



# 硬质合金棒材

## CEMENTED CARBIDE RODS



# 公司简介

About GESAC

厦门金鹭硬质合金有限公司是一家国家级重点高新技术企业，成立于2018年，现有员工715人，注册资本5亿元人民币，是中外合资国家级重点高新技术企业厦门金鹭特种合金有限公司的全资子公司。目前厂区位于厦门海沧区，专业从事硬质合金基体棒材的研发和生产，硬质合金棒材产能6000吨，位居世界前列。

金鹭硬质合金棒材产品性能优异，主要用于金属材料，复合材料，高温合金材料等难加工材料的切削钻铣，广泛应用于汽车，3C，航天航空，木工行业等相关领域。近年来公司不断研发创新，开发了多个适合高硬度材料加工的牌号。

公司开发了国际先进的纳米晶硬质合金棒材技术，获得国家级及省市级各类奖项多项。公司本着“以高质量的工作追求更高质量的产品”的质量方针、建立完善的质量管理体系；产品远销日本、印度、欧美及中东等国家和地区。公司技术力量雄厚，设备先进，管理严格，秉承“以科技为先导，以质量求生存，以创新求发展”的经营方针，以“认认真真做事，实实在在做人”的企业精神，力求生产世界一流产品，满足世界各地客户的需求。

Xiamen Golden Egret Cemented Carbides Co., Ltd. (GESAC) is a national key high-tech enterprise that was founded in 2018. GESAC with 715 employees and a registered capital of RMB 500 million, which is a wholly-owned subsidiary of Xiamen Golden Egret Special Alloy Co., Ltd., a Sino-foreign joint venture with national key high-tech. The factory is located in Haicang District, Xiamen City, specializing in the development and production of cemented carbide rods, which with 6000 tons cemented carbide rods production capacity that ranking among the top in the world.

GESAC carbide rods with excellent performance, mainly used for cutting, drilling and milling of metal materials, composite materials, high-temperature alloy materials and other difficult machining materials, which is widely used in automotive, 3C, aerospace, woodworking and other related fields. In recent years, GESAC has developed a number of grades that is suitable for processing high hardness materials through continuous R&D and innovation.

GESAC has developed international advanced nanocrystalline cemented carbide rods technology and won a number of national and provincial awards. In line with the quality policy of "pursuing higher quality products with high quality work, GESAC established a sound quality management system, and the products are exported to Japan, India, Europe, America, the Middle East and other countries. GESAC with abundant technical force, advanced equipment and strict management, also adhering to the management policy of "take science and technology as the guide, survival by quality, development by innovation", and together with the enterprise spirit "being down-to-earth and being in honesty", GESAC strives to produce world-class products to fulfill the demand of customers around the world.



# 目录 Contents

A 基本信息  
Basic Information

B 整体刀具用棒材  
Solid Carbide Rods

C 板材产品  
Plates

D 附录  
Appendix

编码体系 GESAC Code System	03
产品系列介绍 Products Introduction	04
牌号介绍 Grade Introduction	06
牌号推荐 Grade Selection Guide	08

<b>实心圆棒</b> Solid Rods	
• 公制长棒 Solid Long Rods-Metric	11
• 英制长棒 Solid Long Rods-Inch	12
• 公制精磨倒角短棒 (h5/h6) Ground Rods with Chamfer-Metric	13
• 英制精磨倒角短棒 (h5/h6) Ground Rods with Chamfer-Inch	14
• DIN精磨倒角短棒 (h5/h6) Ground Rods with Chamfer-DIN	15
• 精磨倒角侧固短棒 (h5/h6) Endmill Blanks with Weldon	17
<b>带内冷孔棒材</b> Rods with Coolant Holes	
• 30°双螺旋孔棒材 Rods with 2 Helical Coolant Holes (30°)	19
• 30°三螺旋孔棒材 Rods with 3 Helical Coolant Holes (30°)	21
• 40°双螺旋孔棒材 Rods with 2 Helical Coolant Holes (40°)	22
• 40°三螺旋孔棒材 Rods with 3 Helical Coolant Holes (40°)	23
• 其他角度双螺旋孔棒材 Other Rods with Helical Coolant Holes	24
• 单直孔棒材 Rods with Central Coolant Hole	25
• 双直孔棒材 Rods with Two Straight Coolant Holes	26
• 毛坯枪钻 (深孔钻) Gun Drill Blanks	28
<b>异型棒</b> Preforms	
• 精磨油槽尖锥螺旋孔棒材 Ground Drill Blanks with Point, Slot and Helical Coolant Holes (30°)	30
• 精磨球头棒 Ground Ballnose Endmill Blanks	32
• 精磨Y形棒材 Ground Milling Cutter Blanks with Axial Coolant Hole and Lateral Exits	33
• 毛坯尖锥 Rods with Tapered End	34
• 毛坯带定位孔棒材 Rods with Centers	35
• 毛坯T形棒 T-Slot Endmill Blanks	36
• 其他 Other Preformed Blanks	37

四边型材 STB	39
----------	----

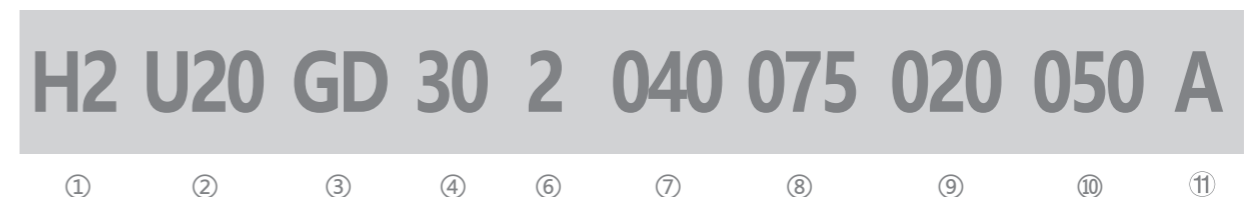
公差等级 Carbide Rod Tolerances	42
材质项目名词解释 Properties	43
尺寸项目名词 Definitions of Geometrical Tolerances	44

## 编码体系 GESAC Code System

### 棒材或板材 Rods or Plates



### 带内冷孔棒材 Rods with Coolant Holes



① 产品类别 Product Category	② 金鹭牌号 GESAC Grade	③ 产品规格种类 Type Classification	
H0-毛坯/ Unground	U25U-GU25UF	BR-圆棒/ Solid Rods	
H1-半精磨/ Semi Fine Ground	U20F-GU20F	BQ-球头棒/ Ballnose Endmill Blanks	
H2-精磨h6/ Ground h6	U20-GU20	BT-台阶棒/ Combined Drill and Countersink Blanks	
H7-精磨h5/ Ground h5	K05A-GK05A	BK-带定位孔棒/ Rods with Center Holes	
	MR127-GMR127	BZ-尖锥棒/ Rods with Tapered End	
	.....	TS+形状代码-板材/ TS + Shape Code-Plates	
		GA-单直孔棒材/ Rods with Central Coolant Hole	
		GB-双直孔棒材/ Rods with 2 Straight Coolant Holes	
		GD-双螺旋棒材/ Rods with 2 Helical Coolant Holes	
		GE-三螺旋棒材/ Rods with 3 Helical Coolant Holes	
		GN-“Y”形内冷孔棒材/ Milling Cutter Blanks with Axial Coolant Hole and Lateral Exits	
		.....	
		⑨ 孔径 Hole Diameter	⑩ 孔间距 Bolt Circle
		⑪ 流水号 Serial Number	

## 产品系列介绍

### Products Introduction

#### 关于厦门金鹭硬质合金棒材产品的概述

The Overview of Xiamen Golden Egret Cemented Carbide Rods

影响刀具性能的因素很多，整个切削过程是个耦合的系统工程，因硬度和韧性不可兼得，无法用单一硬质合金牌号适配所有工况。如果想用好硬质合金棒材，则需要了解切削变形区的应力应变场，结合工件材料的特性，分析刀具失效模式，最终根据基体选型原则，实现被加工材料、加工工况和基体牌号的最佳匹配，适材适用，发挥出基体棒材的最大潜能。

There are many factors affecting tools performance, the whole cutting process is a coupled system engineering. Since hardness and toughness can't have both that one cemented carbide grade can't suitable for all working conditions. If customers want to make good use of cemented carbide rods that need to understand the stress and strain field of the cutting deformation area, also combining with the characteristics of the workpiece, analyzing the tool failure mode and finally according to matrix selection principle to achieve the best match of the processed materials, processing conditions and grades. Using correct materials for right application, to give play the maximum potential of the rods.

为了满足客户使用需求，厦门金鹭目前采用三大产品系列并行，供客户根据不同需求选用，分别是：拥有卓越品质的高性能通用产品系列、强调契合工况的细分领域产品系列以及具有极高性价比的通用产品系列。

GESAC adopts three product series to meet different demand of customers, including high-performance universal product series with excellent quality, subdivision industry product series and universal product series with extremely cost-effective.

#### 高性能产品系列

##### High-performance product series

通用性极佳的硬质合金棒材产品，可适配多种不同的被加工材料、加工参数以及加工轨迹，在差异度较大的不同加工工况条件下均能表现出卓越的性能。

The excellent universal carbide rods can be adapted to a variety of different processed materials, processing parameters and processing path, which show outstanding performance under different processing conditions even with large differences.

#### 细分领域产品系列

##### Subdivision industry product series

从终端客户的实际使用需求出发，通过失效模式分析原理进行正向创新设计。最终实现单一工况下，牌号的性能达到最佳匹配。

According to end customers actual requirements, innovation design is carried out through the principle of failure mode analysis.

The grade could achieve the best performance under a single working condition finally.

#### 通用产品系列

##### Universal product series

该系列产品具有较强的通用性，并兼具极高的性价比和优秀的批次间质量稳定性。

This series of products with strong versatility, also with extremely cost effective and excellent quality stability between batches.

#### 高性能产品系列

##### High-performance product series

牌号 Grade	ISO牌号ISO Grade	晶粒度 Grain Size	钴含量 Cobalt Content	硬度 Hardness		密度 Density	抗弯强度 TRS	断裂韧性Kic Application
	ISO Grade	um	%	HRA	HV30	g/cm <sup>3</sup>	N/mm <sup>2</sup>	MPa*m <sup>1/2</sup>
<b>GU25UF</b>	K20-K40	0.4	12	92.6	1750	14.1	4700	> 9.9
<b>GU20F</b>	K20-K40	0.6	10	92.3	1670	14.37	4200	> 10.2
<b>GU20</b>	K20-K40	0.8	10	91.9	1630	14.4	4000	> 10.5

#### 细分领域产品系列

##### Subdivision industry product series

牌号 Grade	ISO牌号ISO Grade	晶粒度 Grain Size	钴含量 Cobalt Content	硬度 Hardness		密度 Density	抗弯强度 TRS	断裂韧性Kic Application
	ISO Grade	um	%	HRA	HV30	g/cm <sup>3</sup>	N/mm <sup>2</sup>	MPa*m <sup>1/2</sup>
<b>GMR127</b>	M20-M40	0.7	12	91.8	1610	14.15	4100	> 11.5
<b>GTC108</b>	S20-S40	0.8	10	91.9	1630	14.45	4200	> 10.8
<b>GSC098</b>	S20-S40	0.8	9	92	1660	14.48	3900	> 11.1
<b>GSR118</b>	S20-S40	0.8	11	91.5	1580	14.15	4100	> 12.1
<b>GU092</b>	H05-H10	0.2	9	94	2050	14.44	4500	> 9.1
<b>GU10UF</b>	K05-K10	0.4	6	94	2050	14.8	4300	> 9.2
<b>GU15UF</b>	H10-H20	0.4	8.5	93.2	1900	14.52	4300	> 9.6
<b>GK05A</b>	K15	1	6	92.5	1740	14.9	3500	> 9.3
<b>GP02MH</b>	—	0.2	7	94.3	2150	14.58	4000	> 9.0
<b>GP08M</b>	—	0.8	6	93	1860	14.8	3800	> 9.4
<b>GW06N</b>	—	0.4	2.3	94	2050	15.23	3000	> 8.3
<b>GW06A</b>	—	1	3	93.3	1930	15.2	2600	> 7.6

#### 高性价比产品系列

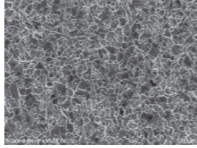
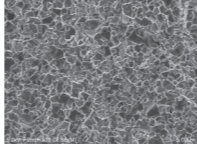
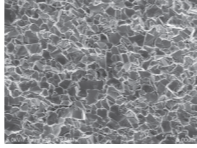
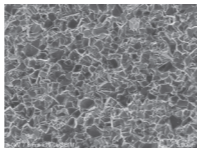
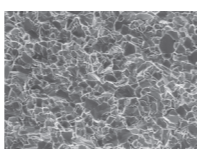
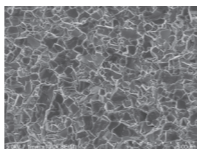
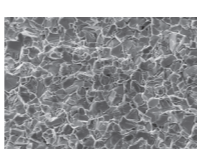
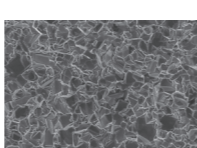
##### Cost-effective product series

牌号 Grade	ISO牌号ISO Grade	晶粒度 Grain Size	钴含量 Cobalt Content	硬度 Hardness		密度 Density	抗弯强度 TRS	断裂韧性Kic Application
	ISO Grade	um	%	HRA	HV30	g/cm <sup>3</sup>	N/mm <sup>2</sup>	MPa*m <sup>1/2</sup>
<b>GU108C</b>	K20-K40	0.8	10	91.5	1580	14.45	3800	> 10.3



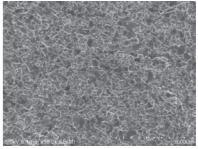
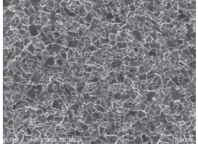
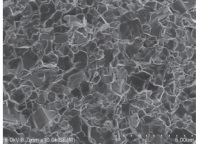
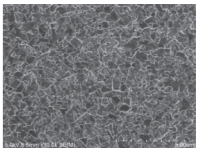
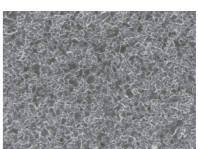
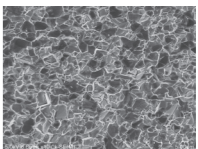
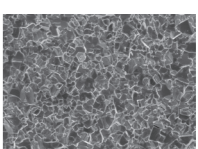
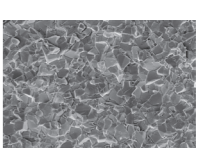
## 牌号介绍

### Grade Introduction

行业 Industry	牌号 Grade	牌号应用 Application	
机加行业 Machining Industry	GU25UF	适用于制作立铣刀和铰刀，特别适用于合金钢、不锈钢、有色金属、钛合金、高温合金、高硬材料 (HRC45~55) 的精加工 Suitable for making end mills and reamers, especially for milling of alloy steel, stainless steel, non-ferrous metal, titanium alloy, high temperature alloy and high hard material (HRC50-55).	
机加行业 Machining Industry	GU20F	适用于合金钢、不锈钢、有色金属、高温合金等材料的切削加工。 Suitable for cutting processing of alloy steel, stainless steel, non-ferrous metal, high temperature alloy and so on.	
机加行业 Machining Industry	GU20	用于制作铣刀、钻头，适用于合金钢、不锈钢、有色金属、高温合金等材料的切削加工。 General use of milling and drilling, suitable for cutting processing of alloy steel, stainless steel, non-ferrous metal, high temperature alloy and so on.	
机加行业 Machining Industry	GMR127	适用于不锈钢铣削粗加工。 Suitable for rough milling of stainless steel.	
机加行业 Machining Industry	GU108C	具有较强的通用性，兼具极高的性价比和优秀的批次间质量稳定性，尤其适用于 HRC≤45 钢材以及铝合金材料的铣削粗加工。 With strong versatility, also with extremely cost effective and excellent quality stability between batches. Especially suitable for rough milling of HRC≤45 steel and aluminum alloy materials.	
3C行业 3C Industry	GTC108	适用于3C行业钛合金通用加工（粗加工、半精加工）。 Suitable for general processing of titanium alloy in 3C industry (including rough machining, semi-finish machining)	
航空航天行业 Aerospace Industry	GSC098	适用于变形高温合金粗精一体通用铣削加工。 Suitable for general milling of wrought high temperature alloy (rough machining, finish machining).	
航空航天行业 Aerospace Industry	GSR118	适用于钛合金、高温合金高效铣削粗加工。 Suitable for high efficiency rough milling of titanium alloy and high temperature alloy.	

## 牌号介绍

### Grade Introduction

行业 Industry	牌号 Grade	牌号应用 Application	
模具行业 Mold Industry	GU092	适用于加工高硬钢 (HRC: 53~65)、高速钢、复合材料等难加工材料的精加工以及钛合金、不锈钢、铝合金等高光表面加工。 Suitable for finish processing of high hard steel (HRC 53-65), high speed steel, composite material and other difficult processing materials, also applicable to polished surface treatment of titanium alloy, stainless steel, aluminum alloy and so on.	
模具行业 Mold Industry	GU15UF	用于制作具有高耐磨性要求的铣刀、雕刻刀，适用于加工 PCB和塑胶。 Suitable for making milling and carving cutter that with high wear resistance, and applicable to processing PCB and plastic.	
模具行业 Mold Industry	GK05A	适用于有色金属、高硅铝合金、石墨制品和碳纤维复合材料（金刚石涂层）。 Suitable for machining non-ferrous metal, aluminium with a high silicon content, graphite and carbon fiber composite (with diamond coating)	
PCB行业 PCB Industry	GU10UF	用于制作 PCB 的钻头和铣刀，适用于高硬材料、复合材料精加工。 Suitable for making PCB drills and mills, and applicable to finish processing of high hard material and composite material.	
PCB行业 PCB Industry	GP02MH	适用PCB高TG值无铅无卤、高速高频、BT载板等中高端板材以及铝基板铣削加工。 Suitable for milling processing of PCB high TG value without lead and halogen, high speed and high frequency, BT carrier and other medium and high-end plate as well as aluminum substrate.	
PCB行业 PCB Industry	GP08M	搭配金刚石涂层，适用于PCB铝基、陶瓷基、高填充、高TG难加工板材 Using with diamond coating and suitable for processing PCB aluminum substrate, ceramic substrate, high filled and high TG difficult processing board.	
木工行业 Woodworking Industry	GW06N	适用于刨花板，密度板，胶合板，塑料和复合材料的加工。 Suitable for processing chipboard, fiberboard, plastic and composite material.	
木工行业 Woodworking Industry	GW06A	适用于加工硬木、刨花板、密度板、塑料。 Suitable for processing hardwood, chipboard, fiberboard and plastic.	

## 牌号推荐

### Grade Selection Guide

被加工材料	切削工具类型	高性能产品系列							细分领域产品系列									通用产品系列	
		GU25UF	GU20F	GU20	GMR127	GTC108	GSC098		GSR118	GU092	GU10UF	GU15UF	GK05A	GP02MH	GP08M	GW06N	GW06A	GU108C	
P 钢 Steel	立铣刀 Endmill	粗加工Roughing		★	★														●
		精加工Finishing	★	●	●														
	钻头 Drill		●	★															
M 不锈钢 Stainless steel	立铣刀 Endmill	粗加工Roughing		●	●	★													●
		精加工Finishing	★	●							●								
	钻头 Drill		●	★															
K 铸铁 Cast Iron	立铣刀 Endmill	粗加工Roughing			★														●
		精加工Finishing		★	●								▲						
	钻头 Drill		●	★															
N 有色金属 Nonferrous Material	立铣刀 Endmill	粗加工Roughing		★	●														●
		精加工Finishing	★	●	●						●		▲						
	钻头 Drill			★															
S 耐热合金 Heat Resistance Material	立铣刀 Endmill	粗加工Roughing		●	●	●	★	★			★								
		精加工Finishing	★		●							●							
	钻头 Drill		●	★															
H 高硬材料 Hardened Material	立铣刀 Endmill	粗加工Roughing	●									●		★					
		精加工Finishing										★	●	●					
	钻头 Drill		●	★									●						
Others	石墨Graphite													▲					
	碳纤维增强塑料CFRP											●	●	●	▲				
	印刷电路板PCB												●			★	▲		
	人造板																★	●	

\*木工行业产品详细应用介绍请参考厦门金鹭《木工硬质合金》产品册

★	优选 First Choice
●	备选 Second Choice
▲	金刚石涂层 Diamond Coating

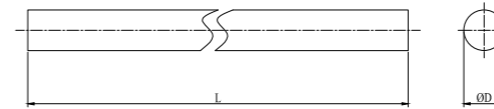
# SOLID RODS 实心圆棒

# B

B  
实心圆棒  
Solid Rods

## 公制长棒 Solid Long Rods-Metric

GU20 GU20F GU25UF



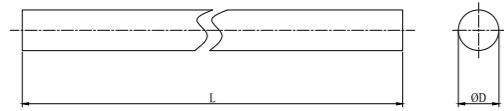
规格 Type	直径 ØD	长度 L
BR1020310/330	2	310/330
BR1030310/330	3	310/330
BR1040310/330	4	310/330
BR1050310/330	5	310/330
BR1060310/330	6	310/330
BR1070310/330	7	310/330
BR1080310/330	8	310/330
BR1090310/330	9	310/330
BR1100310/330	10	310/330
BR1110310/330	11	310/330
BR1120310/330	12	310/330
BR1130310/330	13	310/330
BR1140310/330	14	310/330
BR1150310/330	15	310/330
BR1160310/330	16	310/330
BR1170310/330	17	310/330
BR1180310/330	18	310/330
BR1190310/330	19	310/330
BR1200310/330	20	310/330
BR1210310/330	21	310/330
BR1220310/330	22	310/330

规格 Type	直径 ØD	长度 L
BR1230310/330	23	310/330
BR1240310/330	24	310/330
BR1250310/330	25	310/330
BR1260310/330	26	310/330
BR1270310/330	27	310/330
BR1280310/330	28	310/330
BR1290310/330	29	310/330
BR1300310/330	30	310/330
BR1310310/330	31	310/330
BR1320310/330	32	310/330
BR1330310/330	33	310/330
BR1340310/330	34	310/330
BR1350310/330	35	310/330
BR1360310/330	36	310/330
BR1370310/330	37	310/330
BR1380310/330	38	310/330
BR1390310/330	39	310/330
BR1400310/330	40	310/330
BR1410310/330	41	310/330
BR1420310/330	42	310/330

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD ( mm )		精磨 Ground ØD ( mm )		长度L (mm) 公差 (Tol.)
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	
	2 ≤ ØD < 3	+0.15, +0.30	2 ≤ ØD ≤ 42	h5/h6	0, +5
	3 ≤ ØD ≤ 6	+0.30, +0.50			
	6 < ØD ≤ 12	+0.30, +0.60			
	12 < ØD ≤ 16	+0.30, +0.70			
	16 < ØD ≤ 42	+0.30, +0.80			

英制长棒  
Solid Long Rods-Inch



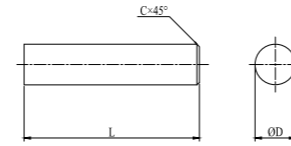
规格 Type	直径 ØD	长度 L
BR1031333	0.1250	13-1/8
BR1035333	0.1406	13-1/8
BR1039333	0.1563	13-1/8
BR1043333	0.1719	13-1/8
BR1047333	0.1875	13-1/8
BR1051333	0.2031	13-1/8
BR1055333	0.2188	13-1/8
BR1059333	0.2344	13-1/8
BR1063333	0.2500	13-1/8
BR1071307	0.2813	12-1/8
BR1075307	0.2969	12-1/8
BR1079307	0.3125	12-1/8
BR1083307	0.3281	12-1/8
BR1087307	0.3438	12-1/8
BR1091307	0.3594	12-1/8
BR1095307	0.3750	12-1/8
BR1099307	0.3906	12-1/8

规格 Type	直径 ØD	长度 L
BR1103307	0.4063	12-1/8
BR1107307	0.4219	12-1/8
BR1111307	0.4375	12-1/8
BR1115307	0.4531	12-1/8
BR1119307	0.4688	12-1/8
BR1123307	0.4844	12-1/8
BR1127307	0.5000	12-1/8
BR1134307	0.5313	12-1/8
BR1142307	0.5625	12-1/8
BR1158307	0.6250	12-1/8
BR1174307	0.6875	12-1/8
BR1190307	0.7500	12-1/8
BR1206307	0.8125	12-1/8
BR1222307	0.8750	12-1/8
BR1238307	0.9375	12-1/8
BR1254307	1.0000	12-1/8

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD ( mm )		精磨 Ground ØD ( mm )		长度 L ( mm )
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	
	1/8 ≤ ØD ≤ 1/4	+0.012, +0.020	1/8 ≤ ØD ≤ 1	h5/h6	+1/8, +3/8
	1/4 < ØD ≤ 31/64	+0.012, +0.024			
	31/64 < ØD ≤ 5/8	+0.012, +0.028			
	5/8 < ØD ≤ 1	+0.012, +0.032			

公制精磨倒角短棒 (h5/h6)  
Ground Rods with Chamfer-Metric



规格 Type	直径 ØD	长度 L	倒角尺寸 C
BR2030040	3	40	0.4
BR2030050	3	50	0.4
BR2030070	3	70	0.4
BR2030100	3	100	0.4
BR2030150	3	150	0.4
BR2040040	4	40	0.4
BR2040050	4	50	0.4
BR2040075	4	75	0.4
BR2040100	4	100	0.4
BR2040150	4	150	0.4
BR2050050	5	50	0.4
BR2050055	5	55	0.5
BR2050060	5	60	0.5
BR2050070	5	70	0.5
BR2050080	5	80	0.5
BR2050100	5	100	0.5
BR2050150	5	150	0.5
BR2060050	6	50	0.5
BR2060060	6	60	0.5
BR2060075	6	75	0.5
BR2060100	6	100	0.5
BR2060150	6	150	0.5
BR2070055	7	55	0.6
BR2070060	7	60	0.6
BR2080060	8	60	0.6
BR2080075	8	75	0.6

规格 Type	直径 ØD	长度 L	倒角尺寸 C
BR2080080	8	80	0.6
BR2080090	8	90	0.6
BR2080100	8	100	0.6
BR2080150	8	150	0.6
BR2100070	10	70	0.6
BR2100075	10	75	0.6
BR2100090	10	90	0.6
BR2100100	10	100	0.6
BR2100125	10	125	0.6
BR2120075	12	75	0.8
BR2120090	12	90	0.8
BR2120100	12	100	0.8
BR2120110	12	110	0.8
BR2120120	12	120	0.8
BR2140075	14	75	0.8
BR2140110	14	110	0.8
BR2140125	14	125	0.8
BR2160100	16	100	0.8
BR2160125	16	125	0.8
BR2180100	18	100	0.8
BR2180150	18	150	0.8
BR2200100	20	100	1.0
BR2200120	20	120	1.0
BR2200150	20	150	1.0
BR2250100	25	100	1.0
BR2250150	25	150	1.0

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

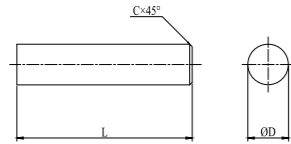
GESAC Standard	精磨 Ground ØD ( mm )		倒角尺寸 C ( mm )	倒角角度 Angle of Chamfer ( ° )	长度 L ( mm )
	范围 (Range)	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)
	3 ≤ ØD ≤ 25	h5/h6	±0.1	45° ± 3°	0, +1.0



## 英制精磨倒角短棒 (h5/h6)

Ground Rods with Chamfer-Inch

GU20 GU20F GU25UF



规格 Type	直径 ØD	长度L (公差Tol./0,+1/16)	倒角尺寸 Chamfer Size	
			C	公差Tol.
BR2031038	1/8	1-1/2	0.015	±0.004
BR2031050	1/8	2	0.015	±0.004
BR2031063	1/8	2-1/2	0.015	±0.004
BR2031076	1/8	3	0.015	±0.004
BR2047050	3/16	2	0.015	±0.004
BR2047076	3/16	3	0.015	±0.004
BR2063050	1/4	2	0.015	±0.004
BR2063063	1/4	2-1/2	0.015	±0.004
BR2063076	1/4	3	0.015	±0.004
BR2063101	1/4	4	0.015	±0.004
BR2079063	5/16	2-1/2	0.015	±0.004
BR2095063	3/8	2-1/2	0.015	±0.004
BR2095076	3/8	3	0.015	±0.004
BR2127063	1/2	2-1/2	0.031	±0.008
BR2127076	1/2	3	0.031	±0.008
BR2127101	1/2	4	0.031	±0.008
BR2158088	5/8	3-1/2	0.031	±0.008
BR2190101	3/4	4	0.031	±0.008
BR2190127	3/4	5	0.031	±0.008
BR2254101	1	4	0.031	±0.008

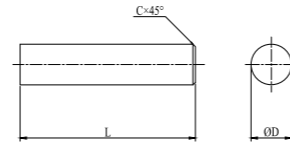
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD(inch)		倒角角度Angle of Chamfer (°)
	范围 (Range)	公差 (Tol.)	公差 (Tol.)
	0.0125≤ØD≤1.25	h5/h6	45°±3°

## DIN精磨倒角短棒 (h5/h6)

Ground Rods with Chamfer-DIN

GU20 GU20F GU25UF



规格 Type	直径 ØD	长度 L	倒角尺寸 C	标准 Standard
BR2030038	3	38	0.4	D6527K/D6527L
BR2035050	3.5	50	0.4	D6528
BR2040050	4	50	0.4	D6528
BR2045050	4.5	50	0.5	D6528
BR2050050	5	50	0.5	D6528
BR2055057	5.5	57	0.5	D6528
BR2060050	6	50	0.5	D6527K
BR2060057	6	57	0.5	D6527L/D6528
BR2060054	6	54	0.5	D6527K
BR2065060	6.5	60	0.6	D6528
BR2070060	7	60	0.6	D6528
BR2075063	7.5	63	0.6	D6528
BR2080058	8	58	0.6	D6527K
BR2080063	8	63	0.6	D6527L/D6528
BR2085067	8.5	67	0.6	D6528
BR2090067	9	67	0.6	D6528

规格 Type	直径 ØD	长度 L	倒角尺寸 C	标准 Standard
BR2095072	9.5	72	0.6	D6528
BR2100066	10	66	0.6	D6527K
BR2100072	10	72	0.6	D6527L/D6528
BR2110083	11	83	0.8	D6528
BR2120073	12	73	0.8	D6527K
BR2120083	12	83	0.8	D6527L/D6528
BR2130083	13	83	0.8	D6528
BR2140075	14	75	0.8	D6527K
BR2140083	14	83	0.8	D6527L/D6528
BR2150092	15	92	0.8	D6528
BR2160082	16	82	0.8	D6527K
BR2160092	16	92	0.8	D6527L/D6528
BR2180084	18	84	0.8	D6527K
BR2180092	18	92	0.8	D6527L/D6528
BR2200092	20	92	1.0	D6527K
BR2200104	20	104	1.0	D6527L/D6528

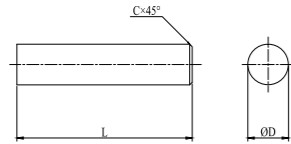
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD(mm)		倒角尺寸C (mm)	倒角角度Angle of Chamfer (°)	长度L(mm)
	范围(Range)	公差	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)
	ØD≤42	h5/h6	±0.1	45°±3°	0,+1.0

## DIN精磨倒角短棒 (h5/h6)

Ground Rods with Chamfer-DIN

GU20 GU20F GU25UF



规格 Type	直径 ØD	长度 L	倒角尺寸 C	标准 Standard
BR2030047	3	47	0.4	D6539
BR2040056	4	56	0.4	D6539
BR2050063	5	63	0.5	D6539
BR2060063	6	63	0.5	D6537K
BR2060067	6	67	0.5	D6537K/D6537L/D6539
BR2060075	6	75	0.5	D6537L
BR2060083	6	83	0.5	D6537L
BR2070075	7	75	0.6	D6539
BR2080080	8	80	0.6	D6537K/D6539
BR2080092	8	92	0.6	D6537L
BR2090085	9	85	0.6	D6539
BR2100090	10	90	0.6	D6537K/D6539
BR2100104	10	104	0.6	D6537L
BR2110096	11	96	0.8	D6539

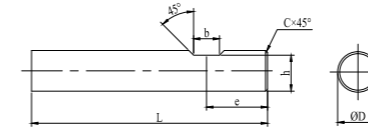
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD(mm)		倒角尺寸C (mm)	倒角角度Angle of Chamfer (°)	长度L(mm)
	范围(Range)	公差	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)
	ØD≤42	h5/h6	±0.1	45°±3°	0,+1.0

## 精磨倒角侧固短棒 (h5/h6)

Endmill Blanks with Weldon

GU20 GU20F GU25UF



规格 Type	直径 ØD	长度 L	侧固槽宽 b (Tol./0,+0.5)	端面到侧固槽中心距离 e(公差Tol./0,-1)	侧固槽深h	(公差Tol.)	倒角尺寸 C(Tol./±0.1)
BM2060050	6	50	4.2	15.9	4.8	+0,-0.075	0.5
BM2060057	6	57	4.2	18.0	5.1	+0,-0.075	0.5
BM2080063	8	63	5.5	18.0	6.9	+0,-0.090	0.6
BM2100072	10	72	7.0	20.0	8.5	+0,-0.090	0.6
BM2120083	12	83	8.0	22.5	10.4	+0,-0.110	0.8
BM2140083	14	83	8.0	22.5	12.7	+0,-0.110	0.8
BM2160092	16	92	10.0	24.0	14.2	+0,-0.110	0.8
BM2180092	18	92	10.0	24.0	16.2	+0,-0.110	0.8
BM2200104	20	104	11.0	25.0	18.2	+0,-0.130	1.0

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

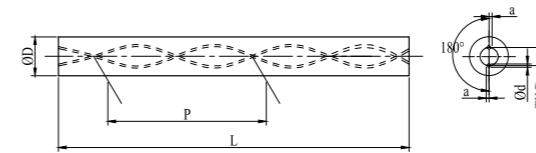
GESAC Standard	精磨 Ground ØD(mm)		倒角尺寸C (mm)	倒角角度Angle of Chamfer (°)	长度L(mm)
	范围(Range)	公差	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)
	ØD≤42	h5/h6	±0.1	45°±3°	0,+1.0

### 30°双螺旋孔棒材

Rods with 2 Helical Coolant Holes (30°)

GU20

GU20F



规格 Type	直径 ØD	长度L (公差Tol. /0,+5)	内孔径 Ød	孔间距 Bolt Circle TKØ	螺距(±0.5°) Pitch			孔中心偏差 Hole Deviation a
					P	Tol.		
GD301030330040017A/B	3	330	0.40	1.70	16.32	-0.32	+0.33	0.15
GD301040330060022A/B	4	330	0.60	2.20	21.77	-0.43	+0.45	0.15
GD301050330070026A/B	5	330	0.70	2.60	27.21	-0.54	+0.56	0.15
GD301060330070026A/B	6	330	0.70	2.60	32.65	-0.65	+0.67	0.15
GD301070330100037A/B	7	330	1.00	3.70	38.09	-0.76	+0.78	0.15
GD301080330100040A/B	8	330	1.00	4.00	43.53	-0.86	+0.89	0.15
GD301090330140048A/B	9	330	1.40	4.80	48.97	-0.97	+1.00	0.20
GD301100330140048A/B	10	330	1.40	4.80	54.41	-1.08	+1.11	0.20
GD301110330140053A/B	11	330	1.40	5.30	59.86	-1.19	+1.22	0.30
GD301120330140062A/B	12	330	1.40	6.25	65.30	-1.30	+1.34	0.30
GD301130330175065A/B	13	330	1.75	6.50	70.74	-1.40	+1.45	0.37

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC 标准 Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	3 ≤ ØD ≤ 6	+0.60, +1.00	3 ≤ ØD ≤ 25	h5/h6
	6 < ØD ≤ 24	+0.70, +1.10		
	ØD = 25	+0.80, +1.20		
	内孔径 Ød (mm)		孔间距 TKØ (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	0.40 ≤ Ød ≤ 0.90	±0.10	TKØ ≤ 4.00	+0, -0.40
	0.90 < Ød ≤ 1.70	±0.15	4.00 < TKØ ≤ 5.00	+0, -0.60
	Ød = 1.75	±0.20	5.00 < TKØ ≤ 10.10	+0, -0.80
	Ød = 2.00	±0.25	10.10 < TKØ ≤ 13.30	+0, -1.00

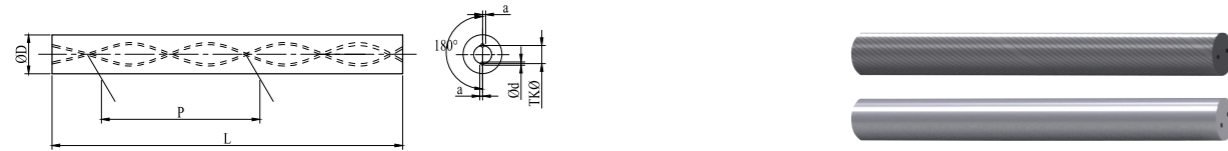
## RODS WITH COOLANT HOLES 带内冷孔棒材

# B

### 30°双螺旋孔棒材

Rods with 2 Helical Coolant Holes (30°)

GU20 GU20F



规格 Type	直径 ØD	长度 L (公差 Tol. / 0,+5)	内孔径 Ød	孔间距 Bolt Circle TKØ	螺距(±0.5°) Pitch			孔中心偏离 Hole Deviation a	
					P	Tol.		a	α
GD301140330175071A/B	14	330	1.75	7.10	76.18	-1.51	+1.56	0.40	
GD301140330190067A/B	14	330	1.90	6.70	76.18	-1.51	+1.56	0.40	
GD301150330175077A/B	15	330	1.75	7.70	81.62	-1.62	+1.67	0.40	
GD301160330175083A/B	16	330	1.75	8.30	87.06	-1.73	+1.78	0.40	
GD301160330210080A/B	16	330	2.10	8.00	87.07	-1.73	+1.78	0.45	
GD301160330250088A/B	16	330	2.50	8.80	87.06	-1.73	+1.78	0.45	
GD301170330175089A/B	17	330	1.75	8.90	92.50	-1.84	+1.89	0.45	
GD301180330200095A/B	18	330	2.00	9.55	97.95	-1.94	+2.00	0.50	
GD301180330280099A/B	18	330	2.80	9.90	97.95	-1.95	+2.00	0.50	
GD301190330200101A/B	19	330	2.00	10.10	103.39	-2.05	+2.12	0.50	
GD301200330200104A/B	20	330	2.00	10.40	108.83	-2.16	+2.23	0.50	
GD301200330250100A/B	20	330	2.50	10.00	108.83	-2.16	+2.23	0.50	
GD301210330200111A/B	21	330	2.00	11.15	114.27	-2.27	+2.34	0.50	
GD301220330200116A/B	22	330	2.00	11.60	119.71	-2.38	+2.45	0.50	
GD301230330200122A/B	23	330	2.00	12.20	125.15	-2.48	+2.56	0.50	
GD301240330200128A/B	24	330	2.00	12.80	130.59	-2.59	+2.67	0.50	
GD301250330200133A/B	25	330	2.00	13.30	136.03	-2.70	+2.78	0.50	

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC 标准 Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	3 ≤ ØD ≤ 6	+0.60, +1.00	3 ≤ ØD ≤ 25	h5/h6
	6 < ØD ≤ 24	+0.70, +1.10		
	ØD=25	+0.80, +1.20		
	内孔径 Ød (mm)		孔间距 TKØ (mm)	
范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	
0.40 ≤ Ød ≤ 0.90	±0.10	TKØ ≤ 4.00	+0, -0.40	
0.90 < Ød ≤ 1.70	±0.15	4.00 < TKØ ≤ 5.00	+0, -0.60	
Ød=1.75	±0.20	5.00 < TKØ ≤ 10.10	+0, -0.80	
Ød=2.00	±0.25	10.10 < TKØ ≤ 13.30	+0, -1.00	

### 30°三螺旋孔棒材

Rods with 3 Helical Coolant Holes (30°)

GU20 GU20F



规格 Type	直径 ØD	长度 L (公差 Tol. / 0,+5)	内孔径 Ød	孔间距 Bolt Circle TKØ	螺距(±0.5°) Pitch			孔中心偏离 Hole Deviation	
					P	Tol.		a	α
GE301060330070027A/B	6	330	0.70	2.75	32.65	-0.65	+0.67	0.15	±4°
GE301060330050029A/B	6	330	0.50	2.90	32.65	-0.65	+0.67	0.15	±4°
GE301080330100040A/B	8	330	1.00	4.00	43.53	-0.86	+0.89	0.15	±4°
GE301080330070040A/B	8	330	0.70	4.00	43.53	-0.86	+0.89	0.15	±4°
GE301100330140050A/B	10	330	1.40	5.00	54.41	-1.08	+1.11	0.20	±4°
GE301100330085051A/B	10	330	0.85	5.10	54.41	-1.08	+1.11	0.20	±4°
GE301120330140060A/B	12	330	1.40	6.00	65.30	-1.30	+1.34	0.30	±4°
GE301120330110063A/B	12	330	1.10	6.30	65.30	-1.30	+1.34	0.30	±4°
GE301140330175070A/B	14	330	1.75	7.00	76.18	-1.51	+1.56	0.40	±4°
GE301140330140073A/B	14	330	1.40	7.30	76.18	-1.51	+1.56	0.40	±4°
GE301160330175080A/B	16	330	1.75	8.00	87.06	-1.73	+1.78	0.40	±4°
GE301160330160083A/B	16	330	1.60	8.30	87.06	-1.73	+1.78	0.40	±4°
GE301180330200095A/B	18	330	2.00	9.55	97.95	-1.94	+2.00	0.50	±4°
GE301180330170095A/B	18	330	1.70	9.50	97.95	-1.94	+2.00	0.50	±4°
GE301200330200100A/B	20	330	2.00	10.00	108.83	-2.16	+2.23	0.50	±4°
GE301200330190102A/B	20	330	1.90	10.20	108.83	-2.16	+2.23	0.50	±4°
GE301250330200133A/B	25	330	2.00	12.5	136.03	-2.70	+2.78	0.50	±4°

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

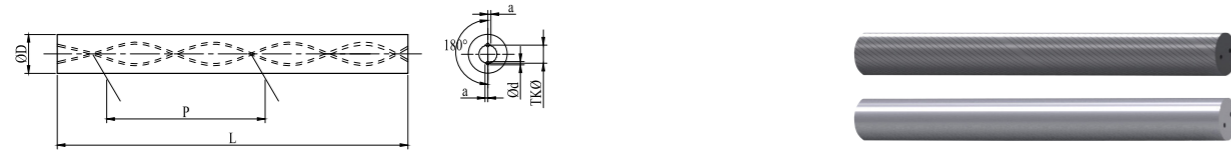
GESAC Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	ØD=6	+0.60, +1.00	6 ≤ ØD ≤ 20	h5/h6
	6 < ØD ≤ 20	+0.70, +1.10		
	内孔径 Ød (mm)		孔间距 TKØ (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
0.40 ≤ Ød ≤ 0.90	±0.10	TKØ ≤ 4.00	+0, -0.40	
0.90 < Ød ≤ 1.70	±0.15	4.00 < TKØ ≤ 6.00	+0, -0.60	
Ød=1.75	±0.20	6.00 < TKØ ≤ 9.55	+0, -0.80	
Ød=2.00	±0.25	TKØ=10.00	+0, -1.00	



### 40°双螺旋孔棒材

Rods with 2 Helical Coolant Holes (40°)

GU20 GU20F



规格 Type	直径 ØD	长度 L (公差 Tol. / 0,+5)	内孔径 Ød	孔间距 Bolt Circle TKØ	螺距(±0.5°) Pitch		孔中心偏离 Hole Deviation a	
					P	Tol.		
GD401060330050022A/B	6	330	0.50	2.20	22.46	-0.39	+0.40	0.15
GD401070330065024A/B	7	330	0.65	2.40	26.21	-0.46	+0.47	0.15
GD401080330065027A/B	8	330	0.65	2.70	29.95	-0.53	+0.54	0.15
GD401090330075032A/B	9	330	0.75	3.20	33.70	-0.59	+0.60	0.20
GD401100330080035A/B	10	330	0.80	3.50	37.44	-0.66	+0.67	0.20
GD401110330080037A/B	11	330	0.80	3.70	41.18	-0.72	+0.74	0.30
GD401120330090042A/B	12	330	0.90	4.20	44.93	-0.79	+0.80	0.30
GD401130330090044A/B	13	330	0.90	4.40	48.67	-0.85	+0.87	0.37
GD401140330100047A/B	14	330	1.00	4.70	52.42	-0.92	+0.94	0.40
GD401150330110051A/B	15	330	1.10	5.10	56.16	-0.99	+1.01	0.40
GD401160330120055A/B	16	330	1.20	5.50	59.90	-1.05	+1.07	0.40
GD401170330120059A/B	17	330	1.20	5.90	63.65	-1.12	+1.14	0.45
GD401180330140063A/B	18	330	1.40	6.30	67.39	-1.18	+1.21	0.50
GD401190330140067A/B	19	330	1.40	6.70	71.14	-1.25	+1.27	0.50
GD401200330150071A/B	20	330	1.50	7.10	74.88	-1.31	+1.34	0.50

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	6 ≤ ØD ≤ 20	+1.10, +1.50	6 ≤ ØD ≤ 20	h5/h6
GESAC Standard	内孔径 Ød (mm)		孔间距 TKØ (mm)	
	范围(Range)	公差 (Tol.)	范围(Range)	公差 (Tol.)
	0.40 ≤ Ød ≤ 0.60	±0.10	TKØ ≤ 2.20	+0, -0.40
	0.60 < Ød ≤ 0.90	±0.15	2.20 < TKØ ≤ 2.70	+0, -0.60
	0.90 < Ød ≤ 1.20	±0.20	2.70 < TKØ ≤ 6.30	+0, -0.80
	1.20 < Ød ≤ 1.50	±0.25	6.3 < TKØ ≤ 7.1	+0, -1.00

### 40°三螺旋孔棒材

Rods with 3 Helical Coolant Holes (40°)

GU20 GU20F



规格 Type	直径 ØD	长度 L (公差 Tol. / 0,+5)	内孔径 Ød	孔间距 Bolt Circle TKØ	螺距(±0.5°) Pitch		孔中心偏离 Hole Deviation		
					P	Tol.	a	α	
GE401060330050022A/B	6	330	0.50	2.20	22.46	-0.39	+0.40	0.15	±4°
GE401080330065027A/B	8	330	0.65	2.70	29.95	-0.53	+0.54	0.15	±4°
GE401100330080035A/B	10	330	0.80	3.50	37.44	-0.66	+0.67	0.15	±4°
GE401120330090042A/B	12	330	0.90	4.20	44.93	-0.79	+0.80	0.30	±4°
GE401140330100047A/B	14	330	1.00	4.70	52.42	-0.92	+0.94	0.40	±4°
GE401160330120055A/B	16	330	1.20	5.50	59.90	-1.05	+1.07	0.40	±4°
GE401180330140063A/B	18	330	1.40	6.30	67.39	-1.18	+1.21	0.50	±4°
GE401200330150071A/B	20	330	1.50	7.10	74.88	-1.31	+1.34	0.50	±4°

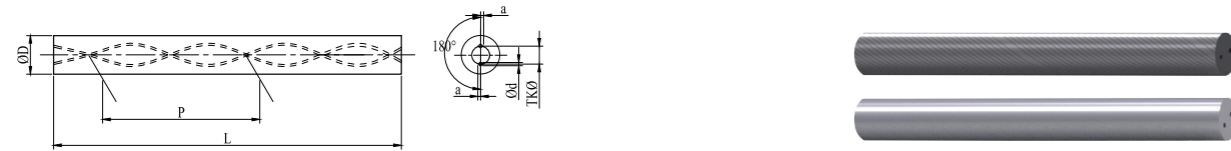
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)
	6 ≤ ØD ≤ 20	+1.10, +1.50	6 ≤ ØD ≤ 20	h5/h6
GESAC Standard	内孔径 Ød (mm)		孔间距 TKØ (mm)	
	范围(Range)	公差 (Tol.)	范围(Range)	公差 (Tol.)
	0.40 ≤ Ød ≤ 0.80	±0.15	2.20 < TKØ ≤ 2.50	+0, -0.30
	0.80 < Ød ≤ 1.20	±0.20	3.50 < TKØ ≤ 6.30	+0, -0.50
	1.20 < Ød ≤ 1.50	±0.25	6.30 < TKØ ≤ 7.10	+0, -0.70
	1.20 < Ød ≤ 1.50	±0.25	6.3 < TKØ ≤ 7.1	+0, -1.00

### 其他角度双螺旋孔棒材

Other Rods with Helical Coolant Holes

GU20 GU20F



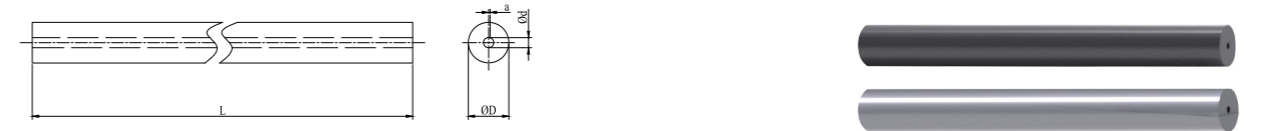
规格 Type	直径 ØD	角度 C	长度 L	内孔径 Hole Diameter		孔间距 Bolt Circle		螺距 Pitch			孔中心偏离 Hole Deviation a
				Ød	Tol.	TKØ	Tol.	P	Tol.		
GD151060330070028A/B	6	15	330	0.70	±0.10	2.80	-0.40	70.35	-2.38	+2.54	0.15
GD151080330125038A/B	8	15	330	1.25	±0.15	3.80	-0.40	93.80	-3.17	+3.38	0.15
GD151100330140051A/B	10	15	330	1.40	±0.15	5.10	-0.60	117.25	-3.96	+4.23	0.20
GD151120330155065A/B	12	15	330	1.55	±0.15	6.55	-0.60	140.70	-4.76	+5.08	0.30
GD151140330190071A/B	14	15	330	1.90	±0.20	7.10	-0.80	164.14	-5.55	+5.92	0.40
GD151160330210084A/B	16	15	330	2.10	±0.20	8.40	-0.80	187.59	-6.34	+6.77	0.40
GD151180330230094A/B	18	15	330	2.30	±0.25	9.40	-0.80	211.04	-7.13	+7.61	0.50
GD151200330250105A/B	20	15	330	2.50	±0.25	10.50	-1.00	234.49	-7.93	+8.46	0.50
GD391030330020009A/B	3	39.5	330	0.20	±0.03	0.90	-0.20	11.43	-0.20	+0.21	0.04
GD491040330026009A/B	4	48.8	330	0.26	±0.05	0.95	-0.20	11.00	-0.38	+0.39	0.05
GD451040330033012A/B	4	45.2	330	0.33	±0.05	1.2	-0.20	12.5	-0.43	+0.44	0.05
GD361060330080020A/B	6	36	330	0.80	±0.10	2.00	-0.20	25.84	-0.46	+0.49	0.15
GD331060330090023A/B	6	33	330	0.90	±0.10	2.30	-0.20	29.00	-0.58	+0.59	0.15
GD461060330050017A/B	6	46.3	330	0.50	±0.10	1.70	-0.20	18.00	-0.31	+0.32	0.15
GD361060330080020A/B	6	36	330	0.80	±0.10	2.00	-0.20	25.84	-0.46	+0.49	0.15
GD431060330060015A/B	6	43	330	0.60	±0.10	1.50	-0.20	20.40	-0.34	+0.37	0.15
GD401060330070019A/B	6	40	330	0.70	±0.10	1.90	-0.20	22.46	-0.39	+0.40	0.15
GD401060330070020A/B	6	40	330	0.70	±0.10	2.00	-0.20	22.46	-0.39	+0.40	0.15
GD361080330100034A/B	8	35.7	330	1.00	±0.10	3.40	-0.20	35.00	-1.28	+1.30	0.15
GD401080330070030A/B	8	40	330	0.70	±0.10	3.05	-0.30	29.95	-0.53	+0.54	0.15
GD341100330115046A/B	10	34.3	330	1.15	±0.15	4.60	-0.40	46.05	-0.85	+0.87	0.20
GD321100330135046A/B	10	32.9	330	1.35	±0.075	4.60	-0.40	48.56	-0.92	+0.94	0.20
GD331120330150056A/B	12	33.5	330	1.50	±0.15	5.60	-0.40	57.00	-1.11	+1.05	0.30
GD321120330165056A/B	12	32.1	330	1.65	±0.15	5.60	-0.40	60.09	-1.15	+1.18	0.30
GD301250330320123A/B	25	29.4	330	3.20	±0.30	12.30	-0.60	139.39	-2.80	+2.89	0.50

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

### 单直孔棒材

Rods with Central Coolant Hole

GU20 GU20F GU25UF

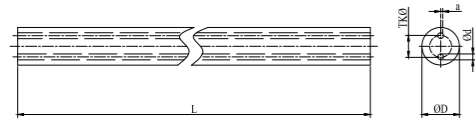


规格 Type	直径 Diameter			长度 L (公差 Tol. / 0,+5)	内孔径 Hole Diameter	
	ØD	毛坯公差 Tol. of Unground	精品公差 Tol. of Ground		Ød	Tol.
GA1030330050	3	+0.30,+0.50	h5/h6	330	0.50	±0.10
GA1040330080	4	+0.30,+0.50	h5/h6	330	0.80	±0.10
GA1050330080	5	+0.30,+0.50	h5/h6	330	0.80	±0.10
GA1060330100	6	+0.30,+0.50	h5/h6	330	1.00	±0.15
GA1070330100	7	+0.30,+0.60	h5/h6	330	1.00	±0.15
GA1080330100	8	+0.30,+0.60	h5/h6	330	1.00	±0.15
GA1090330140	9	+0.30,+0.60	h5/h6	330	1.40	±0.15
GA1100330140	10	+0.30,+0.60	h5/h6	330	1.40	±0.15
GA1110330140	11	+0.30,+0.60	h5/h6	330	1.40	±0.15
GA1120330175	12	+0.30,+0.60	h5/h6	330	1.75	±0.15
GA1130330175	13	+0.30,+0.70	h5/h6	330	1.75	±0.15
GA1140330175	14	+0.30,+0.70	h5/h6	330	1.75	±0.15
GA1150330200	15	+0.30,+0.70	h5/h6	330	2.00	±0.20
GA1160330200	16	+0.30,+0.70	h5/h6	330	2.00	±0.20
GA1170330200	17	+0.30,+0.80	h5/h6	330	2.00	±0.20
GA1180330200	18	+0.30,+0.80	h5/h6	330	2.00	±0.20
GA1190330200	19	+0.30,+0.80	h5/h6	330	2.00	±0.20
GA1200330250	20	+0.30,+0.80	h5/h6	330	2.50	±0.25
GA1210330250	21	+0.30,+0.80	h5/h6	330	2.50	±0.25
GA1220330250	22	+0.30,+0.80	h5/h6	330	2.50	±0.25
GA1230330250	23	+0.30,+0.80	h5/h6	330	2.50	±0.25
GA1240330300	24	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1250330300	25	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1260330300	26	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1270330300	27	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1280330300	28	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1290330300	29	+0.30,+0.80	h5/h6	330	3.00	±0.25
GA1300330300	30	+0.30,+0.80	h5/h6	330	3.00	±0.25

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

## 双直孔棒材

Rods with Two Straight Coolant Holes

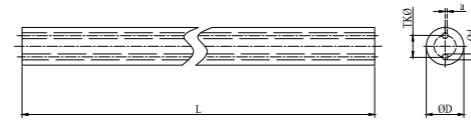


规格 Type	直径 Diameter			长度 L (公差 Tol. /0,+5)	内孔径 Hole Diameter		孔间距 Bolt Circle	
	直径 ØD	毛坯公差 Tol. of Unground	精品公差 Tol. of Ground		Ød	Tol.	TKØ	Tol.
GB1040330080018	4	+0.30,+0.50	h5/h6	330	0.80	±0.10	1.80	+0,-0.15
GB1050330080020	5	+0.30,+0.50	h5/h6	330	0.80	±0.10	2.00	+0,-0.15
GB1060330100030	6	+0.30,+0.50	h5/h6	330	1.00	±0.15	3.00	+0,-0.20
GB1070330100035	7	+0.30,+0.60	h5/h6	330	1.00	±0.15	3.50	+0,-0.20
GB1080330100040	8	+0.30,+0.60	h5/h6	330	1.00	±0.15	4.00	+0,-0.30
GB1090330140040	9	+0.30,+0.60	h5/h6	330	1.40	±0.15	4.00	+0,-0.30
GB1100330140050	10	+0.30,+0.60	h5/h6	330	1.40	±0.15	5.00	+0,-0.30
GB1110330140050	11	+0.30,+0.60	h5/h6	330	1.40	±0.15	5.00	+0,-0.30
GB1120330175060	12	+0.30,+0.60	h5/h6	330	1.75	±0.15	6.00	+0,-0.30
GB1130330175060	13	+0.30,+0.70	h5/h6	330	1.75	±0.15	6.00	+0,-0.30
GB1140330175070	14	+0.30,+0.70	h5/h6	330	1.75	±0.15	7.00	+0,-0.30
GB1150330200070	15	+0.30,+0.70	h5/h6	330	2.00	±0.20	7.00	+0,-0.30
GB1160330200080	16	+0.30,+0.70	h5/h6	330	2.00	±0.20	8.00	+0,-0.30
GB1170330200080	17	+0.30,+0.80	h5/h6	330	2.00	±0.20	8.00	+0,-0.30
GB1180330200090	18	+0.30,+0.80	h5/h6	330	2.00	±0.20	9.00	+0,-0.30
GB1190330200090	19	+0.30,+0.80	h5/h6	330	2.00	±0.20	9.00	+0,-0.30
GB1200330250100	20	+0.30,+0.80	h5/h6	330	2.50	±0.25	10.00	+0,-0.40
GB1210330250100	21	+0.30,+0.80	h5/h6	330	2.50	±0.25	10.00	+0,-0.40
GB1220330250110	22	+0.30,+0.80	h5/h6	330	2.50	±0.25	11.00	+0,-0.40
GB1230330250110	23	+0.30,+0.80	h5/h6	330	2.50	±0.25	11.00	+0,-0.40
GB1240330300120	24	+0.30,+0.80	h5/h6	330	3.00	±0.25	12.00	+0,-0.50
GB1250330300120	25	+0.30,+0.80	h5/h6	330	3.00	±0.25	12.00	+0,-0.50
GB1260330300130	26	+0.30,+0.80	h5/h6	330	3.00	±0.25	13.00	+0,-0.50

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

## 双直孔棒材

Rods with Two Straight Coolant Holes

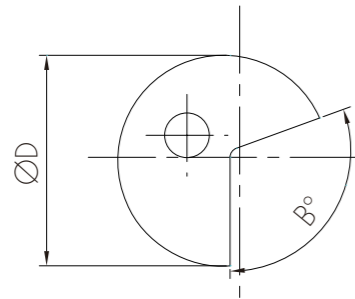


规格 Type	直径 Diameter			长度 L (公差 Tol. /0,+5)	内孔径 Hole Diameter		孔间距 Bolt Circle	
	直径 ØD	毛坯公差 Tol. of Unground	精品公差 Tol. of Ground		Ød	Tol.	TKØ	Tol.
GB1060330080015	6	+0.30,+0.50	h5/h6	330	0.80	±0.10	1.50	+0,-0.20
GB1070330080015	7	+0.30,+0.60	h5/h6	330	0.80	±0.10	1.50	+0,-0.20
GB1080330100015	8	+0.30,+0.60	h5/h6	330	1.00	±0.15	1.50	+0,-0.30
GB1090330100026	9	+0.30,+0.60	h5/h6	330	1.00	±0.15	2.60	+0,-0.30
GB1100330100026	10	+0.30,+0.60	h5/h6	330	1.00	±0.15	2.60	+0,-0.30
GB1110330120036	11	+0.30,+0.60	h5/h6	330	1.20	±0.15	3.60	+0,-0.30
GB1120330120036	12	+0.30,+0.60	h5/h6	330	1.20	±0.15	3.60	+0,-0.30
GB1130330120036	13	+0.30,+0.70	h5/h6	330	1.20	±0.15	3.60	+0,-0.30
GB1140330150050	14	+0.30,+0.70	h5/h6	330	1.50	±0.15	5.00	+0,-0.30
GB1150330150050	15	+0.30,+0.70	h5/h6	330	1.50	±0.15	5.00	+0,-0.30
GB1160330150050	16	+0.30,+0.70	h5/h6	330	1.50	±0.15	5.00	+0,-0.30
GB1170330200062	17	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.30
GB1180330200062	18	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.30
GB1190330200062	19	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.30
GB1200330200062	20	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.40
GB1210330200062	21	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.40
GB1220330200062	22	+0.30,+0.80	h5/h6	330	2.00	±0.20	6.20	+0,-0.40
GB1230330200075	23	+0.30,+0.80	h5/h6	330	2.00	±0.20	7.50	+0,-0.40
GB1240330200075	24	+0.30,+0.80	h5/h6	330	2.00	±0.20	7.50	+0,-0.50
GB1250330200075	25	+0.30,+0.80	h5/h6	330	2.00	±0.20	7.50	+0,-0.50
GB1260330200075	26	+0.30,+0.80	h5/h6	330	2.00	±0.20	7.50	+0,-0.50

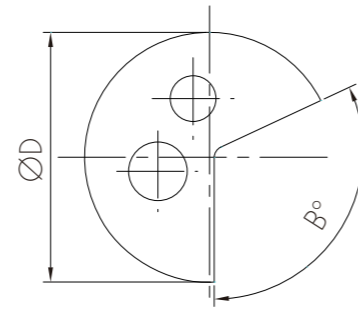
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

## 毛坯枪钻 (深孔钻)

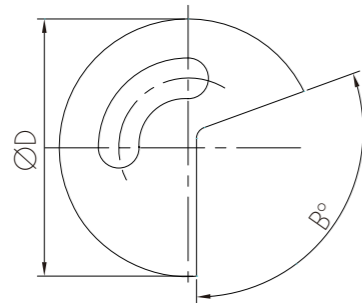
Gun Drill Blanks



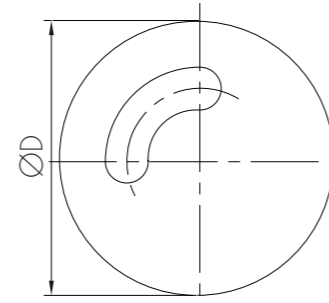
带槽单孔型  
Gun Drill Blank-I



带槽双孔型  
Gun Drill Blank-II



带槽肾形  
Gun Drill Blank-III



无槽肾形  
Gun Drill Blank-IV

- 适用范围: 深孔钻  
Application Area: Gun Drill
- 产品规格: 直径Ø6-Ø25 mm、长度30-330 mm  
Production Type: Diameter Ø6-Ø25 mm、Length 30-330 mm
- 尺寸公差: 具体尺寸根据图纸定制  
Tolerance: To Customer Specification



PREFORMS  
成型棒

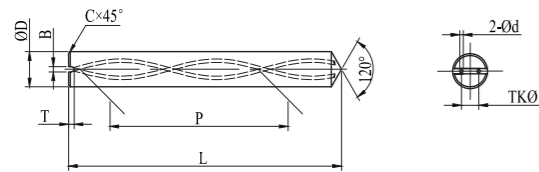
B



### 精磨油槽尖锥螺旋孔棒材

Ground Drill Blanks with Point, Slot and Helical Coolant Holes (30°)

GU20



规格 Type	直径 ØD	长度 L	槽宽 B	槽深 T	倒角尺寸 C	内孔径 Ød	孔间距 TKØ	螺距(±0.5°) Pitch		系列 Series
								P	Tol.	
GD305060067070026A	6	67.0	1.50	1.40	0.50	0.70	2.60	32.65	-0.65,+0.67	3×D
GD305080080100040A	8	80.5	2.00	1.95	0.60	1.00	4.00	43.53	-0.86,+0.89	
GD305100090140048A	10	90.5	2.50	2.10	0.60	1.40	4.80	54.41	-1.08,+1.12	
GD305120104140062A	12	104.0	2.50	2.25	0.80	1.40	6.25	65.30	-1.30,+1.33	
GD305140109175071A	14	109.0	2.50	2.60	0.80	1.75	7.10	76.18	-1.51,+1.56	
GD305160117175083A	16	117.5	2.50	2.80	0.80	1.75	8.30	87.06	-1.73,+1.78	
GD305180125200095A	18	125.5	3.00	3.00	0.80	2.00	9.55	97.95	-1.95,+2.00	
GD305200134200104A	20	134.0	3.00	3.20	1.00	2.00	10.40	108.8	-2.16,+2.22	
GD305060083070026A	6	83.0	1.50	1.40	0.50	0.70	2.60	32.65	-0.65,+0.67	
GD305080092100040A	8	92.5	2.00	1.95	0.60	1.00	4.00	43.53	-0.86,+0.89	
GD305100104140048A	10	104.5	2.50	2.10	0.60	1.40	4.80	54.41	-1.08,+1.12	
GD305120120140062A	12	120.0	2.50	2.25	0.80	1.40	6.25	65.30	-1.30,+1.33	
GD305140126175071A	14	126.0	2.50	2.60	0.80	1.75	7.10	76.18	-1.51,+1.56	
GD305160135175083A	16	135.5	2.50	2.80	0.80	1.75	8.30	87.06	-1.73,+1.78	
GD305180145200095A	18	145.5	3.00	3.00	0.80	2.00	9.55	97.95	-1.95,+2.00	
GD305200156200104A	20	156.0	3.00	3.20	1.00	2.00	10.40	108.8	-2.16,+2.22	

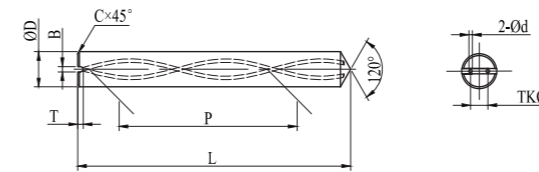
所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD (mm)		长度 L (mm)		槽宽B 公差 (Tol.)	槽深T 公差 (Tol.)
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)		
±0.2	6 ≤ ØD ≤ 20	h5/h6	L < 120	0,+1.50	±0.2	0, +0.40
			120 ≤ L	0,+2.00		
			内孔径 Ød (mm)			
	Ød ≤ 0.70	±0.10	TKØ ≤ 4.00	+0,-0.40		
	0.70 < Ød ≤ 1.40	±0.15	TKØ = 4.80	+0,-0.60		
	Ød = 1.75	±0.20	4.80 < TKØ ≤ 9.55	+0,-0.80		
Ød = 2.00	±0.25	TKØ = 10.40	+0,-1.00			

### 精磨油槽尖锥螺旋孔棒材

Ground Drill Blanks with Point, Slot and Helical Coolant Holes (30°)

GU20



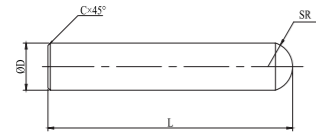
规格 Type	直径 ØD	长度 L	槽宽 B	槽深 T	倒角尺寸 C	内孔径 Ød	孔间距 TKØ	螺距(±0.5°) Pitch		系列 Series
								P	Tol.	
GD305060098070026A	6	98.0	1.50	1.40	0.50	0.70	2.60	32.65	-0.65,+0.67	7×D
GD305080107100040A	8	107.5	2.00	1.95	0.60	1.00	4.00	43.53	-0.86,+0.89	
GD305100132140048A	10	132.5	2.50	2.10	0.60	1.40	4.80	54.41	-1.08,+1.12	
GD305120157140062A	12	157.0	2.50	2.25	0.80	1.40	6.25	65.30	-1.30,+1.33	
GD305140184175071A	14	184.0	2.50	2.60	0.80	1.75	7.10	76.18	-1.51,+1.56	
GD305160206175083A	16	206.5	2.50	2.80	0.80	1.75	8.30	87.06	-1.73,+1.78	
GD305180225200095A	18	225.5	3.00	3.00	0.80	2.00	9.55	97.95	-1.95,+2.00	
GD305200247200104A	20	247.0	3.00	3.20	1.00	2.00	10.40	108.8	-2.16,+2.22	

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD (mm)		长度 L (mm)		槽宽B 公差 (Tol.)	槽深T 公差 (Tol.)
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)		
±0.2	6 ≤ ØD ≤ 20	h5/h6	L < 120	0,+1.50	±0.2	0, +0.40
			120 ≤ L	0,+2.00		
			内孔径 Ød (mm)			
	Ød ≤ 0.70	±0.10	TKØ ≤ 4.00	+0,-0.40		
	0.70 < Ød ≤ 1.40	±0.15	TKØ = 4.80	+0,-0.60		
	Ød = 1.75	±0.20	4.80 < TKØ ≤ 9.55	+0,-0.80		
Ød = 2.00	±0.25	TKØ = 10.40	+0,-1.00			

## 精磨球头棒 Ground Ballnose Endmill Blanks

GU20



规格 Type	尺寸 (公制) Dimension (Metric)		
	直径 ØD (h5/h6)	长度 L(公差 Tol./0,+1)	球头半径 SR(公差 Tol. /0, + 0.38)
BQ3060058	6	58	3.15
BQ3060080	6	80	3.15
BQ3080064	8	64	4.19
BQ3080100	8	100	4.19
BQ3100073	10	73	5.24
BQ3100100	10	100	5.24
BQ3120084	12	84	6.29
BQ3120120	12	120	6.29

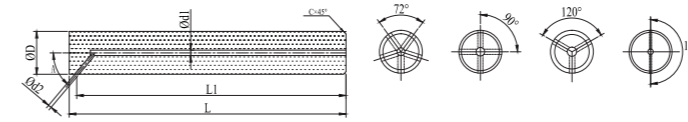
规格 Type	尺寸 (英制) Dimension (Inch)		
	直径 ØD (h5/h6)	长度 L(公差 Tol./0,+1)	球头半径 SR(公差 Tol. /0, + 0.38)
BQ3140084	14	84	7.34
BQ3140120	14	120	7.34
BQ3160093	16	93	8.39
BQ3160140	16	140	8.39
BQ3180093	18	93	9.44
BQ3180160	18	160	9.44
BQ3200105	20	105	10.49
BQ3200160	20	160	10.49

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	精磨 Ground ØD (mm)		长度 L (mm)		球头半径SR
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	公差 (Tol.)
	6 ≤ ØD ≤ 20	h5/h6	58 ≤ L ≤ 160	0, +1	0, + 0.38

## 精磨Y形孔棒材 Ground Milling Cutter Blanks with Axial Coolant Hole and Lateral Exits

GU20



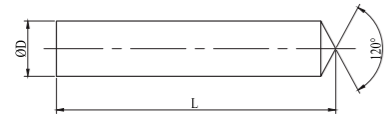
规格 Type	直径 ØD	长度 L	内孔径 Ød1	其它尺寸 L1	斜孔径 Ød2	倒角尺寸 C
GN3206005817501	6	58.0	1.75	55.0	1.00	0.50
GN3206006517501	6	65.0	1.75	62.0	1.00	0.50
GN3208006417501	8	64.2	1.75	60.0	1.20	1.00
GN3208007917501	8	79.0	1.75	74.8	1.20	1.00
GN3210007320001	10	73.2	2.00	68.0	1.20	1.00
GN3210010120001	10	101.2	2.00	96.0	1.20	1.00
GN3212008420001	12	84.2	2.00	78.0	1.50	1.00
GN3212010120001	12	101.1	2.00	95.0	1.50	1.00
GN3216009340001	16	93.2	4.00	85.0	1.50	1.50
GN3216012840001	16	128.0	4.00	119.8	1.50	1.50
GN3216013340001	16	133.2	4.00	125.0	1.50	1.50
GN3220011040001	20	110.0	4.00	99.8	2.00	1.50
GN3220015140001	20	151.5	4.00	141.0	2.00	1.50
GN3220016141501	20	161.2	4.00	151.0	2.00	1.50
GN3225013040001	25	130.0	4.00	117.5	2.00	1.50
GN3225018540001	25	185.0	4.00	172.5	2.00	1.50
GN3225018641501	25	186.0	4.00	173.5	2.00	1.50

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground	尺寸公差 Dimension (Tol.) (mm)		
	范围 (Range)	直径 ØD	长度 L	内孔径 Ød1
	6 ≤ ØD ≤ 32	h5/h6	0, +1.0	0, +0.30
		长度 L1	斜孔径 Ød2	倒角尺寸 C
		±0.30	±0.15	±0.10

### 毛坯圆锥棒 Rods with Tapered End

GU20



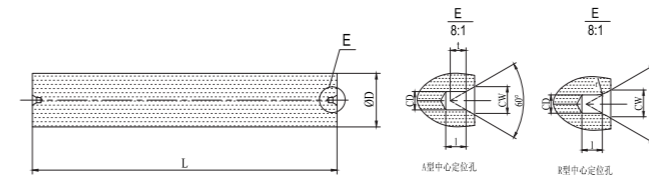
规格 Type	直径 ØD	全长 L	C面	
			C	Tol.
BZ1050063	5	63	0.5	±0.1
BZ1060067	6	67	0.5	±0.1
BZ1070075	7	75	0.6	±0.1
BZ1080080	8	80	0.6	±0.1
BZ1090085	9	85	0.6	±0.1
BZ1100090	10	90	0.6	±0.1
BZ1110096	11	96	0.8	±0.1
BZ1120103	12	103	0.8	±0.1
BZ1130103	13	103	0.8	±0.1
BZ1140108	14	108	0.8	±0.1
BZ1150112	15	112	0.8	±0.1
BZ1160116	16	116	0.8	±0.1
BZ1170120	17	120	0.8	±0.1
BZ1180124	18	124	0.8	±0.1
BZ1190128	19	128	1.0	±0.1
BZ1200132	20	132	1.0	±0.1
BZ1210137	21	137	1.0	±0.1
BZ1200142	22	142	1.0	±0.1

所有数据均为典型值。您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)		长度L(mm)	C面	
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	公差 (Tol.)	角度	公差 (Tol.)
	2≤ØD<3	+0.15, +0.30	2≤ØD≤42	h5/h6	0, +1.0	45°	±3°
	3≤ØD≤6	+0.30, +0.50					
	6<ØD≤12	+0.30, +0.60					
	12<ØD≤16	+0.30, +0.70					
	16<ØD≤42	+0.30, +0.80					

### 毛坯带定位孔棒材 Rods with Centers

GU20



规格 Type	直径 ØD	全长 L
BK01030125	3	125
BK01040105	4	105
BK01040125	4	125
BK01050105	5	105
BK01050125	5	125
BK01060105	6	105
BK01060125	6	125
BK01060145	6	145

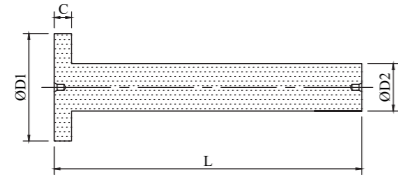
规格	外径 ØD	全长 L
BK01070100	7	100
BK01070105	7	105
BK01070145	7	145
BK01080100	8	100
BK01090100	9	100
BK01100100	10	100
BK01100120	10	120
BK01100125	10	125

所有数据均为典型值。您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯 Unground ØD (mm)		精磨 Ground ØD (mm)		长度L(mm)
	范围 (Range)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	公差 (Tol.)
	3≤ØD<7	+0.30, +0.50	3≤ØD≤10	h5/h6	0, +1.0
7≤ØD≤10	+0.30, +0.60				

## 毛坯T形棒 T-Slot Endmill Blanks

GU20



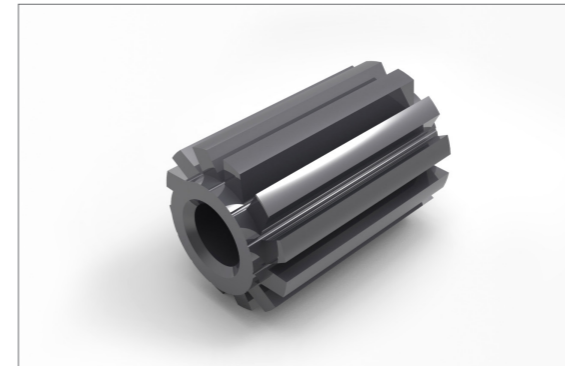
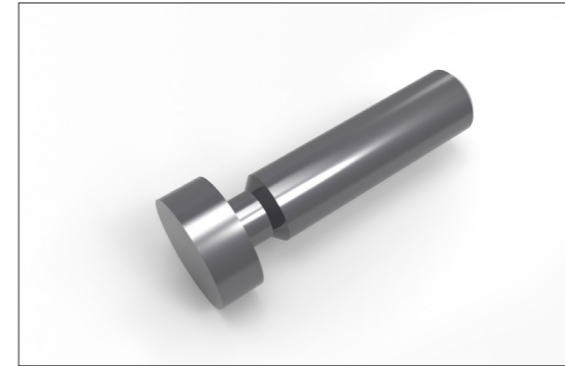
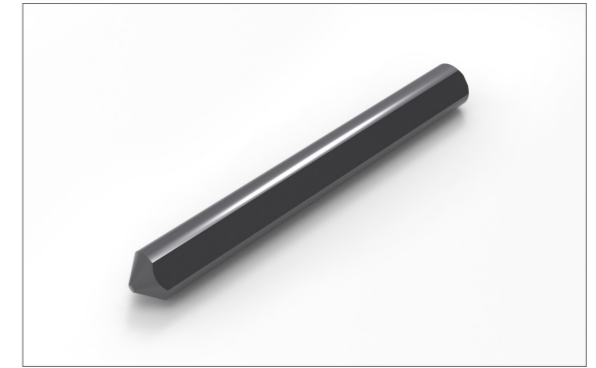
规格 Type	外径 ØD1	全长 L	C长度	台阶外径 ØD2
BT0317010401	17	104	4	10
BT0321010801	21	108	8	10
BT0327011001	27	110	10	12
BT0333015401	33	154	4	16
BT0337015801	37	158	8	16
BT0341316001	41.3	160	10	20

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

GESAC Standard	毛坯ØD1 (mm)		长度L(mm)	C长度	台阶外径ØD2 (mm)		
	范围 (Range)	公差 (Tol.)	公差 (Tol.)	公差 (Tol.)	范围 (Range)	公差 (Tol.)	
	17≤ØD<41.3	0, +0.4	0, +2	±0.3	ØD>10	毛坯 +0.6, +0.3	精磨 h5/h6

## 其他 Other Preformed Blanks

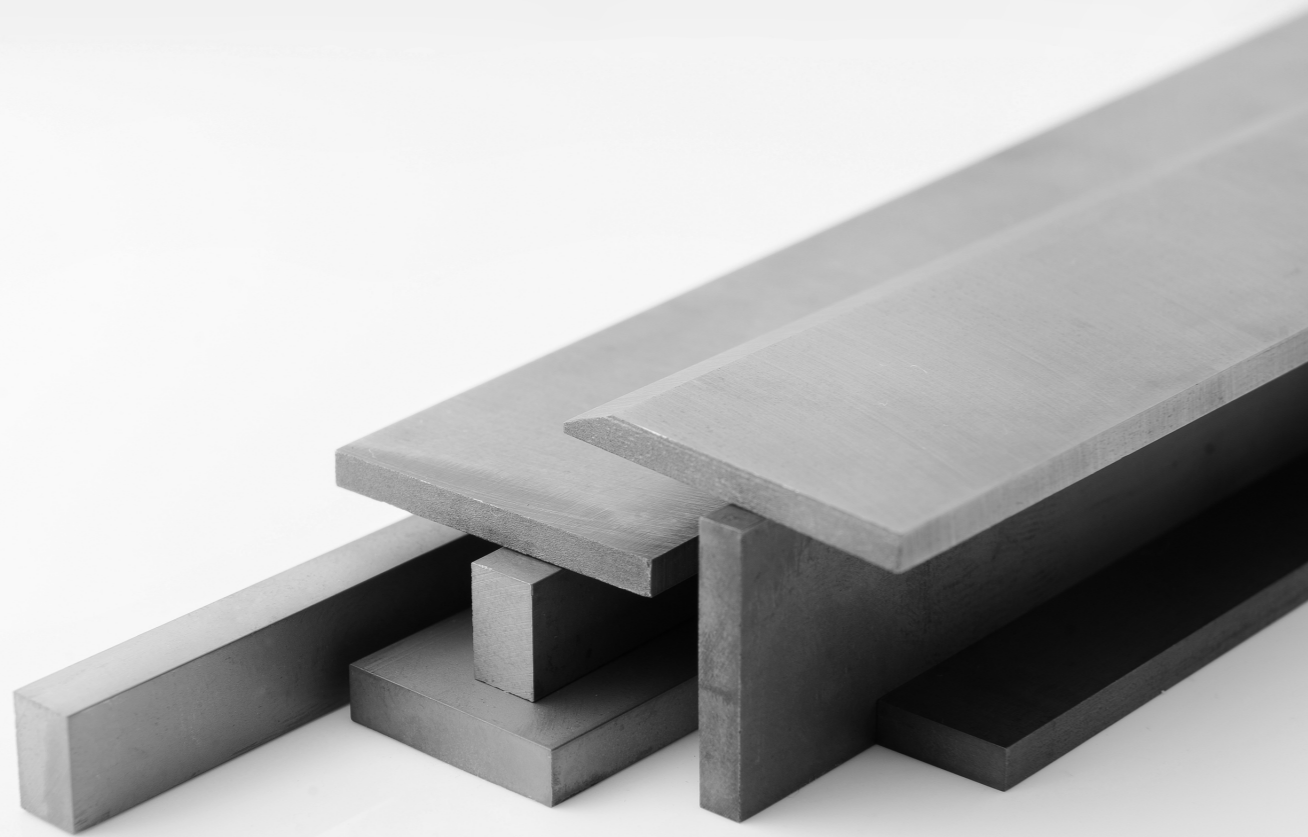
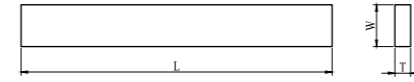
定制  
Customized





四边型材  
STB

GU20



规格 Type	宽度 W	厚度 T	长度 L
TS0103003001	3	3	330
TS0104002001	4	2	330
TS0104004001	4	4	330
TS0105002001	5	2	330
TS0105003001	5	3	330
TS0105004001	5	4	330
TS0105005001	5	5	330
TS0106002001	6	2	330
TS0106002501	6	2.5	330
TS0106003001	6	3	330
TS0106004001	6	4	330
TS0106005001	6	5	330
TS0106006001	6	6	330
TS0107002001	7	2	330
TS0107003001	7	3	330
TS0107004001	7	4	330
TS0107005001	7	5	330
TS0108002001	8	2	330
TS0108002501	8	2.5	330
TS0108003001	8	3	330
TS0108004001	8	4	330
TS0108005001	8	5	330

规格 Type	宽度 W	厚度 T	长度 L
TS0108006001	8	6	330
TS0108008001	8	8	330
TS0109002001	9	2	330
TS0110002001	10	2	330
TS0110002501	10	2.5	330
TS0110003001	10	3	330
TS0110004001	10	4	330
TS0110005001	10	5	330
TS0110006001	10	6	330
TS0110010001	10	10	330
TS0112002001	12	2	330
TS0112002501	12	2.5	330
TS0112003001	12	3	330
TS0112004001	12	4	330
TS0112005001	12	5	330
TS0112006001	12	6	330
TS0112012001	12	12	330
TS0113004001	13	4	330
TS0113005001	13	5	330
TS0113006001	13	6	330
TS0114002001	14	2	330
TS0114002501	14	2.5	330

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

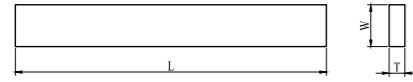
PLATES  
板材产品

C

# 四边型材

STB

GU20



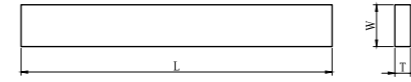
规格 Type	宽度 W	厚度 T	长度 L
TS0114003001	14	3	330
TS0114004001	14	4	330
TS0114005001	14	5	330
TS0114006001	14	6	330
TS0114014001	14	14	330
TS0115003001	15	3	330
TS0115005001	15	5	330
TS0115006001	15	6	330
TS0116002001	16	2	330
TS0116002501	16	2.5	330
TS0116003001	16	3	330
TS0116004001	16	4	330
TS0116005001	16	5	330
TS0116006001	16	6	330
TS0116016001	16	16	330
TS0118002001	18	2	330
TS0118002501	18	2.5	330
TS0118003001	18	3	330
TS0118004001	18	4	330
TS0118005001	18	5	330
TS0118006001	18	6	330
TS0120002001	20	2	330

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

# 四边型材

STB

GK05



规格 Type	宽度 W	厚度 T	长度 L
TS0112709501	1/2	3/8	12
TS0115803101	5/8	1/8	12
TS0115804701	5/8	3/16	12
TS0115806301	5/8	1/4	12
TS0119003101	3/4	1/8	12
TS0119004701	3/4	3/16	12
TS0119006301	3/4	1/4	12
TS0119009501	3/4	3/8	12
TS0125403101	1	1/8	12
TS0125404701	1	3/16	12
TS0125406301	1	1/4	12
TS0125409501	1	3/8	12
TS0131706301	1-1/4	3/16	12
TS0131706301	1-1/4	1/4	12

所有数据均为典型值，您可以联系我们，了解更多硬质合金棒材尺寸。

## 公差等级

Carbide Rod Tolerances

### 精磨外径公差

Tol. of Ground Rods' Diameter

外径 Diameter	h4	h5	h6	h7
0-3.0mm 0-0.1181 in.	0.003mm 0.00012 in.	0.004 mm 0.00015 in.	0.006 mm 0.00024 in.	0.010 mm 0.00039 in.
3.001-6.0mm 0.1181 - 0.2362 in.	0.004mm 0.00015 in.	0.005 mm 0.00020 in.	0.008 mm 0.00031 in.	0.012 mm 0.00047 in.
6.001-10.0 mm 0.2363 - 0.3937 in.	0.004mm 0.00015 in.	0.006 mm 0.00024 in.	0.009 mm 0.00035 in.	0.015 mm 0.00059 in.
10.001-18.0 mm 0.3938 - 0.7087 in.	0.005mm 0.00020 in.	0.008 mm 0.00031 in.	0.011 mm 0.00043 in.	0.018 mm 0.00071 in.
18.001-30.0 mm 0.7088 - 1.1811 in.	0.006mm 0.00024 in.	0.009 mm 0.00035 in.	0.013 mm 0.00051 in.	0.021 mm 0.00083 in.
30.001-50.0 mm 1.1812 - 1.9685 in.	0.007mm 0.00028 in.	0.011 mm 0.00043 in.	0.016 mm 0.00063 in.	0.025 mm 0.00098 in.

"h" 的公差均为+0.0/-  
"h" Tolerance is +0.0/-

### 棒材表面粗糙度

Surface Roughness of Rods

类型 Type	精度 Accuracy
高光棒材 Polished Rods	0.00-0.02 μm
镜面棒材 Mirror finished rods	0.00-0.05 μm
精磨棒材 Ground Rods	0.00-0.12 μm
亚光洁度 Dull Finished	0.10-0.20 μm

### 圆度

Roundness Tolerance

不论外径、长度，精磨圆棒圆度标准均为0.002 mm  
The standard roundness tolerance of the ground rod is 0.002 mm.

## 材质项目名词解释

Definitions of Physical Properties

### ★ 矫顽磁力 Coercive Field Strength

矫顽磁力测量的是合金试样完全去磁化所需的反向磁场大小，它可用于评定合金的组织状况，矫顽力随钴含量降低而增大，当钴含量一定时，碳化钨晶粒越细，钴相分散程度越高，矫顽力也越大  
Coercive Field Strength is a measure of the residual magnetism in the hysteresis loop when the Cobalt (Co) binder in grade of cemented carbide is magnetized and then demagnetized. It can be used to assess the status of alloy organization. The finer the grain size of the carbide phase the higher will be the coercive force value.

### ★ 磁饱和 Magnetic Saturation

磁饱和是最大磁化强度与质量的比值，通过测定硬质合金中具有磁性的钴 (Co) 粘结相的磁饱和，可以评定合金成份。低磁饱和值表示合金含碳量低，或者含有η相碳化物，高磁饱和值表示存在“游离碳或石墨”  
Magnetic Saturation: is the ratio of magnetic intensity to quality. Magnetic Saturation measurements on the Cobalt (Co) binder phase in cemented carbide are used by the industry to evaluate its composition. Low Magnetic Saturation values indicate a low carbon level and/or the presence of Eta-Phase Carbides. High Magnetic Saturation values indicate the presence of 'free-carbon' or Graphite.

### ★ 密度 Density

材料的密度 (比重) 是材料质量与其体积的比率，使用液体置换法进行测定，硬质合金密度随WC-Co相中钴含量增加而减小  
The Density (specific gravity) of a material is the ratio of its mass to its volume. It is measured using a water displacement technique. Cemented carbide density decreases linearly with increasing Cobalt content for the Wc-Co grades.

### ★ 金相 Metallographic Analysis

硬质合金烧结钴相粘结后，过量钴可能在某些结构区域中存在，形成“钴池”；而当粘结相不完全粘结，则将形成一些少量残余孔隙，合金中钴池及孔隙率使用金相显微镜检验得到  
Cobalt Lakes will bond after sintering, excess cobalt may exist in certain area of the structure, forming the cobalt pool; If bonding phase is incompletely adhesive, there will form some residual pores. Cobalt pools and porosity can be detected by using metallographic microscope.

### ★ 硬度 Hardness

金属材料抵抗其它更硬物体压入表面的能力称为硬度，主要采用洛氏或维氏硬度测量法，两种硬度值转换时需要注意换算  
The Hardness of material is defined as the ability to fight against the hard pressed into surface of the object, mainly using measurements of Rockwell and Vickers. As the principles of the Vickers and Rockwell tests are different, care must be taken when converting from one system to the other.

### ★ 断裂韧性 Fracture Toughness

金属材料承受弹性和塑性变形的能力  
The ability of metallic materials to withstand elastic and plastic deformation.

### ★ 抗弯强度 Transverse Rupture Strength

抗弯强度是表征材料抵抗弯曲不断裂的能力，即试样跨距中点加载负荷至断裂时，单位面积上所受的力大小  
Transverse Rupture Strength (TRS) is the ability of material to resist bending, measured at the breaking point of a material in a standard three points bend test.



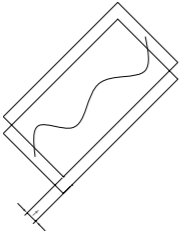
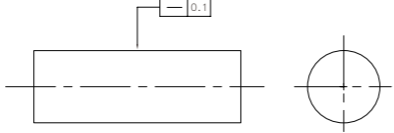
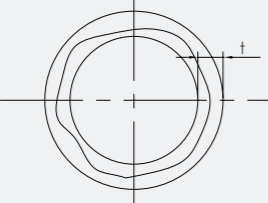
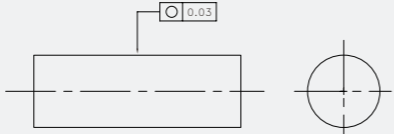
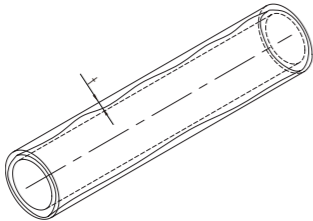
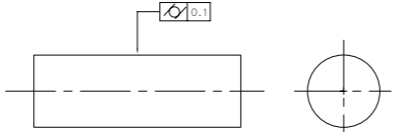
X100

X1500

X30000

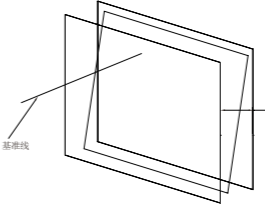
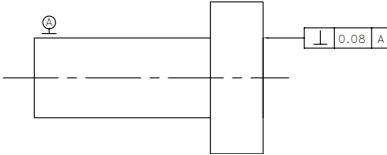
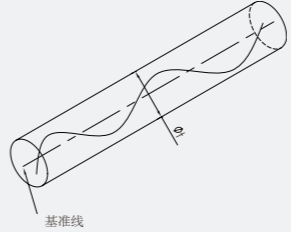
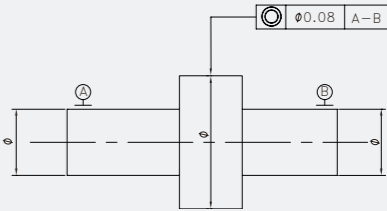
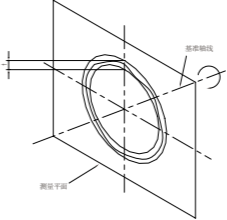
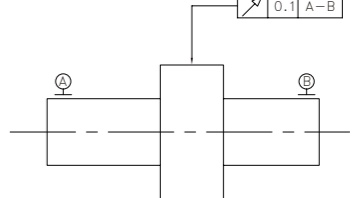
## 尺寸项目名词

Definitions of Geometrical Tolerance

	公差带定义 Definition of Tolerance Zone	标注和解释 Indication and Explanation
<p>直线度 Straightness Tolerance</p>	 <p>在给定方向上公差带是距离为公差值t的两平行平面之间的区域 The tolerance zone, in the considered plane, is limited by two parallel straight lines a distance t apart and in the specified direction only.</p>	 <p>被测圆柱面的任一素线必须位于距离为公差值0.1的两平行平面之内 Any extracted (actual) line on the upper surface, parallel to the plane of projection in which the indication is shown, shall be contained between two parallel straight lines 0.1 apart.</p>
<p>圆度 Roundness Tolerance</p>	 <p>是在同一正截面上，半径差为公差值t的两同心圆之间的区域 The tolerance zone, in the considered cross-section, is limited by two concentric circles with a difference in radii of t.</p>	 <p>被测圆柱面任一正截面的圆周必须位于半径差为公差值0.03的两同心圆之间 The extracted (actual) circumferential line, in any cross-section of the cylindrical and conical surfaces, shall be contained between two co-planar concentric circles, with a difference in radii of 0.03.</p>
<p>圆柱度 Cylindricity</p>	 <p>是半径差为公差值t的两同轴圆柱面之间的区域 The tolerance zone is limited by two coaxial cylinders with a difference in radii of t.</p>	 <p>是在同一正截面上，半径差为公差值t的两同心圆之间的区域 The tolerance zone, in the considered cross-section, is limited by two concentric circles with a difference in radii of t.</p>

## 尺寸项目名词

Definitions of Geometrical Tolerance

	公差带定义 Definition of Tolerance Zone	标注和解释 Indication and Explanation
<p>垂直度 Perpendicularity Tolerance of a Surface</p>	 <p>是距离为公差值t且垂直于基准线的两平行平面之间的区域 The tolerance zone is limited by two parallel planes a distance t apart and perpendicular to the datum.</p>	 <p>被测面必须位于距离为公差值0.08且垂直于基准线A（基准轴线）的两平行平面之间 The extracted (actual) surface shall be contained between two parallel planes 0.08 apart that is perpendicular to datum axis A.</p>
<p>同轴度 Concentricity Tolerance of a Point</p>	 <p>是直径为公差值t的圆柱面内区域，该圆柱面的轴线与基准轴线同轴 The tolerance zone is limited by a circle of diameter t; the tolerance value shall be preceded by the symbol <math>\varnothing</math>. The centre of the circular tolerance zone coincides with the datum point.</p>	 <p>大圆柱面的轴线必须位于直径为公差值0.08且与公共基准线A-B（公共基准轴线）同轴的圆柱面内 The extracted (actual) median line of the tolerance cylinder shall be within a cylindrical zone of diameter 0.08 the axis of which is the common datum straight line A-B.</p>
<p>圆跳动 Circular run-out Tolerance</p>	 <p>是在垂直于基准轴线的任一半径位置的测量平面内，半径差为公差值t且圆心在基准轴线上的两同心圆之间的区域 The tolerance zone is limited within any cross-section perpendicular to the datum axis by two concentric circles with a difference in radii of t, the centers of which coincide with the datum.</p>	 <p>当被测要素围绕公共基准线A-B（公共基准轴线）旋转一周时，在任一测量平面内的径向圆跳动均不得大于0.1 The extracted (actual) line in any cross-section plane perpendicular to common datum straight line A-B shall be contained between two coplanar concentric circles with a difference in radii of 0.1.</p>







## 厦门金鹭硬质合金有限公司

地址：中国厦门市海沧区东孚西路69号

电话：+86-592-6022591

传真：+86-592-6022396

邮编：361026

电邮：gesac@cxtc.com

网址：<http://en.gesac.com.cn>

## Xiamen Golden Egret Cemented Carbides Co.,Ltd.

Add: No.69, Dongfu West Road, Haicang, Xiamen, CHINA

Tel: +86-592-6022591

Fax: +86-592-6022396

P.C: 361026

E-mail: gesac@cxtc.com

<http://en.gesac.com.cn>



———— BSC202403a