713–A5N–1800	18.00	93	48	143	18
D713–A5N–1950	19.50	101	50	153	20
D713–A5N–2000	20.00	101	50	153	20

尺寸范围 nominal size range	D(k6)	d(h6)
≥2—3	+0.006/+0.000	0.000/–0.006
> 3—6	+0.009/+0.001	0.000/–0.008
> 6—10	+0.010/+0.001	0.000/–0.009
> 10—18	+0.012/+0.001	0.000/–0.011
> 18—20	+0.015/+0.002	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
				◎	◎		◎	

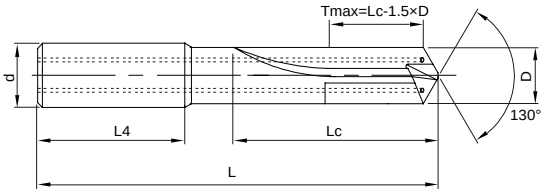
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P590

D713–A5C

铸铁加工5D内冷直槽钻

5D Inner Cooling Straight Fluted Drills for Cast Iron



Tmax –推荐最大钻深 Recommended Maximum Depth



SHANK DIN 6535HA | TiAlN | 5D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D(k6)	Lc	L4	L	d(h6)
D713–A5C–0400	4.00	36	36	74	6
D713–A5C–0420	4.20	36	36	74	6
D713–A5C–0500	5.00	44	36	82	6
D713–A5C–0600	6.00	44	36	82	6
D713–A5C–0680	6.80	53	36	91	8
D713–A5C–0700	7.00	53	36	91	8
D713–A5C–0800	8.00	53	36	91	8
D713–A5C–0850	8.50	61	40	103	10
D713–A5C–0900	9.00	61	40	103	10
D713–A5C–1000	10.00	61	40	103	10
D713–A5C–1025	10.25	71	45	118	12
D713–A5C–1100	11.00	71	45	118	12
D713–A5C–1200	12.00	71	45	118	12

尺寸范围 nominal size range	D(k6)	d(h6)
≥2—3	+0.006/+0.000	0.000/–0.006
>3—6	+0.009/+0.001	0.000/–0.008
>6—10	+0.010/+0.001	0.000/–0.009
>10—18	+0.012/+0.001	0.000/–0.011
>18—20	+0.015/+0.002	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
				◎	◎		◎	

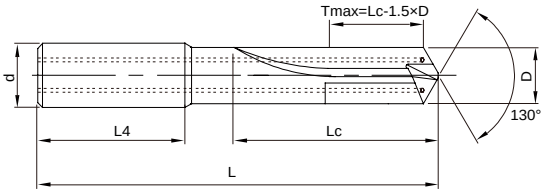
◎ 最适合 Most Suitable ○ 适合Suitable

推荐切削参数 Cutting Parameters ※P590

D713–A5C

铸铁加工5D内冷直槽钻

5D Inner Cooling Straight Fluted Drills for Cast Iron



Tmax –推荐最大钻深　Recommended Maximum Depth



SHANK DIN 6535HA　TiAlN　5D

标记说明请参考P8页　See page 8 for guidelines to icons

》续前 continue

订货号 Ordering code	D(k6)	Lc	L4	L	d(h6)
D713–A5C–1300	13.00	77	45	124	14
D713–A5C–1400	14.00	77	45	124	14
D713–A5C–1500	15.00	83	48	133	16
D713–A5C–1550	15.50	83	48	133	16
D713–A5C–1600	16.00	83	48	133	16
D713–A5C–1700	17.00	93	48	143	18
D713–A5C–1750	17.50	93	48	143	18
D713–A5C–1800	18.00	93	48	143	18
D713–A5C–1950	19.50	101	50	153	20
D713–A5C–2000	20.00	101	50	153	20

尺寸范围 nominal size range	D(k6)	d(h6)
≥2—3	+0.006/+0.000	0.000/–0.006
>3—6	+0.009/+0.001	0.000/–0.008
>6—10	+0.010/+0.001	0.000/–0.009
>10—18	+0.012/+0.001	0.000/–0.011
>18—20	+0.015/+0.002	0.000/–0.013

单位unit (mm)

工件材料 Workpiece Material

P			M	K		N		
1234	5	6	123	12	3	12	3	4
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢、工具钢 (35–48HRC) Alloy Steel,Tool Steel(35–48HRC)	PH与铁素体/马氏体钢 (<35HRC) PH,Ferritic,Martensitic Steel (<35HRC)	不锈钢 Stainless Steel	灰铸铁、球墨铸铁 (<32HRC) Grey Cast Iron, Nodular Cast Iron(<32HRC)	高合金铸铁 (35–45HRC) High–alloy Cast Iron(35–45HRC)	锻造铝合金、铸造铝合金 (Si≤12%) Wrought Aluminium Alloys,Cast Aluminium Alloys (Si≤12%)	铸造铝合金 (Si>12%) Cast Aluminium Alloys (Si>12%)	铜合金 (<200HB) Copper Alloys (<200HB)
				◎	◎		◎	

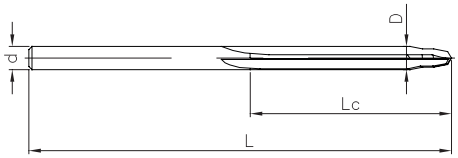
◎ 最适合 Most Suitable　○ 适合Suitable

推荐切削参数 Cutting Parameters ※P590

D612–Y3N

4刃匕首钻

4 Flute, Triple–angle drill





SHANK h6 | U-DIA | 3D

标记说明请参考P8页 See page 8 for guidelines to icons

订货号 Ordering code	D	Lc	L	d
D612–Y3N–0249	2.49	15	65	2.49
D612–Y3N–0326	3.26	20	65	3.26
D612–Y3N–0483	4.83	32	75	4.83
D612–Y3N–0600	6.00	32	75	6.00
D612–Y3N–0635	6.35	32	75	6.35

单位unit (mm)

工件材料 Workpiece Material					
P		M	N		
1234	5	123	123	4	5
碳钢、合金钢 (<35HRC) Carbon Steel,Alloy Steel(<35HRC)	合金钢 (48HRC以下) Alloy Steel (48HRC以下)	不锈钢 Stainless Steel	铝合金 Aluminium Alloys	铜合金 Copper Alloys	复合材料、碳纤维、玻璃纤维 Composite Material，CFRP，GFRP
					◎

◎ 最适合 Most Suitable ○ 适合Suitable

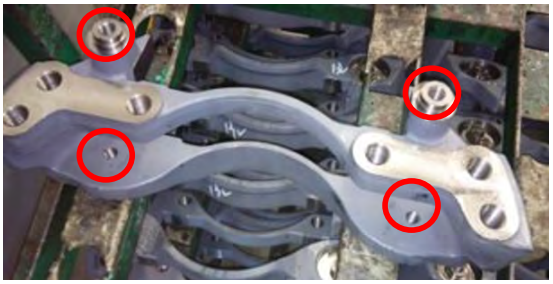
推荐切削参数 Cutting Parameters ※P591

D938

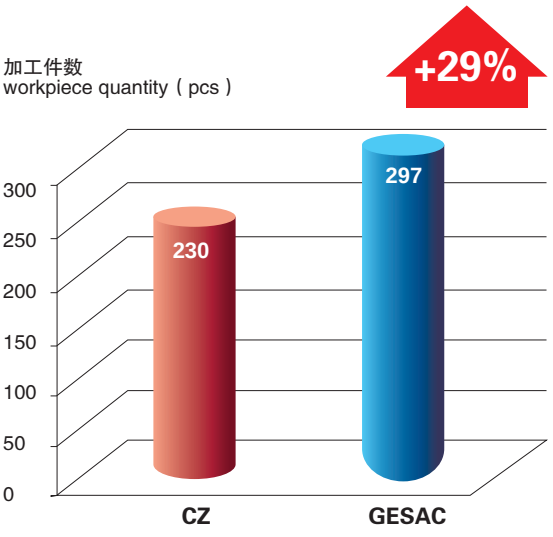
案例一：D938加工制动器托架螺纹预孔

Case 1: D938 Twist Drills for Drilling Brake Bracket Holes of Threading

刀具型号 Type	D938–A3N–1200
刀具规格 Size	D12*55*102*d12
加工位置 Cutting Path	制动器托架螺纹预孔 Brake Bracket
工件材料 Workpiece	QT600（190–230HB）
钻削参数 Feed Rate	Vc=83m/min fn =0.19mm/rev F =420mm/min 孔深ap=4*30mm
冷却方式 Cooling Method	外冷External Cooling
加工设备 Machine	现代起亚 VX500 HYUNDAI KIA VX500
寿命状况 Tool Life	297pcs（1188孔hole） 我司刀具稳定在290–300件,与CZ公司刀具相比寿命提高60pcs（+29%）。 D938 series drills life is 29% longer than CZ company tool.



红色为加工部位
red range is cutting path

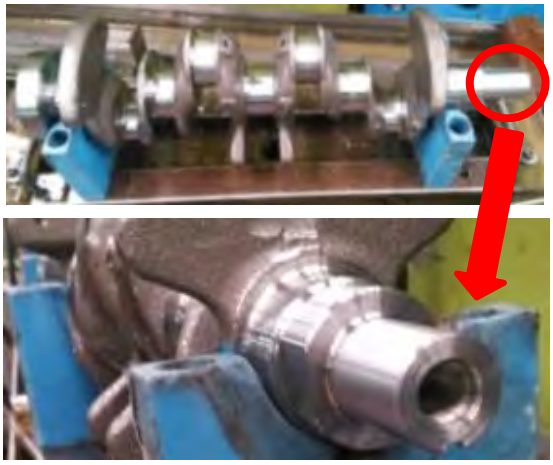


D938

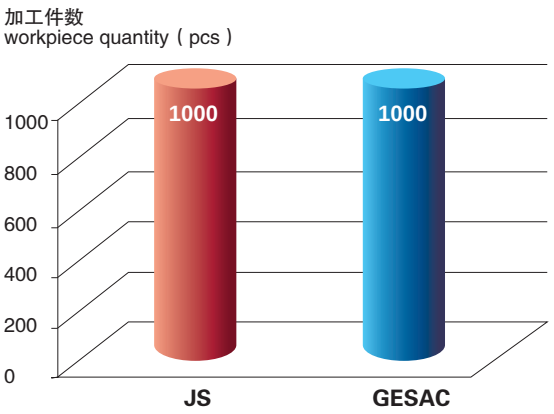
案例二：D938加工曲轴小头端孔

Case 2: D938 Twist Drills for Drilling Engine Crankshaft Hole in Flank

刀具型号 Type	D938–A5C–1280
刀具规格 Size	D12.8*77*124*d14
加工位置 Cutting Path	曲轴小头端孔 Engine Crankshaft Hole in Flank
工件材料 Workpiece	40# (150–190HB)
钻削参数 Cutting Speed	Vc=60m/min fn =0.20mm/rev F =300mm/min 孔深ap=50mm
冷却方式 Cooling Method	内冷 Internal Cooling
加工设备 Machine	沈阳专机 Custom–made Machine
寿命状况 Tool Life	1000pcs (1000孔hole) 刀具性能与知名日系品牌JS公司产品性能相当。 GESAC shows almost the same performance with JS company tool, and meet customer demand.



红色为加工部位
red range is cutting path



推荐切削参数
Recommended Cutting Data

D101/D102/D103系列NC定心钻
D101/D102/D103 NC Centre Drills

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)			
		外冷	内冷	Φ4	Φ6	Φ8	Φ10
P	低碳钢，长切屑 (<125HB)	130–100–60	–	0.12–0.15–0.18	0.14–0.17–0.20	0.16–0.20–0.26	0.18–0.24–0.3
	低碳钢，短切屑，易切钢 (<125HB)	120–100–60	–	0.10–0.14–0.18	0.14–0.16–0.20	0.16–0.20–0.24	0.18–0.24–0.3
	高碳钢及中碳钢 (<25HRC)	110–80–60	–	0.10–0.13–0.16	0.12–0.15–0.18	0.14–0.18–0.22	0.16–0.20–0.24
	合金钢，工具钢 (<35HRC)	110–80–60	–	0.10–0.13–0.16	0.12–0.15–0.18	0.14–0.18–0.22	0.16–0.20–0.24
	合金钢，工具钢 (35–48HRC)	100–80–60	–	0.10–0.12–0.16	0.12–0.14–0.18	0.14–0.16–0.20	0.16–0.20–0.24
	PH与铁素体，马氏体钢 (<35HRC)	100–80–60	–	0.10–0.12–0.16	0.12–0.14–0.18	0.14–0.16–0.20	0.16–0.20–0.24
K	灰铸铁 (<32HRC)	140–120–60	–	0.12–0.20–0.26	0.17–0.26–0.32	0.20–0.32–0.40	0.25–0.30–0.36
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	130–105–60	–	0.12–0.18–0.24	0.15–0.20–0.27	0.17–0.22–0.30	0.20–0.26–0.32
	难加工的高合金铸铁，球墨铸铁 (<45HRC)	120–90–60	–	0.10–0.16–0.22	0.10–0.13–0.16	0.13–0.17–0.21	0.15–0.20–0.26
N	锻造铝合金(Si<12%)	150–120–60	–	0.12–0.20–0.26	0.17–0.26–0.32	0.20–0.32–0.40	0.25–0.30–0.36
	铸造铝合金(Si<12%)	150–120–60	–	0.12–0.18–0.24	0.15–0.20–0.27	0.17–0.22–0.30	0.20–0.26–0.32
	铸造铝合金(Si>12%)	150–120–60	–	0.10–0.13–0.16	0.12–0.15–0.18	0.14–0.18–0.22	0.16–0.20–0.24
	铜，铜合金 (<200HB)	150–120–60	–	0.10–0.12–0.16	0.12–0.14–0.18	0.14–0.16–0.20	0.16–0.20–0.24

推荐切削参数
Recommended Cutting Data

D101/D102/D103系列NC定心钻
D101/D102/D103 NC Centre Drills

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)			
		外冷	内冷	Φ12	Φ14	Φ16	Φ20
P	低碳钢，长切屑 (<125HB)	130–100–60	–	0.20–0.26–0.32	0.24–0.30–0.35	0.28–0.34–0.4	0.32–0.38–0.45
	低碳钢，短切屑，易切钢 (<125HB)	120–100–60	–	0.20–0.26–0.32	0.24–0.28–0.34	0.28–0.34–0.4	0.32–0.38–0.45
	高碳钢及中碳钢 (<25HRC)	110–80–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40
	合金钢，工具钢 (<35HRC)	110–80–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40
	合金钢，工具钢 (35–48HRC)	100–80–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40
	PH与铁素体，马氏体钢 (<35HRC)	100–80–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40
K	灰铸铁 (<32HRC)	140–120–60	–	0.26–0.32–0.38	0.28–0.32–0.40	0.30–0.36–0.42	0.32–0.38–0.44
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	130–105–60	–	0.22–0.28–0.34	0.24–0.30–0.36	0.26–0.32–0.38	0.30–0.36–0.42
	难加工的高合金铸铁，球墨铸铁(<45HRC)	120–90–60	–	0.17–0.22–0.28	0.19–0.26–0.31	0.20–0.27–0.33	0.28–0.29–0.35
N	锻造铝合金(Si<12%)	150–120–60	–	0.26–0.32–0.38	0.28–0.32–0.40	0.30–0.36–0.42	0.32–0.38–0.44
	铸造铝合金(Si<12%)	150–120–60	–	0.22–0.28–0.34	0.24–0.30–0.36	0.26–0.32–0.38	0.30–0.36–0.42
	铸造铝合金(Si>12%)	150–120–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40
	铜，铜合金 (<200HB)	150–120–60	–	0.18–0.24–0.30	0.20–0.26–0.30	0.22–0.28–0.32	0.26–0.32–0.40

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D918通用加工麻花钻
D918 Twist Drills for General Purpose

	工件材料 Workpiece Material	切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ3	Φ4	Φ6	Φ8	Φ10
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	高碳钢及中碳钢 (<25HRC)	90–70–45	120–80–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	合金钢，工具钢 (<35HRC)	90–70–45	110–80–50	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	合金钢，工具钢 (35–48HRC)	80–60–40	90–60–40	0.09–0.12–0.14	0.10–0.14–0.17	0.13–0.17–0.22	0.17–0.23–0.29	0.21–0.28–0.35
	PH与铁素体，马氏体钢 (<35HRC)	70–50–30	80–50–30	0.09–0.12–0.14	0.10–0.14–0.17	0.13–0.17–0.22	0.17–0.23–0.29	0.21–0.28–0.35
M	奥氏体不锈钢 (130– 200HB)	–	50–40–20	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.12–0.14	0.08–0.13–0.18	0.09–0.15–0.20
	高强度的奥氏体和铸造不锈钢 (<25HRC)	–	55–40–30	0.03–0.06–0.08	0.04–0.08–0.10	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.11–0.14
	双相不锈钢 (<30HRC)	–	55–40–20	0.03–0.06–0.08	0.04–0.08–0.10	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.11–0.14
K	灰铸铁 (<32HRC)	100–80–60	140–120–60	0.13–0.17–0.21	0.15–0.20–0.26	0.17–0.26–0.32	0.20–0.32–0.40	0.25–0.36–0.42
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	140–120–60	0.11–0.15–0.18	0.13–0.18–0.22	0.15–0.23–0.27	0.17–0.26–0.38	0.22–0.28–0.38
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.06–0.09–0.11	0.08–0.10–0.13	0.10–0.13–0.16	0.13–0.17–0.21	0.15–0.20–0.26
N	锻造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si>12%)	–	270–180–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铜，铜合金 (<200HB)	–	180–135–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38

推荐切削参数
Recommended Cutting Data

D918通用加工麻花钻
D918 Twist Drills for General Purpose

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ12	Φ14	Φ16	Φ18	Φ20
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	高碳钢及中碳钢 (<25HRC)	90–70–45	120–80–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	合金钢，工具钢 (<35HRC)	90–70–45	110–80–50	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	合金钢，工具钢 (35–48HRC)	80–60–40	90–60–40	0.22–0.30–0.37	0.26–0.35–0.41	0.28–0.37–0.44	0.31–0.38–0.46	0.31–0.39–0.47
	PH与铁素体，马氏体钢 (<35HRC)	70–50–30	80–50–30	0.22–0.30–0.37	0.26–0.35–0.41	0.28–0.37–0.44	0.31–0.38–0.46	0.31–0.39–0.47
M	奥氏体不锈钢 (130– 200HB)	–	50–40–20	0.10–0.17–0.22	0.11–0.18–0.24	0.12–0.20–0.24	0.13–0.22–0.26	0.14–0.24–0.28
	高强度的奥氏体和铸造不锈钢 (<25HRC)	–	55–40–30	0.08–0.13–0.16	0.09–0.13–0.18	0.10–0.14–0.18	0.10–0.14–0.20	0.12–0.16–0.22
	双相不锈钢 (<30HRC)	–	55–40–20	0.08–0.13–0.16	0.09–0.13–0.18	0.10–0.14–0.18	0.10–0.14–0.20	0.12–0.16–0.22
K	灰铸铁 (<32HRC)	100–80–60	140–120–60	0.26–0.38–0.46	0.28–0.40–0.50	0.30–0.42–0.52	0.32–0.44–0.54	0.36–0.48–0.56
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	140–120–60	0.22–0.34–0.42	0.24–0.35–0.44	0.26–0.40–0.48	0.30–0.40–0.46	0.34–0.43–0.50
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.17–0.22–0.28	0.19–0.26–0.31	0.20–0.27–0.33	0.23–0.28–0.34	0.23–0.29–0.35
N	锻造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si>12%)	–	270–180–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铜，铜合金 (<200HB)	–	180–135–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D938普通钢加工麻花钻
D938 Twist Drills for Steel

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ3	Φ4	Φ6	Φ8	Φ10
P	低碳钢，长切屑 (<125HB)	120–80–50	140–100–60	0.10–0.15–0.20	0.10–0.15–0.20	0.14–0.19–0.25	0.16–0.22–0.32	0.16–0.22–0.35
	低碳钢，短切屑，易切钢 (<125HB)	120–75–50	140–100–60	0.10–0.15–0.20	0.10–0.15–0.20	0.14–0.19–0.25	0.16–0.22–0.32	0.16–0.22–0.35
	高碳钢及中碳钢 (<25HRC)	120–70–45	120–80–60	0.10–0.15–0.20	0.10–0.15–0.20	0.14–0.19–0.25	0.16–0.22–0.30	0.16–0.22–0.32
	合金钢，工具钢 (<35HRC)	100–70–45	110–80–60	0.09–0.13–0.16	0.09–0.13–0.16	0.12–0.17–0.23	0.14–0.20–0.28	0.14–0.20–0.30
	合金钢，工具钢 (35–48HRC)	80–60–35	90–60–35	0.08–0.11–0.14	0.08–0.11–0.14	0.08–0.14–0.20	0.09–0.16–0.25	0.09–0.16–0.28
	PH与铁素体，马氏体钢 (<35HRC)	70–50–30	90–60–30	0.05–0.08–0.11	0.05–0.08–0.11	0.07–0.12–0.17	0.08–0.14–0.20	0.08–0.14–0.23
	高强度PH与铁素体，马氏体钢 (35–48HRC)	70–45–25	80–50–30	0.04–0.06–0.08	0.04–0.06–0.08	0.06–0.10–0.14	0.08–0.13–0.18	0.08–0.13–0.20
K	灰铸铁 (<32HRC)	140–100–60	160–120–60	0.13–0.17–0.20	0.15–0.20–0.23	0.17–0.25–0.30	0.20–0.27–0.35	0.23–0.30–0.40
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	120–80–60	140–100–60	0.11–0.15–0.18	0.13–0.17–0.20	0.15–0.20–0.25	0.17–0.25–0.32	0.20–0.28–0.36
	难加工的高合金铸铁，球墨铸铁 (<45HRC)	100–70–50	100–80–50	0.06–0.09–0.11	0.08–0.10–0.13	0.10–0.13–0.16	0.12–0.16–0.20	0.14–0.20–0.26

推荐切削参数
Recommended Cutting Data

D938普通钢加工麻花钻
D938 Twist Drills for Steel

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ12	Φ14	Φ16	Φ18	Φ20
P	低碳钢，长切屑 (<125HB)	120–80–50	140–100–60	0.18–0.28–0.40	0.22–0.32–0.45	0.22–0.32–0.45	0.25–0.38–0.50	0.25–0.38–0.50
	低碳钢，短切屑，易切钢 (<125HB)	120–75–50	140–100–60	0.18–0.28–0.40	0.22–0.32–0.45	0.22–0.32–0.45	0.25–0.38–0.50	0.25–0.38–0.50
	高碳钢及中碳钢 (<25HRC)	120–70–45	120–80–60	0.18–0.28–0.38	0.22–0.32–0.45	0.22–0.32–0.45	0.25–0.38–0.50	0.25–0.38–0.50
	合金钢，工具钢 (<35HRC)	100–70–45	110–80–60	0.15–0.23–0.34	0.18–0.25–0.38	0.18–0.25–0.38	0.20–0.30–0.40	0.20–0.30–0.40
	合金钢，工具钢 (35–48HRC)	80–60–35	90–60–35	0.11–0.19–0.30	0.12–0.22–0.32	0.12–0.22–0.32	0.14–0.24–0.34	0.14–0.24–0.34
	PH与铁素体，马氏体钢 (<35HRC)	70–50–30	90–60–30	0.10–0.18–0.28	0.12–0.20–0.30	0.12–0.20–0.30	0.14–0.24–0.32	0.14–0.24–0.32
	高强度PH与铁素体，马氏体钢 (35–48HRC)	70–45–25	80–50–30	0.10–0.18–0.28	0.12–0.20–0.30	0.12–0.20–0.30	0.14–0.24–0.32	0.14–0.24–0.32
K	灰铸铁 (<32HRC)	140–100–60	160–120–60	0.25–0.33–0.45	0.28–0.36–0.48	0.30–0.40–0.50	0.32–0.42–0.52	0.35–0.45–0.55
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	120–80–60	140–100–60	0.22–0.30–0.42	0.24–0.33–0.45	0.25–0.35–0.48	0.28–0.38–0.48	0.30–0.40–0.50
	难加工的高合金铸铁，球墨铸铁 (<45HRC)	100–70–50	100–80–50	0.16–0.22–0.28	0.18–0.24–0.30	0.20–0.26–0.32	0.22–0.28–0.34	0.23–0.28–0.35

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D968不锈钢加工麻花钻
D968 Twist Drills for Stainless Steel

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ3	Φ4	Φ6	Φ8	Φ10
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	高碳钢及中碳钢 (<25HRC)	90–70–45	120–80–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	合金钢，工具钢 (<35HRC)	90–70–45	110–80–50	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
M	奥氏体不锈钢 (130– 200HB)	40–30–20	80–60–40	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.12–0.14	0.08–0.13–0.18	0.09–0.15–0.20
	高强度的奥氏体和铸造不锈钢 (<25HRC)	40–30–20	80–60–40	0.03–0.06–0.08	0.04–0.08–0.10	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.11–0.14
	双相不锈钢 (<30HRC)	35–25–20	60–45–30	0.03–0.06–0.08	0.04–0.08–0.10	0.05–0.08–0.10	0.06–0.10–0.12	0.07–0.11–0.14
N	锻造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si>12%)	–	270–180–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铜，铜合金 (<200HB)	–	180–135–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
S	铁基高温合金 (160–260HB)	–	50–40–25	0.03–0.05–0.08	0.04–0.07–0.10	0.05–0.09–0.10	0.06–0.10–0.12	0.07–0.12–0.14
	钴基高温合金 (250–450HB)	–	50–40–25	0.03–0.05–0.08	0.04–0.07–0.10	0.05–0.09–0.10	0.06–0.10–0.12	0.07–0.12–0.14
	镍基高温合金 (160–450HB)	–	50–40–25	0.03–0.05–0.07	0.04–0.07–0.09	0.05–0.09–0.10	0.06–0.10–0.12	0.07–0.12–0.14
	钛及钛合金 (300–400HB)	–	45–35–20	0.03–0.04–0.06	0.04–0.06–0.08	0.05–0.08–0.10	0.06–0.09–0.11	0.07–0.10–0.12

推荐切削参数
Recommended Cutting Data

D968不锈钢加工麻花钻
D968 Twist Drills for Stainless Steel

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ12	Φ14	Φ16	Φ18	Φ20
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	高碳钢及中碳钢 (<25HRC)	90–70–45	120–80–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	合金钢，工具钢 (<35HRC)	90–70–45	110–80–50	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
M	奥氏体不锈钢 (130– 200HB)	40–30–20	80–60–40	0.10–0.17–0.22	0.11–0.18–0.24	0.12–0.20–0.24	0.13–0.22–0.26	0.14–0.24–0.28
	高强度的奥氏体和铸造不锈钢 (<25HRC)	40–30–20	80–60–40	0.08–0.13–0.16	0.09–0.13–0.18	0.10–0.14–0.18	0.10–0.14–0.20	0.12–0.16–0.22
	双相不锈钢 (<30HRC)	35–25–20	60–45–30	0.08–0.13–0.16	0.09–0.13–0.18	0.10–0.14–0.18	0.10–0.14–0.20	0.12–0.16–0.22
N	锻造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si>12%)	–	270–180–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铜，铜合金 (<200HB)	–	180–135–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
S	铁基高温合金 (160–260HB)	–	50–40–25	0.08–0.14–0.16	0.09–0.15–0.18	0.10–0.17–0.18	0.10–0.16–0.20	0.12–0.18–0.22
	钴基高温合金 (250–450HB)	–	50–40–25	0.08–0.14–0.16	0.09–0.15–0.18	0.10–0.17–0.18	0.10–0.16–0.20	0.12–0.18–0.22
	镍基高温合金 (160–450HB)	–	50–40–25	0.08–0.14–0.16	0.09–0.15–0.18	0.10–0.17–0.18	0.10–0.16–0.20	0.12–0.18–0.22
	钛及钛合金 (300–400HB)	–	45–35–20	0.08–0.12–0.14	0.09–0.13–0.16	0.10–0.14–0.16	0.10–0.15–0.18	0.12–0.16–0.20

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D928铸铁加工麻花钻
D928 Twist Drills for Cast Iron

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ3	Φ4	Φ6	Φ8	Φ10
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	高碳钢及中碳钢 (<25HRC)	90–70–45	100–80–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
	合金钢，工具钢 (<35HRC)	90–70–45	100–80–60	0.09–0.13–0.16	0.11–0.15–0.19	0.14–0.19–0.23	0.19–0.25–0.31	0.23–0.30–0.38
K	灰铸铁 (<32HRC)	100–80–60	160–140–60	0.13–0.17–0.21	0.15–0.20–0.26	0.17–0.26–0.32	0.20–0.32–0.40	0.25–0.36–0.42
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	140–120–60	0.11–0.15–0.18	0.13–0.18–0.22	0.15–0.23–0.27	0.17–0.26–0.38	0.22–0.28–0.38
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.06–0.09–0.11	0.08–0.10–0.13	0.10–0.13–0.16	0.13–0.17–0.21	0.15–0.20–0.26
N	锻造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si<12%)	–	315–230–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38
	铸造铝合金(Si>12%)	–	270–180–90	0.06–0.09–0.11	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38

推荐切削参数
Recommended Cutting Data

D928铸铁加工麻花钻
D928 Twist Drills for Cast Iron

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ12	Φ14	Φ16	Φ18	Φ20
P	低碳钢，长切屑 (<125HB)	100–80–50	140–100–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	低碳钢，短切屑，易切钢 (<125HB)	100–75–50	140–100–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	高碳钢及中碳钢 (<25HRC)	90–70–45	100–80–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
	合金钢，工具钢 (<35HRC)	90–70–45	100–80–60	0.24–0.33–0.41	0.28–0.38–0.45	0.30–0.42–0.50	0.33–0.42–0.50	0.34–0.43–0.51
K	灰铸铁 (<32HRC)	100–80–60	160–140–60	0.26–0.38–0.46	0.28–0.40–0.50	0.30–0.42–0.52	0.32–0.44–0.54	0.36–0.48–0.56
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	140–120–60	0.22–0.34–0.42	0.24–0.35–0.44	0.26–0.40–0.48	0.30–0.40–0.46	0.34–0.43–0.50
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.17–0.22–0.28	0.19–0.26–0.31	0.20–0.27–0.33	0.23–0.28–0.34	0.23–0.29–0.35
N	锻造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si<12%)	–	315–230–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48
	铸造铝合金(Si>12%)	–	270–180–90	0.22–0.34–0.42	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D998高硬钢加工麻花钻
D998 Twist Drills for Hardened Steel

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ3	Φ4	Φ6	Φ8	Φ10
H	淬硬钢 (45–55HRC)	40–30–20	–	0.04–0.06–0.08	0.05–0.08–0.10	0.06–0.10–0.13	0.08–0.12–0.15	0.09–0.14–0.16
	淬硬钢 (55–60HRC)	30–20–15	–	0.03–0.05–0.07	0.03–0.06–0.08	0.04–0.08–0.12	0.06–0.10–0.13	0.08–0.12–0.15

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ12	Φ14	Φ16	–	–
H	淬硬钢 (45–55HRC)	40–30–20	–	0.10–0.15–0.17	0.10–0.16–0.20	0.10–0.16–0.20	–	–
	淬硬钢 (55–60HRC)	30–20–15	–	0.09–0.13–0.16	0.10–0.14–0.17	0.10–0.14–0.17	–	–

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刃尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

D713铸铁加工直槽钻
D713 Straight Flute Drills for Cast Iron

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ4	Φ6	Φ8	Φ10	Φ12
K	灰铸铁 (<32HRC)	100–80–60	140–110–60	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38	0.22–0.34–0.42
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	120–100–60	0.13–0.18–0.22	0.15–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.22–0.30–0.38
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.08–0.10–0.13	0.10–0.13–0.16	0.13–0.17–0.21	0.15–0.20–0.26	0.17–0.22–0.28
N	铸造铝合金 (Si>12%)	100–80–60	140–110–60	0.13–0.20–0.26	0.16–0.22–0.28	0.18–0.26–0.32	0.20–0.30–0.38	0.22–0.34–0.42

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)		进给量fn (mm/rev)				
		外冷	内冷	Φ14	Φ16	Φ18	Φ20	–
K	灰铸铁 (<32HRC)	100–80–60	140–110–60	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48	–
	中等加工难度的合金铸铁，球墨铸铁 (<28HRC)	100–80–60	120–100–60	0.24–0.32–0.40	0.26–0.32–0.40	0.28–0.36–0.42	0.30–0.38–0.46	–
	难加工的高合金铸铁，球墨铸铁(<45HRC)	90–70–60	100–90–60	0.19–0.26–0.31	0.20–0.27–0.33	0.23–0.28–0.34	0.23–0.29–0.35	–
N	铸造铝合金 (Si>12%)	100–80–60	140–110–60	0.24–0.36–0.44	0.28–0.38–0.46	0.32–0.40–0.48	0.34–0.42–0.48	–

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.此标准切削条件表适用于水溶性切削液;
The Recommended Cutting condition is suitable for apply water soluble.

4.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.

推荐切削参数
Recommended Cutting Data

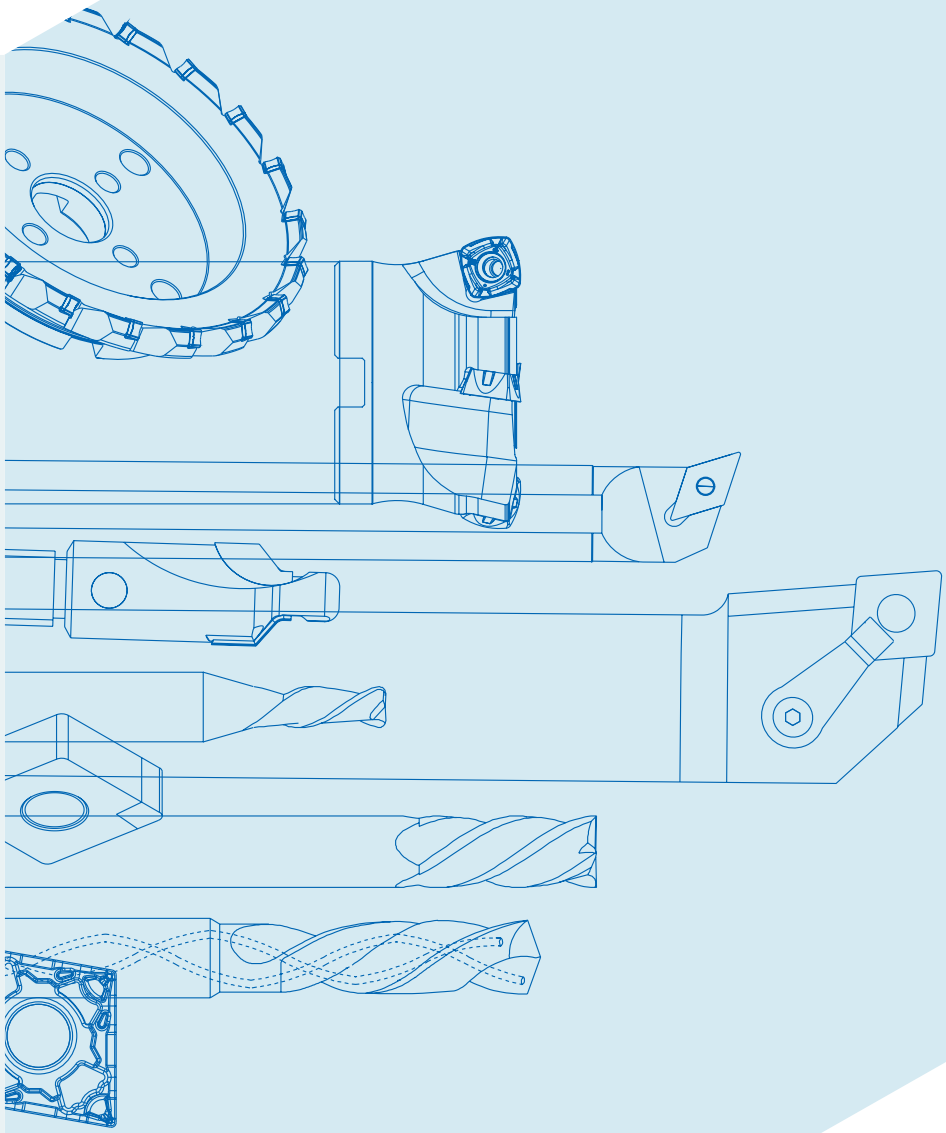
D612系列匕首钻
D612 Triple–angle Drill for Composite Material

工件材料 Workpiece Material		切削速度Vc Cutting Speed (m/min)	进给量fn (mm/rev)				
			ϕ2.49	ϕ3.26	ϕ4.83	ϕ6.00	ϕ6.35
N	CFRP	50–65–80	0.02–0.04–0.06	0.02–0.045–0.07	0.03–0.05–0.07	0.03–0.055–0.08	0.04–0.06–0.08

1.请使用刚性较高的机床，建议采用液压刀柄、热涨刀柄、带弹簧夹头的强力刀柄;
Make sure work piece and machine are stable and use a precision holder, Use hydraulic chucks, high quality collet chucks.

2.刀具安装时需确保钻头刀尖径向跳动小于0.02mm;
Make sure total indicated run–out(TIR) is less than 0.02mm.

3.对于表中没有的刀具刃径规格，请参照表中最接近的刃径规格选择切削参数，同时加工时请根据实际加工情况适当调整切削参数。
If the tool size is not in the table, Please refer to the table closest to the blade diameter size selection of cutting parameters, adjust cutting parameters according to actual working conditions during processing.



APPENDIX

附录

铣削加工的切削参数与通用计算公式
Cutting Parameters and General Formula

常用参数及其单位 Parameter and Unit					
D	铣刀直径 Diameter	(mm)	Fn	每转进给量 Feed per Revolution	(mm/rev)
ap	切削深度 Cutting Depth	(mm)	fz	每刃进给量 Feeding per Teeth	(mm/tooth)
ae	切削宽度 Cutting Width	(mm)	Z	刀刃数 Number of Teeth	
Vf	进给速度 Feed Rate	(mm/min)	n	主轴转速 Spindle Speed	(rev/min)
Vc	切削速度 Cutting Speed (工件长度+ 铣刀直径：l+D)	(m/min)	L	工作台总进给长度Length	(mm)
Q	金属切削率 Rate of Metal Removal	(cm^3/min)	Tc	加工时间Processing Time	(min)

通用计算公式 General Formula		
n	主轴转速 Spindle Speed	$n = \frac{Vc * 1000}{\pi * D}$ (rev/min)
Vc	切削速度 Cutting Speed	$Vc = \frac{\pi * D * n}{1000}$ (m/min)
Vf	进给速度 Feed Rate	$V_f = f_z * z * n$ (mm/min)
fz	每刃进给量 Feed per Teeth	$f_z = \frac{V_f}{z * n}$ (mm)
Q	金属切削率 Rate of Metal Removal	$Q = \frac{ae * ap * V_f}{1000}$ (cm^3/min)
Tc	加工时间Processing Time	$Tc = \frac{L}{V_f}$ (min)

工件材料表
Workpiece Material Table

材料组 ISO Material Group	MC GESAC	工件材料 Workpiece Material	含量 Carbon Content	抗拉强度 Tensile Strength N/mm²	布氏硬度 Brinell Hardness HB	洛氏硬度 Rockwell Hardness HRC
P 钢 Steels	P1	低碳钢，长切屑 Low–carbon Steels,Long Chipping.	C<0.25%	<530	<125	
	P2	低碳钢，短切屑，易切钢 Low–carbon Steels,Short Chipping,Free–cutting Steels	C<0.25%	<530	<125	
	P3	高碳钢及中碳钢 High–carbon Steels, Medium–carbon Steels.	C>0.25%	>530	<220	<25
	P4	合金钢，工具钢 Alloy Steels, Tool Steels.	C>0.25%	600–850	<330	<35
	P5	合金钢，工具钢 Alloy Steels,Tool Steels.	C>0.25%	850–1400	340–450	35–48
	P6	铁素体不锈钢，马氏体不锈钢，PH不锈钢 Ferritic Stainless Steels,Martensitic Stainless Steels,PH Stainless Steels.	C=(0–0.4)%	600–900	<330	<35
	P7	高强度铁素体不锈钢，马氏体不锈钢, PH 不锈钢， High–strength Ferritic Stainless Steels, Martensitic Stainless Steels,PH Stainless Steels.	C=(0.1–0.6)%	900–1350	330–450	35–48
M 不锈钢 Stainless Steels	M1	奥氏体不锈钢， Austenitic Stainless Steels.	C=(0.05–0.15)%	<600	130–200	
	M2	高强度的奥氏体和铸造不锈钢 High–Strength Austenitic Stainless Steels and Cast Stainless Steels.	C=(0.05–0.15)%	600–800	150–230	<25
	M3	双相不锈钢 Duplex Stainless Steels.	C=(0.05–0.20)%	<800	135–275	<30
K 铸铁 Cast Iron	K1	灰铸铁 Grey Cast Iron.		125–500	120–290	<32
	K2	中等加工难度的合金铸铁，球墨铸铁 Moderately Difficult Alloy Cast iron,Nodular Cast Iron.		<600	130–260	<28
	K3	难加工的高合金铸铁，球墨铸铁 Difficult High–alloy Cast Iron,Nodular Cast Iron.		>600	180–350	<43
N 有色金属 Non–ferrous Materials	N1	锻造铝合金 Wrought Aluminium Alloys.		<520	60–90	
	N2	铸造铝合金 Cast Aluminium Alloys.	Si≤12%	<350	70–100	
	N3	铸造铝合金 Cast Aluminium Alloys.	Si>12%	200–320	60–120	
	N4	铜，铜合金 Copper,Copper Alloys.		200–650	60–200	
	N5	石墨，复合材料 Graphite,CFK,CFRP Graphite,Composite Materials.		600–1500		
	N6	铝基复合材料(MMCs) GFK,CFK Aluminium–based Composite Materials.		<700	<210	
S 耐热合金、钛合金 Heat–resistant Alloys and Titanium Alloys	S1	铁基高温合金 Iron–based Heat–resistant Alloys.		500–1200	160–260	25–48
	S2	钴基高温合金 Cobalt–based Heat–resistant Alloys.		1000–1450	250–450	25–48
	S3	镍基高温合金 Nickel–based Heat–resistant Alloys.		600–1700	160–450	<48
	S4	钛及钛合金 Titanium and Titanium Alloys.		900–1600	300–400	33–48
H 高硬度材料 High Hardness Materials	H1	淬硬钢 Hardened Steels.				45–55
	H2	淬硬钢 Hardened Steels.				55–60
	H3	淬硬钢 Hardened Steels.				60–65
	H4	淬硬钢 Hardened Steels.				>65

工件材料牌号对照表

Workpiece Material Conversion Table

金鹭材料号 MC GESAC	中国	德国		日本	美国	法国	英国	欧洲
	GB	材料号	DIN	JIS	AISI/SAE	AFNOR	BS	EN
P1	15	1.0401	C 15	S 15 C	1015	C 12	080 M 15	C 15
P1	20;ML20	1.0402	C 22	S 22 C	1020	C 20	050 A 20	1 C 22
P1	15	1.1141	Ck 15	S 15 C	1015	XC 15	080 M 15	2 C 15
P1	10;ML08	1.0301	C 10	S 10 C	1010	XC 10	045 M 10	C 10
P1	20	1.1151	Ck 22	S 22 C	1023	XC 25	050 A 20	2 C 22
P2	Y15	1.0715	9 SMn 28/ 11 SMn 30	SUM 22	1213	S 250	230 M 07	11 SMn 28
P2	15	1.0038	R St 37–2/ S235 JRG2	SS 34	A 570 Gr. 36	E 24–2 NE	4260–40 C	S235 JR G 2
P2	Y15Pb	1.0718	9 SMnPb 28	SUM 22 L	12L13	S 250 Pb	—	11 SMnPb 28
P2	Y12;Y15	1.0721	10 S 20	—	1108	10 F 1	210 M 15	10 S 20
P2	Y13	1.0736	9 SMn 36/ 11 S Mn 37	SUM 25	1215	S 300	240 M 07	11 SMn 37
P2	—	1.0737	9 SMnPb 36/ 11 SMnPb 37	—	12L14	S 300 Pb SMnPb 36	—	11 SMnPb 37
P3	Q275	1.0144	St 44–3	SM 41 B	A 573 Gr. 70	Fe 430 D1 (2); E 28–4	4360–43 C	S 275 J2 G3 (4)
P3	35	1.0501	C 35	S 35 C	1035	CC 35	060 A 35	1 C 35
P3	45	1.0503	C 45	S 45 C	1045	CC 45	080 M 46	1 C 45
P3	ZG340–640;55	1.0535	C 55	S 55 C	1055	C 55	070 M 55	1 C 55
P3	60	1.0601	C 60	S 60 C– CSP	1060	AF 70 C 55	080 A 62	1 C 60
P3	Y35;Y30	1.0726	35 S 20	—	1140	35 MF 4	212 M 36	35 S 20
P3	60Si2CrA; 60Si2Mn	1.0961	60 SiCr 7	SUP 7	9262	60 SC 7	250 A 61	60 SiCr 8
P3	40Mn	1.1157	40 Mn 4	—	1039	35 M 5	150 M 36	—
P3	25;ML25	1.1158	Ck 25	S 25 C	1025	XC 25	070 M 26	2 C 25
P3	35Mn2	1.1167	36 Mn 5	SMn 438 (H)	1335	40 M 5	150 M 36	—
P3	30Mn2	1.1170	28 Mn 6	SCMn 1	1330	35 M 5	150 M 28	28 Mn 6
P3	—	1.1179	C 30 R	C 30 R (3 C 30)	—	C 30 R	C 30 R	C 30 R
P3	35Mn	1.1183	Cf 35	S 35 C	1035	XC 38 TS	060 A 35	C 35 G
P3	Ck45；45; Mn45Mn; ZG310–570	1.1191	Ck 45	S 45 C	1045	XC 42	080 M 46	2 C 45
P3	55	1.1203	Ck 55	S 55 C	1055	XC 55 H1	070 M 55	2 C 55

GB–中国国标Guo Biao，Chinses Standard
DIN–德国化学标准会German Institute for Standardization　JIS–日本工业标准Japanese Industrial Standards
AISI/SA–美国钢铁学会/美国汽车工程师协会American Iron and Steel Institute/Society of Automotive Engineer
BS–英国标准British Standards　EN–欧洲标准European Standards

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	GB	材料号	DIN	JIS	AISI/SAE	AFNOR	BS	EN
P3	50	1.1213	Cf 53	S 50 C	1050	XC 48 TS	060 A 57	C 53 G
P3	60Mn；60	1.1221	Ck 60	S 58 C	1060	XC 60	060 A 62	2 C 60
P3	—	1.1274	Ck 101	SUP_4	1095	XC 100	060 A 96	C 100 S
P3	T10	1.1545	C 105 W1	—	W 110	Y 105	B W 1 A	C 105 U
P3	CrV;9SiCr; Cr2;9Cr2	1.2067	100 Cr 6	—	L3	Y 100 C 6	B L 3	102 Cr 6
P3	CrWMo;CrWMn; 9CrWMn	1.2419	105 WCr 6	SKS 31	—	(107 WCr 13)	—	105 WCr 5
P3	5CrNiMo; 5CrW2Si	1.2542	45 WCrV 7	—	S1	45 WCr V 8	BS 1	45 WCrV 8
P3	5CrNiMo	1.2713	55 NiCrMoV 6	SKT 4	L6	55 NCDV 7	BH 224/5	55 NiCrMoV 7
P3	—	1.5415	15 Mo 3	STFA 12 –240	A 204 Gr. A	15 D3	1501	16 Mo 3
P3	—	1.5423	16 Mo 5	SBC 690	4520	—	1503–245–420	—
P3	—	1.5622	14 Ni 6	SL2N26	A 350 –LF 5	15 N 6	—	FeE 285 Ni 6
P3	—	1.6511	36 CrNiMo 4	—	9840	40 NCD 3	816 M 40	36 CrNiMo 4
P3	40CrNiMoA	1.6582	34 CrNiMo 6	SNCM 447	4340	35 NCD 6	817 M 40	34 CrNiMo 6
P3	—	1.6587	17 CrNiMo 6	SNCM 815	—	18 NCD 6	820 A 16	17 CrNiMo 7
P3	15Cr	1.7015	15 Cr 3	SCr 415 H	5015	12 C 3	523 M15	15 Cr 2
P3	35Cr	1.7033	34 Cr 4	SCr 430 H	5130 H	32 C 4	530 A 32	34 Cr 4 KD
P3	40Cr	1.7045	42 Cr 4	SCr 440	5140	42 C 4 TS	530 A 40	40 NiCrMo 3
P3	18CrMn	1.7131	16 MnCr 5	SCR 415	5115	16 MC 5	527 M 17	16 MnCr 5 KD
P3	20CrMn; 50CrMn	1.7176	55 Cr 3	SUP 9 (A)	5155	55 C 3	527 A 60	55 Cr 3
P3	30CrMn;	1.7218	25 CrMo 4	SCM 420	4130	25 CD 4	708 A 25	25 CrMo 4 KD
P3	40CrMoA	1.7223	41 CrMo 4	SCM 440	4142	42 CD 4 TS	708 M 40	41 CrMo 4
P3	42CrMo; 42CrMnMo	1.7225	42 CrMo 4	SCM 440 H	4140	42 CD 4	708 A 42	42 CrMo 4
P3	15CrMo	1.7262	15 CrMo 5	SCM 415 H	—	12 CD 4	—	—
P3	12CrMo	1.7335	13 CrMo 4 4	SFVA F 12	A182 –F11	15 CD 4.05	1501–621	13 CrMo 4–5
P3	—	1.7361	32 CrMo 12	—	—	30 CD 12	722 M 24	32 CrMo 12
P3	—	1.7715	—	—	—	—	1503–660–460	14 MoV 6–3

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	GB	材料号	DIN	JIS	AISI/SAE	AFNOR	BS	EN
P3	50CrVA	1.8159	—	SUP 10	6150	50 CV 4	735 A 50	51 CrV 4
P3	—	1.0570	St52–3	SM490A，SM490B，SM490C	—	E36–3	4360 50 B	—
P3	—	1.0841	St52–3	—	—	20MC5	150M19	—
P3	—	1.8900	StE380	—	1140	—	4360 55 E	—
P3	—	1.7035	41Cr4	SCr440(H)	5140	42C4	530M40	24
P3	35CrMo	1.7220	34CrMo4	SCm432 SCCrM3	4137 4135	35CD4	708A37	—
P3	—	1.7380	Mo910	—	ASTM A182 F.22	12CD9 12CD10	1501–622 Cr31,45	—
P3	20Mn	1.0469	21 Mn 4	—	—	—	—	—
P3	60Mn；60	1.1221	Ck 60	S 58 C	1060	XC 60	060 A 62	2 C 60
P3	—	1.1274	Ck 101	SUP_4	1095	XC 100	060 A 96	C 100 S
P3	T10	1.1545	C 105 W1	—	—	—	—	C 105 U
P3	CrV;9SiCr; Cr2;9Cr2	1.2067	100 Cr 6	—	L3	Y 100 C 6	B L 3	102 Cr 6
P3	20CrH	1.7027	20 Cr 4	—	—	—	—	—
P3	30Cr	1.7030	28 Cr 4	—	5130	30 CD 4	530 A 30	28 Cr 4
P3	CrWMo;CrWMn; 9CrWMn	1.2419	105 WCr 6	SKS 31	—	(107 WCr 13)	—	105 WCr 5
P3	5CrNiMo; 5CrW2Si	1.2542	45 WCrV 7	—	S1	45 WCr V 8	BS 1	45 WCrV 8
P3	5CrNiMo	1.2713	55 NiCrMoV 6	SKT 4	L6	55 NCDV 7	BH 224/5	55 NiCrMoV 7
P3	—	1.5415	15 Mo 3	STFA 12 –240	A 204 Gr. A	15 D3	1501	16 Mo 3
P3	—	1.5423	16 Mo 5	SBC 690	4520	—	1503–245–420	—
P3	—	1.5622	14 Ni 6	SL2N26	A 350 –LF 5	15 N 6	—	FeE 285 Ni 6
P3	—	1.6511	36 CrNiMo 4	—	9840	40 NCD 3	816 M 40	36 CrNiMo 4
P3	40CrNiMoA	1.6582	34 CrNiMo 6	SNCM 447	4340	35 NCD 6	817 M 40	34 CrNiMo 6
P3	—	1.6587	17 CrNiMo 6	SNCM 815	—	18 NCD 6	820 A 16	17 CrNiMo 7
P3	15Cr	1.7015	15 Cr 3	SCr 415 H	5015	12 C 3	523 M15	15 Cr 2
P3	35Cr	1.7033	34 Cr 4	SCr 430 H	5130 H	32 C 4	530 A 32	34 Cr 4 KD
P3	40Cr	1.7045	42 Cr 4	SCr 440	5140	42 C 4 TS	530 A 40	40 NiCrMo 3

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Workpiece Material Conversion Table

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	GB	材料号	DIN	JIS	AISI/SAE	AFNOR	BS	EN
P3	18CrMn	1.7131	16 MnCr 5	SCR 415	5115	16 MC 5	527 M 17	16 MnCr 5 KD
P3	20CrMn; 50CrMn	1.7176	55 Cr 3	SUP 9 (A)	5155	55 C 3	527 A 60	55 Cr 3
P3	30CrMn	1.7218	25 CrMo 4	SCM 420	4130	25 CD 4	708 A 25	25 CrMo 4 KD
P3	40CrMoA	1.7223	41 CrMo 4	SCM 440	4142	42 CD 4 TS	708 M 40	41 CrMo 4
P3	45Mn	1.0519	S 355 K 2 G 4 Cu	—	1046	—	—	S 355 K2 G4 Cu
P3	—	1.0541	C42D	SWRH 42 B	—	FM 42	—	C 42 D
P3	45Mn2	1.0625	StSch 90 C/ GP 280 GH	—	1345	GP 280 GH	—	GP 280 GH
P3	30Mn	1.1146	30Mn4	—	1033	—	—	—
P3	40Mn	1.1157	40 Mn 4	—	1039	35 M 5	150 M 36	—
P3	20Mn2	1.1169	20 Mn 6	—	—	20 M 5	150 M 19	—
P3	30	1.1178	Ck 30	S 30 C	1030	XC 32	080 M 30	2 C 30
P3	40;40Mn	1.1186	Ck 40	S 40 C	1040	XC 42 H1	080 A 40	2 C 40
P3	Ck45；45;Mn45Mn; ZG310–570	1.1191	Ck 45	S 45 C	1045	XC 42	080 M 46	2 C 45
P3	50	1.1210	Ck 53	S 53 C	1053	—	En43C	—
P3	60Mn；60	1.1221	Ck 60	S 58 C	1060	XC 60	060 A 62	2 C 60
P3	70;65	1.1231	Ck 67	S 70 C– CSP	1070	XC 68	060 A 67	C 67 S
P3	42CrMo; 42CrMnMo	1.7225	42 CrMo 4	SCM 440 H	4140	42 CD 4	708 A 42	42 CrMo 4
P3	15CrMo	1.7262	15 CrMo 5	SCM 415 H	—	12 CD 4	—	—
P3	12CrMo	1.7335	13 CrMo 4 4	SFVA F 12	A182 –F11	15 CD 4.05	1501–621	13 CrMo 4–5
P3	—	1.7361	32 CrMo 12	—	—	30 CD 12	722 M 24	32 CrMo 12
P3	—	1.7715	—	—	—	—	1503–660–460	14 MoV 6–3
P3	50CrVA	1.8159	—	SUP 10	6150	50 CV 4	735 A 50	51 CrV 4
P3	ZG35SiMn	1.5122 F.130.A	37 MnSi 5	—	—	38 MS 5	—	—
P4	38CrMoAlA	1.8509	41 CrAlMo 7	SACM 645	E 71400	40 CAD 6. 12	905 M 39	41 CrAlMo 7
P4	55Si2Mn	1.0904	55 Si 7	SKH 1; SKT 4	9255	55 S 7	250 A 53	55 NiCrMoV 7
P4	V	1.2833	100 V 1	SKS 43	W 210	Y1 105 V	BW 2	100 V 2

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P4	12CrNi2	1.5732	14 NiCr 10	SNC 415 H	3415	14 NC 12	—	—
P4	12CrNi3	1.5752	14 NiCr 14	SNC	E	16 NC 11	655 M 13	13 NiCr 12
P4	Gr15;45Gr; Cr2;9Cr2	1.3505	100 Cr 6	SUJ 2	E 52100	100 C 6	535 A 99	100 Cr 6
P4	20CrNiMo	1.6523	21 NiCrMo 2	SNCM 220 H	8620	20 NCD 2	805 M 20	20 NiCrMo 2 KD
P4	—	1.6546	40 NiCrMo 7 2 KB	SNCM 240	8640	40 NCD 2	—	40 NiCrMo 2 KD
P4	—	1.8523	39 CrMoV 13 9	—	—	—	897 M 39	39 CrMoV 13 9
P4	—	1.5710	36NiCr6	SNC236	3135	35NC6	640A35	111A
P4	42CrMo	1.7225	42 CrMo 4	SCM 440 H	4140	42 CD 4	708 A 42	42 CrMo 4
P4	40CrMoA	1.7223	41 CrMo 4	SCM 440	4142	42 CD 4 TS	708 M 40	41 CrMo 4
P4	Gr15;45Gr; Cr2;9Cr2	1.3505	100 Cr 6	SUJ 2	E 52100	100 C 6	535 A 99	100 Cr 6
P4	20CrNiMo	1.6523	21 NiCrMo 2	SNCM 220 H	8620	20 NCD 2	805 M 20	20 NiCrMo 2 KD
P4	—	1.6546	40 NiCrMo 7 2 KB	SNCM 240	8640	40 NCD 2	—	40 NiCrMo 2 KD
P4	40Cr; ML40Cr	1.7035	41 Cr 4	SCr 440 H	5140	42 C 4	530 M 40	41 Cr 4
P4	—	1.8523	39 CrMoV 13 9	—	—	—	897 M 39	39 CrMoV 13 9
P5	2Cr13	1.4027	GX 20 Cr 1 4	SCS 2	—	Z 20 C 13 M	420 C 29	—
P5	—	1.4313	X 5 CrNi 134	SCS 5	CA 6 –NM	Z 4 CDN 13.4	425 C 11	X 3 CrNiMo 13 4
P5	Cr17	1.4742	X 10 CrAl 18	SUH 21	430	Z 10 CAS 18	(430 S 15)	—
P5	5Cr21 Mn9Ni4N	1.4871	X 53 CrMnNiN 21 9	SUH 35	EV 8	Z 52 CMN 21.09	349 S 54	X 53 CrMnNiNS 21 – 9
P5	8Cr20Si2Ni	1.4747	X 80 CrNiSi 20	SUH 4	HNV 6	Z 80 CSN 20.02	443 S 65	X 80 CrNiSi 20
P5	2Cr25N	1.4762	X 10 CrAl 25	SUH 442	446	Z 10 CAS 24	—	X 10 CrAl 24
P5	1Cr18Ni9MoZr; Y1Cr18Ni9	1.4305	X 10 CrNiS 18 9	SUS 303	303	Z 10 CNF 18.09	303 S 21	X 10 CrNiS 18 9
P5	OCr19Ni10; 00Cr19Ni11	1.4306	X 2 CrNi 19 11	SUS 304 L	304 L	Z 2 CN 18.09 19 10	304 C 12	(X 3 CrNi18 10 KD)
P5	0Cr13Al; 1Cr13SiAl	1.4724	X 10 CrAl 13	SUS 405	H–12	Z 10 C 13	BH 12	X 10 CrAl 13
P5	1Cr13	1.4006	X 10 Cr 13	SUS 410	410	Z 12 C 13	410 S 21	(X 12 Cr 13 KD)
P5	1Y1Cr13; Y1Cr13	1.4005	X 12 CrS 1 3	SUS 416	416	Z 12 CF 13	416 S 21	X 12 CrS 13
P5	2Cr13	1.4021	X 20 Cr 13	SUS 420 J1	420	Z 20 C 13	420 S 37	X 20 Cr 13

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P5	1Cr17	1.4016	X 6 Cr 17	SUS 430	430	Z 8 C 17	430 S 15	X 8 Cr 17
P5	Y1Cr17	1.4104	X 12 CrMoS 17	SUS 430 F	430 F	Z 10 CF 17	441 S 29	X 14 CrMoS 17
P5	1Cr17Ni2	1.4057	X 19 CrNi 17 2	SUS 431	431	Z 15 CN 16.02	431 S 29	X 19 CrNi 17 2
P5	1Cr17Mo	1.4113	X 6 CrMo 17 1	SUS 434	434	Z 8 CD 17.01	434 S 17	(X 8 CrMo 17)
P5	0Cr13;1Cr12, 1Cr13	1.4001	X 7 Cr 14	—	410 S	—	—	—
P5	4Cr13	1.4034	X 45 Cr 13	—	420	Z 40 C 14	(420 S45)	X 45 Cr 13
P5	4Cr13	1.4034	X 45 Cr 13	—	420	Z 40 C 14	(420 S45)	X 45 Cr 13
P5	—	1.4418	X 4 CrNiMo 16 51	—	—	Z 6 CND 16.05.01	—	X 4 CrNiMo 16 5 1
P5	OCr13 1Cr12	1.4000	X7Cr13	SUS403	403	Z6C13	403S17	—
P5	—	1.4512	X 6 CrTi 12	SUH 409	409	Z 6 CT 12	409 S 19	X 5 CrTi 12
P5	0Cr13;1Cr12, 1Cr13	1.4001	X 7 Cr 14	—	410 S	—	—	—
P5	4Cr13	1.4034	X 45 Cr 13	—	420	Z 40 C 14	(420 S45)	X 45 Cr 13
P5	0Cr19 Ni13Mo3	1.4449	X 5 CrNiMo 17 13	SUS 317	317	—	317 S 16	—
P5	0Cr13;1Cr12	1.4000	X 6 Cr 13	SUS 403	403	Z 6 C 13	403 S 17	X 6 Cr 13
P5	0Cr13Al	1.4002	X 6 CrAl 13	SUS 405	405	Z 6 CA 13	405 S 17	X 6 CrAl 13
P5	1Cr13	1.4006	X 10 Cr 13	SUS 410	410	Z 6 C 13	403 S 17	(X 12 Cr 13 KD)
P5	2Cr13	1.4021	X 20 Cr 13	SUS 420 J1	420	Z 6 CA 13	405 S 17	X 20 Cr 13
P5	3Cr13	1.4028	X 30 Cr 13	SUS 420 J2	420	Z 12 C 13	410 S 21	X 30 Cr 13
P5	Y1Cr17	1.4104	X 12 CrMoS 17	SUS 430 F	430 F	Z 20 C 13	420 S 37	X 14 CrMoS 17
P5	Y1Cr17	1.4105	X 4 CrMoS 18	SUS 430 F	430	Z 6 CDF 18 – 02	—	X 6 CrMoS 17
P5	1Cr17Mo	1.4113	X 6 CrMo 17 1	SUS 434	434	Z 8 CD 17.01	434 S 17	(X 8 CrMo 17)
P5	7Cr17	1.4109	X 65 CrMo 14	SUS 440 A	440A	Z 70 CD 14	—	X 70 CrMo 15
P5	—	1.4418	X 4 CrNiMo 16 51	—	—	Z 6 CND 16.05.01	—	X 4 CrNiMo 16 5 1
P6	ZGMn13–1;ZGMn13–2	1.3401	X 120 Mn 12	SCMnH 1	A 128	Z 120 M 12	BW 10	—
P6	Cr6WV; 100CrMoV5	1.2363	X 100 CrMoV	SKD 12	A–2 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1
P6	Cr12W	1.2436	X 210 CrW 12	SKD 2	—	Z 210 CW1 2	—	X 210 CrW 12

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P6	3Cr2W8V; 30WCrV9; 5CrMnMo	1.2581	X 30 WCrV 93	SKD 5	H 21	Z 30 WCV 9	BH 21	X 30 WCrV 9 3
P6	4Cr5MoVSi1; 40CrMoV5	1.2344	X 40 CrMoV 5 1	SKD 61	H 13	Z 40 CDV 5	BH 13	X 40 CrMoV 5 1
P6	W18Cr4V	1.3355	S 1–8–0–1	SKH 2	T 1	Z80WCV 18–04–01	BT 1	HS 1–8–0–1
P6	W18Cr4VCo5	1.3255	S 1–8–1–2–5	SKH 3	T 4	Z80 WKCV 18–05–04–01	BT 4	(HS18–1–1–5)
P6	W6Mo5 Cr4V2;M2	1.3343	S 6–5–2	SKH 51	M 2	Z85WDCV06–05–04–02	BM 2	HS 6–5–3
P6	W6Mo5 Cr4V2Co5	1.3243	S 6–5–2–5	SKH 55	M 35	KCV 06–05–05–04–02	BM 35	(HS6–5–2–5)
P6	—	1.5662	X 8 Ni 9	SL 9 N 53	A 353	9 Ni	509	FeE 490 Ni 36
P6	4Cr9Si2; X45CrSi93	1.4718	X 45 CrSi 93	SUH 1	HNV 3	Z 45 CS 9	401 S 45	X 45 CrSi 8
P6	Cr12MoV	1.2601	X 165 CrMoV 12	—	—	—	—	X 165 CrMoV 12
P6	M7	1.3348	S 2–9–2	—	M 7	Z100DCWV 09–04–02–02	—	HS 2–9–2
P6	—	1.4922	X 20 CrMoV 12 1	—	—	—	—	X 20 CrMoV 11–1
P6	—	1.6657	14 NiCrMo 13 4	—	E 9310 H	14 NiCrMo 13–4	832 M 13	14 NiCrMo 13–4
P6	Cr12	1.2080	X210Cr12	SKD1	D3 ASTM D3	Z200C12	BD3	—
P6	—	1.3343	S6–5–2	SUH3	M 7	Z100DCWV 09–04–02–02	4959BA2	—
P6	Cr12MoV	1.2601	X 165 CrMoV 12	—	—	—	—	X 165 CrMoV 12
P6	M7	1.3348	S 2–9–2	—	E 9310 H	14 NiCrMo 13–4	—	HS 2–9–2
P6	—	1.4922	X 20 CrMoV 12 1	—	—	—	—	X 20 CrMoV 11–1
P6	—	1.6657	14 NiCrMo 13 4	—		14 NiCrMo 13–4	832 M 13	14 NiCrMo 13–4
P6	Q215A	1.0028	USt 34–2/ S 250 G1T	—	—	—	—	S 250 G 1 T
M1	0Cr18Ni9	1.4308	GX 6 CrNi 18 9	SCS 13	CF–8	Z 6 CN 18.10 M	304 C 15	X 2 CrNiN 18 7
M1	—	1.4408	GX 6 CrNiMo 18 10	SCS 14	CF–8M	GX5CrNiMo 19–11–2	316 C 16	GX 5 CrNiMo 19–11–2
M1	OCr27 Ni12Mo3	1.4435	X 2 CrNiMo 18 14 3	SCS 16	316 L	Z 2 CND 17.13	316 S 11	X 2 CrNiMo 18 16
M1	1Cr18 Ni12Mo2Ti	1.4581	GX 5 CrNiMoNb 18 10	SCS 22	—	Z 4 CNDNb 18.12 M	318 C 17	GX 5 CrNiMo Nb 19–11–2
M1	1Cr23Ni13; 2Cr23Ni13	1.4828	X 15 CrNiSi 20 12	SUH 309	309	Z 15 CNS 20.12	309 S 24	X 15 CrNiSi 20 12
M1	00Cr18Ni10N; 0Cr19Ni9	1.4311	X 2 CrNiN18 10	SUS 304 LN	304	Z 8 CN 18.12	304 S 62	X 2 CrNiN 18 10
M1	0Cr25Ni20; 2Cr25Ni21	1.4845	X 12 CrNi 25 21	SUS 310 S	310 S	Z 12 CN 25.20	310 S 24	X 8 CrNi 25 21

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M1	0Cr17Ni11Mo2; 0Cr17Ni12Mo2	1.4401	X 5 CrNiMo 17 12 2	SUS 316	316	Z 6 CND 17.11	316 S 16	X6 CrNiMo 17 X 12 2 KD
M1	0Cr17Ni12Mo2	1.4436	X 5 CrNiMo 17 1 3 3	SUS 316	316	Z 6 CND 17.12	316 S 16	X6 CrNiMo 18 13 3 KD
M1	00Cr17Ni14Mo2	1.4404	X 2 CrNiMo 17 13 2	SUS 316 L	316 L	Z 3 CND 19.10 M	316 S 12	X6 CrNiMo 18 13 3 KD
M1	OCr17Ni13Mo; 00Cr17Ni13Mo2N	1.4429	X 2 CrNiMoN 17 13 3	SUS 316 LN	316 LN	Z 2 CND 17.13 Az	316 S 62	GX 3 CrNiMo 17 12 2 KD
M1	—	1.4406	X 2 CrNiMoN 17	SUS 316 LN 12 2	316	Z 2 CND 17.12 Az	316 S 61 LN	X 3 CrNiMoN 17 13 3
M1	Cr18Ni12Mo2Ti	1.4571	X 6 CrNiMoTi 17 12 2	SUS 316 Ti	316 Ti	Z 6 CNDT 17.12	320 S 31	X 6 CrNiMoTi 17 12 2
M1	00Cr19Ni13Mo3	1.4438	X 2 CrNiMo 18 16 4	SUS 317 L	317 L	Z 2 CND 19.15	317 S 12	X 3 CrNiMo 18 16 4
M1	1Cr18Ni9Ti;	1.4541	X 6 CrNiTi 18 10	SUS 321	321	Z 6 CNT 18.10	321 S 12	X 6 CrNiTi 18
M1	1Cr18Ni10Ti; 1Cr18Ni9Ti	1.4878	X 12 CrNiTi 18 9	SUS 321	321	Z 6 CNT 18.12	321 S 20	X 10 CrNiTi 18 10
M1	Cr17Ni12 Mo3Nb	1.4583	X 10 CrNiMoNb 18 12	—	318	—	—	—
M1	—	1.4539	X 1 NiCrMoCuN	—	—	Z 1 NCDU 25–20–5	904 S 13 25 20	X 1 NiCrMoCu
M1	—	1.4003	—	—	405	Z8CA12	405S17	—
M1	—	1.4521	X1CrMoTi182	—	S44400	—	—	—
M1	—	1.4542	—	—	630	Z7CNU17–04	—	—
M1	00Cr19 Ni13Mo3	1.4438	X 2 CrNiMo 18 16 4	SUS 317 L	317 L	Z 2 CND 19.15	317 S 12	X 3 CrNiMo 18 16 4
M1	1Cr18Ni9Ti;	1.4541	X 6 CrNiTi 18 10	SUS 321	321	Z 6 CNT 18.10	321 S 12	X 6 CrNiTi 18
M1	1Cr18Ni10Ti; 1Cr18Ni9Ti	1.4878	X 12 CrNiTi 18 9	SUS 321	321	Z 6 CNT 18.12	321 S 20	X 10 CrNiTi 18 10
M1	1Cr18Ni11Nb	1.4550	X 6 CrNiNb 18 10	SUS 347	347	Z 6 CNNb 18.10	347 S 17	X 6 CrNiNb 18 10
M1	1Cr17	1.4016	X6Cr17	SUS 430	430	—	430 S 17; 430 S 18	—
M1	0Cr15 NiMo2Al	1.4532	X 8 CrNiMoAl 15 7 2	—	15–7 PH	X15D2	—	X 8 CrNiMoAl 15–7–2
M1	Cr17Ni12 Mo3Nb	1.4583	X 10 CrNiMoNb 18 12	—	318	—	—	—
M1	—	1.4539 52662	X 1 NiCrMoCuN	—	—	Z 1 NCDU 25–20–5	904 S 13 25 20	X 1 NiCrMoCu
M1	0Cr17Ni4 Cu4Nb	1.4542	X 5 CrNiCuNb 16 4	SUS 630	630	Z6CNU17.04		X 5 CrNiCuNb 16–4
M2	0Cr17Ni7Al	1.4568	X 7 CrNiAl 17 7	SUS 631	—	X7CrNiAl17–7; Z9CNA17–07	301 S 81	X 7 CrNiAl 17–7
M2	—	1.4504	—	—	—	—	—	—
M2	—	1.4504	—	—	—	—	—	—

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M2	0Cr17Ni7Al	1.4568	X 7 CrNiAl 17 7	SUS 631	—	X7CrNiAl17–7; Z9CNA17–07	301 S 81	X 7 CrNiAl 17–7
M3	0Cr26 Ni5Mo2	1.4460	X 4 CrNiMo 27 5 2	SUS 329 J1	329	X 2 CrNiMo 25–7–3	—	X 3 CrNiMo 27 5 2
M3	—	1.4462	X 2 CrNiMoN 22 5 3	SUS 329J 3L	S318 03	Z 3 CND 22.05 AZ	318 S 13	X 2 CrNiMoN 22 5 3
K1	HT150	0.6015	GG–15	FC 150	A48– 25 B	FGL 150	Grade 150	GJL–150
K1	HT200	0.6020	GG– 20	FC 200	A48– 30 B	FGL 200	Grade 220	GJL–200
K1	HT250	0.6025	GG –25	FC 250	A48–35 B	FGL 250	Grade 260	GJL–250
K1	HT300	0.6030	GG– 30	FC 300	A48– 45 B	FGL 300	Grade 300	GJL–300
K1	HT350	0.6035	GG– 35	FC 350	A48– 50 B	FGL 350	Grade 350	GJL–350
K1	HT400	0.6040	GG– 40	—	A48– 55 B	FGL 400	Grade 400	GJL–400
K2	—	0.7033	GGG–35.3	—	—	—	—	GJS–350–22
K2	QT400–18	0.7040	GGG–40	FCD400	60–40–18	FCS 400–12	SNG 420/12	—
K2	—	—	GGG–40.3	—	—	FGS 370–17	SNG 370/17	—
K2	QT500–7	0.7050	GGG–50	FCD500	80–55–06	FGS 500–7	SNG 500/7	—
K2	—	0.7660	GGG–NiCr202	—	A43D2	S–NC202	Grade S6	—
K2	—	—	GGG–NiMo137	—	—	L–MN 137	L–NiMn 137	—
K2	QT600–3	—	GGG–60	FCD600	—	FGS 600–3	SNG 600/3	—
K2	QT700–18	0.7070	GGG–70	FCD700	100–70–03	FGS 700–2	SNG 700/2	—
K3	—	0.8145	GTS–45–06	FCMP 440	40010	P 45–06	P 440/7	MN 450 – 6
K3	—	0.8155	GTS–55–04	FCMP 490	50005	P 55–04	P 510/4	MN 550–4
K3	—	0.8165	GTS–65–02	FCMP 540	70003	P 65–02	P 570/3	MN 650–3
K3	—	—	—	FCMB310	—	MN 32–8	56 1/3	—
K3	—	—	GTS–35	FCMW330	GTS–35	MN 35–10	B 340/12	—
K3	—	—	GTS–65	FCMP540	GTS–65	MP60–3	P 570/3	—
K3	—	—	GTS–70–02	FCMP690	GTS–70–02	MN 700–2	P 690/2	—
K3	—	0.8145	GTS–45–06	FCMP 440	40010	P 45–06	P 440/7	MN 450 – 6
K3	—	0.8155	GTS–55–04	FCMP 490	50005	P 55–04	P 510/4	MN 550–4

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K3	—	0.8165	GTS–65–02	FCMP 540	70003	P 65–02	P 570/3	MN 650–3
N1	2A12	3.1355	AlCuMg 2	—	2024	—	2L97，2L98	AW–2024
N1	—	3.0250	AL99.5H	—	1000	A59050C	L31	—
N1	—	3.0255	AL99.5	—	1000	A 59050 C	L 31	—
N1	—	3.1325	AlCuMg 1	—	2017	—	—	AW–2017 A
N1	—	3.1655	AlCuBiPb	—	2011	—	—	—
N1	—	3.2315	AlMgSi 1	—	6351	—	—	AW–6005 A
N1	—	3.3206	AlMgSi0.5	—	6063	—	—	—
N1	—	3.3315	AlMg 1	—		—	—	AW–6082
N1	—	3.4345	AlZnMgCu0.5 AlZnMgCu1	—	7050	—	—	—
N2	—	3.3210	AlMgSiCu	—	6061	—	606，H20，L117，L118	—
N2	—	3.1255	AlCuSiMn	—	2014	—	2014A，H15，L102，L103，L105，L158，L159，L168，6L37，3L62，2L77，2L87，2L93，6L37，5010A	—
N2	ZAlCu4	3.1841	G–AlCu 4 Ti	—	—	—	—	—
N2	ZAlSi5Cu1Mg	3.2131	G–AlSi 5 Cu 1	—	—	—	—	—
N2	ZAlSi7Cu4	3.2151	G–AlSi 6 Cu 4	—	—	—	—	—
N2	ZAlSi8Cu1Mg; ZAlSi9Cu2Mg	3.2161	G–AlSi 8 Cu 3	—	—	—	—	—
N2	ZAlSi7Mg; ZAlSi7MgA; ZAlSi7Mn	3.2371	G–AlSi 7 Mg	—	4218 B	—	—	—
N2	ZAlSi9Mg	3.2381	G–AlSi 10 Mg	—	—	—	—	—
N2	ZAlSi12	3.2581	G–AlSi 12	—	A	—	LM 6	—
N2	ZAlSi12 Cu2Mg1	3.2583	G–AlSi 12 (Cu)	—	A 413.1	—	LM 20	—
N2	ZAlMg5Si1	3.3261	G–AlMg 5 Si	—	—	—	—	—
N2	ZAlMg10	3.3591	G–AlMg 10	—	—	—	—	—
N2	7A09	3.4365	AlZnMg–Cu1.5	—	7075	A7075, A3x6	7075, 2L95, L160, L161, L162	—
N4	—	2.0060	E–Cu 57	—	B–120	—	—	—

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AISI/SA–美国钢铁学会/美国汽车工程师协会American Iron and Steel Institute/Society of Automotive Engineer

BS–英国标准British Standards　EN–欧洲标准European Standards

工件材料牌号对照表

Workpiece Material Conversion Table

金鹭材料号 MC GESAC	中国	德国		日本	美国	法国	英国	欧洲
	GB	材料号	DIN	JIS	AISI/SAE	AFNOR	BS	EN
N4	—	2.0065	E–Cu 58	—	C 11000	Cn–a2	C 101	—
N4	—	2.0070	SE–Cu	—	C 10300	Cu–c1	C 101	—
N4	—	2.0082	G–CuL 45	—	C 81100	—	HCC 1	—
N4	—	2.0085	G–CuL 50	—	C 81100	—	HCC 1	—
N4	—	2.0240	CuZn15	C 2300	C 23000	CuZn15	CZ 102	—
N4	—	2.0265	CuZn30	C 2600	C 26000	CuZn30	CZ 102	—
N4	—	2.0321	CuZn37	C 2720	C 27200	CuZn37	CZ 108	—
N4	—	2.0592	G–CuZn 35 Al 1	—	C 86500	U–Z 36 N 3	HTB 1	—
N4	—	2.0596	G–CuZn 34 Al 2	—	C 86200	U–Z 36 N 3	HTB 1	—
N4	—	2.1090	G–CuSn 7 ZnPb	—	C 93200	U–Z 7 Z 5 Pb 4	—	—
N4	—	2.1096	G–CuSn 5 ZnPb	—	C 83600	U–Z 5 Z 5 Pb 5	—	—
N4	—	2.1176	G–CuPb 10 Zn	—	C 93700	U–Z 10 Pb 10	LB 2	—
N4	—	2.1182	G–CuPb 15 Zn	—	C 93800	U–Pb 15 E 8	LB 1	—
N4	—	2.1188	G–CuPb 20 Zn	—	C 94100	U–Pb 20	LB 5	—
N6	—	2.0966	CuAl 10 Ni 5 Fe 4	—	—	—	—	—
N6	—	3.5104	MgAl 9 Zn 1	—	—	—	—	—
S1	Cr15Ni36W3Ti; 1Cr16Ni35	1.4864	X 12 NiCrSi 35 16	SUH 330	330	Z 12 NCS 37.18	NA 17	X 12 NiCrSi 35 1 6
S1	—	1.4865	GX 40 NiCrSi 38 18	SCH 15	—	—	330 C 40	—
S1	—	1.4563	X 1 NiCrMoCuN 31 27 4	—	—	X 1 NiCrMoCuN 31 –27–4	—	X 1 NiCrMoCu 31 27 4
S1	—	1.4563	X 1 NiCrMoCuN 31 27 4	—	—	X 1 NiCrMoCuN 31 –27–4	—	X 1 NiCrMoCu 31 27 4
S3	TA0	3.7025	Ti 1	—	R 50250	—	2 TA 1	—
S3	TA1	3.7035	Ti 2	—	R 50400	—	2 TA 2–5	—
S3	TA2	3.7055	Ti 3	—	R 50550	—	TA 3	—
S3	TA3	3.7065	Ti 4	—	R 50700	—	2 TA 6–9	—
S3	TA9	3.7235	Ti 2 Pd	—	R 52400	—	—	—
S4	TA7	3.7115	TiAl 5 Sn 2	—	—	—	—	—

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S4	TA10	3.7105	TiNi 0,8 Mo 0,3	—	—	—	—	—
S4	TC4	3.7165	TiAl 6 V 4	—	R 56400	T–A 6 V	TA 10–13	—
S4	TC10	—	TiAl6V6Sn2	—	—	—	—	—
H	—	0.9620	GX 260 NiCr 42	0512–00	A 532 IB NiCr–LC	—	—	GJH–X260NiCr 4–2
	—	0.9625	G–X 330 NiCr 42	0513–00	A 532 IA NiCr–HC	FB Ni 4 Cr2 HC	—	GJH–X330NiCr 4–2
	—	0.9630	G–X 300 CrNiSi 95 2	0457–00	A 532 ID Ni–HiCr	—	—	GJH–X300CrNiSi 9–5–2
	—	0.9635	G–X 300 CrMo 15 3	—	A 532 IIC15% CrMo–HC	—	—	GJH–X300CrMo 15–3
	—	0.9640	G–X 300 CrMoNi 15 2 1	—	—	—	—	GJH–X300CrMoNi 15–2–1
	—	0.9645	GX 260 CrMoNi 20 2 1	—	A 532 IID20% CrMo–HC	—	—	GJH–X260CrMoNi 20–2–1
	—	0.9650	GX 260 Cr 27	0466–00	A 532 IIA25% Cr	—	—	GJH–X260Cr 27
	—	0.9655	G–X 300 CrMo 27 1	—	A 532 IIA25% Cr	—	—	GJH–X300CrMo 27–1

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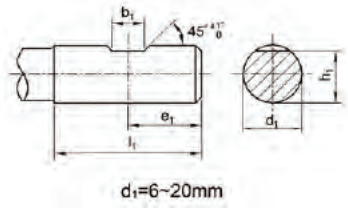
柄部标准–DIN标准
The Structure of Shank–DIN Standard

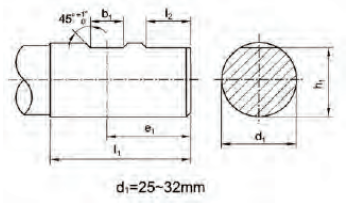
柄部标准 The Structure of Shank
DIN 6535–HA



d_1h_6	2	3	4	5	6	8	10	12	14	16	18	20	25	32
l_1+2 0	28				36		40	45		48		50	56	60

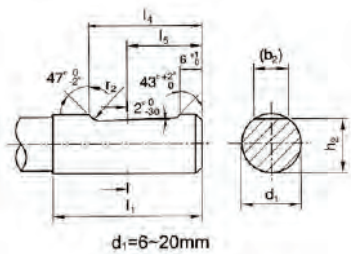
DIN 6535–HB

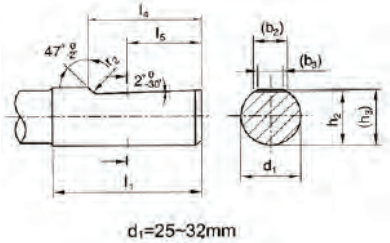




d_1 h_6	b_1 +0.05 0	e_1 0 −1	h_1 h_{11}	l_1 +2 0	l_2 +1 0
6.0	4.2	18.0	5.1	36.0	
8.0	5.5		6.9		
10	7.0	20.0	8.5	40.0	
12	8.0	22.5	10.4	45.0	
14			12.7		
16	10.0	24.0	14.2	48.0	
18			16.2		
20	11.0	25.0	18.2	50.0	
25	12.0	32.0	23.0	56.0	17.0
32	14.0	36.0	30.0	60.0	19.0

DIN 6535–HE





d_1	(b_2)	(b_3)	(h_2)	(h_3)	l_1	l_4	l_5	r_2
6.0	4.3		5.1		36.0	25.0	18.0	1.2
8.0	5.5		6.9					
10	7.1		8.5		40.0	28.0	20.0	
12	8.2		10.4		45.0	33.0	22.5	
14	8.1		12.7					
16	10.1		14.2		48.0	36.0	24.0	1.6
18	10.8		16.2					
20	11.4		18.2		50.0	38.0	25.0	
25	13.6	9.3	23.0	24.1	56.0	44.0	32.0	
32	15.5	9.9	30.0	31.2	60.0	48.0	35.0	

抗拉强度、布氏硬度、洛氏硬度对照表

Comparison Table for Tensile Strength, Vickers Hardness, Brinell Hardness and Rockwell Hardnes

N/mm2	HV10	HB	HRC
240	75	71	
255	80	76	
270	85	81	
285	90	86	
305	95	90	
320	100	95	
335	105	100	
350	110	105	
370	115	109	
385	120	114	
400	125	119	
415	130	124	
430	135	128	
450	140	133	
465	145	138	
480	150	143	
495	155	147	
510	160	152	
530	165	157	
545	170	162	
560	175	166	
575	180	171	
595	185	176	
610	190	181	
625	195	185	
640	200	190	
660	205	195	
675	210	199	
690	215	204	
705	220	209	
720	225	214	
740	230	219	
755	235	223	
770	240	228	
785	245	233	
800	250	238	22
820	255	242	23
835	260	247	24
860	268	255	25
870	272	258	26
900	280	266	27

N/mm2	HV10	HB	HRC
920	287	273	28
940	293	278	29
970	302	287	30
995	310	295	31
1020	317	301	32
1050	327	311	33
1080	336	319	34
1110	345	328	35
1140	355	337	36
1170	364	346	37
1200	373	354	38
1230	382	363	39
1260	392	372	40
1260	403	383	41
1330	413	393	42
1360	423	402	43
1400	434	413	44
1440	446	424	45
1480	458	435	46
1530	473	449	47
1570	484	460	48
1620	497	472	49
1680	514	488	50
1730	527	501	51
1790	544	517	52
1845	560	632	53
1910	578	549	54
1980	596	567	55
2050	615	584	56
2140	639	607	57
	655	622	58
	675		59
	698		60
	720		61
	745		62
	773		63
	800		64
	829		65
	864		66
	900		67
	940		68

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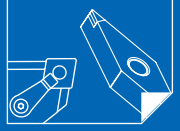
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Turning



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Milling



钻削
Drilling



书脊