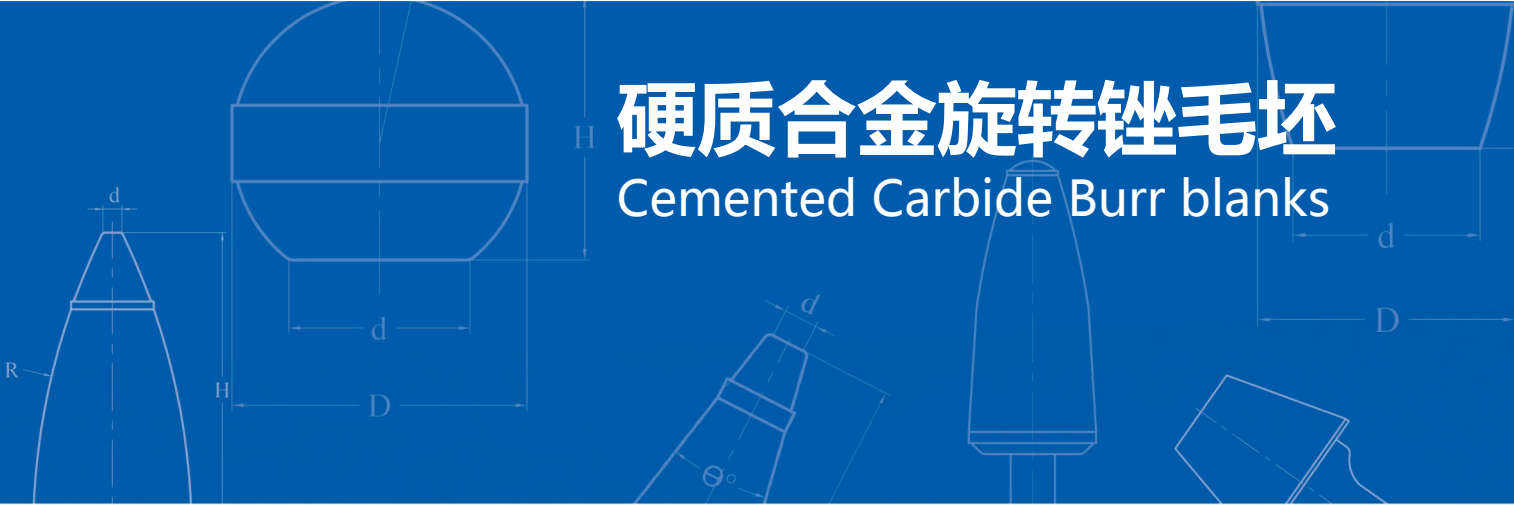


硬质合金旋转锉毛坯

Cemented Carbide Burr blanks



企业简介

厦门金鹭特种合金有限公司，是一家中外合资的国家级高新技术企业，是国有上市公司厦门钨业股份有限公司（股票代码：SH600549）的骨干成员。成立于1989年，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；是中国最大的钨粉、碳化钨粉供应商和出口商；是高品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“国家科技支撑计划”项目、“国家科技重大专项”项目、“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。

ABOUT GESAC

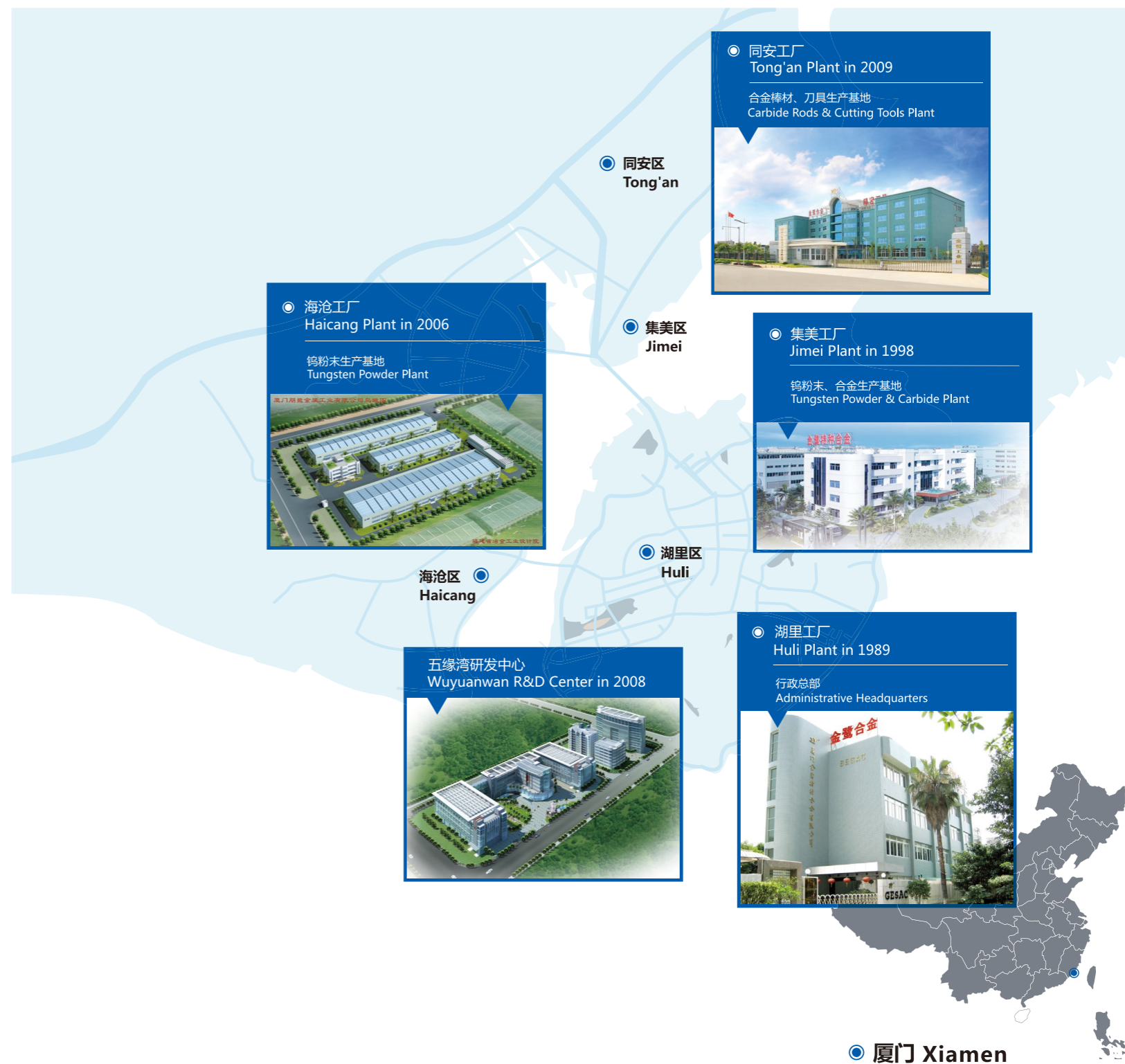
Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC) is a Sino-foreign joint venture company established in 1989. It is designated by the State as a high-tech enterprise. GESAC is the largest subsidiary of the Shanghai Stock Exchange listed company: Xiamen Tungsten Co., LTD. (Stock code: SH600549) It's main products are tungsten metal powder, tungsten carbide powder, cemented carbide, cutting tools and other tungsten related products. GESAC is the largest producer and exporter of tungsten metal powder and tungsten carbide powder in China and also enjoys good reputation in manufacturing high quality cemented carbide and precision cutting tools.

GESAC has a team of talented staff constantly striving to be stronger. GESAC is equipped with the world's most advanced technologies, manufacturing equipment and testing facilities. The "Golden Egret" brand products are renowned for high quality and excellent service. Our clients are spread across more than forty developed countries and regions all over the world.

GESAC owns a national level R&D center, and has undertaken and finished many national and provincial research projects independently, such as National Science and Technology Support Plan project, National major special science and technology project, National Key Technologies R&D Program, National Torch Program, National Important New Products project etc. GESAC has received numerous awards such as "National Standard High-tech Enterprise", "Enterprise with Advanced Technology" and "Export-oriented Enterprise" from the state government.

GESAC adheres to the philosophy of "sincerity and dependability are our essence" and strives to develop into a modern enterprise with "first class equipment, first class technology, first class management, first class quality and first class service".

金鹭工厂分布 Plants of GESAC



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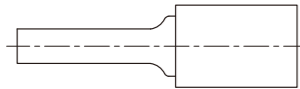
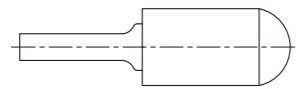
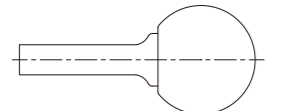
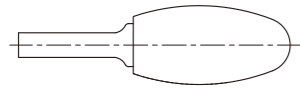
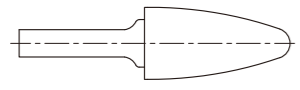
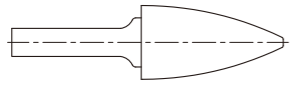
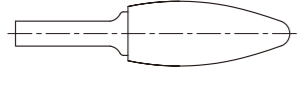
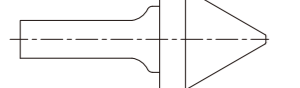
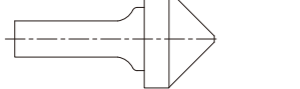
旋转锉牌号介绍

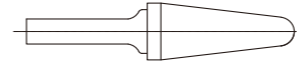
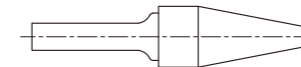
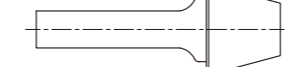
Grade Introduction of Cemented Carbide Burr Blanks

牌号 Grade	钴含量 Cobalt Content (%)	密度 Density (g/cm ³)	硬度 Hardness (HRA)	WC晶粒度 WC Grain Size	抗弯强度(B试样) T.R.S (B Sample) (N/mm ²)	牌号描述/应用 Grades Introduction / Applications
GK10B	6.0	14.94	90.8	Medium	2000	耐磨性好，同时有一定的韧性， 主要应用于机械修磨用锉刀 Good wear resistance with a certain toughness
GK10A	6.0	14.94	91.5	Medium	2500	耐磨性高于GK10B，韧性与 GK10B基本一致。主要应用于机 械修磨用锉刀 Better wear resistance than GK10B, same toughness as GK10B
GU20	10.3	14.42	91.7	Fine	3500	有很高的耐磨性，适用于刃齿加 工刀与美甲刀 Very good wear resistance

旋转锉根据其外观形状分为以下各类

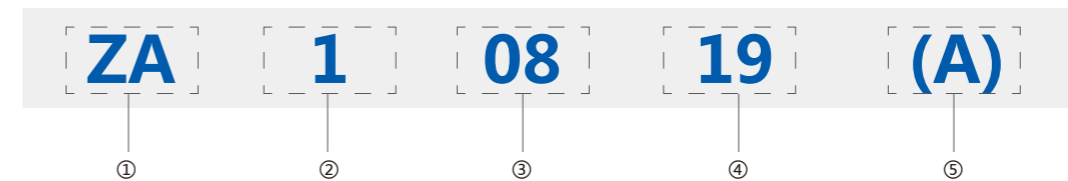
A summary of available shape of Burr Blanks

形状 SHAPE	分类 TYPE	型号 (金鹭) SHAPE(GESAC)	型号 (ANSI) SHAPE(ANSI)	型号 (DIN 8033) SHAPE(DIN 8033)	页码 PAGE
	圆柱形 Cylindrical	ZA	SA	ZYA	005
	圆柱形球头 Cylindrical Round Nose	ZC	SC	WRC	006
	圆球形 Spherical	ZD	SD	KUD	007
	椭圆形 Oval	ZE	SE	TRE	008
	弧形圆头 Arch Round Nose	ZF	SF	RBF	009
	弧形尖头 Arch Pointed Nose	ZG	SG	SPG	010
	火炬形 Flame	ZH	SH	--	011
	60度圆锥形 60° Cone	ZJ	SJ	KSJ	012
	90度圆锥形 90° Cone	ZK	SK	KSK	013

形状 SHAPE	分类 TYPE	型号 (金鹭) SHAPE(GESAC)	型号 (ANSI) SHAPE(ANSI)	型号 (DIN 8033) SHAPE(DIN 8033)	页码 PAGE
	锥形圆头 Conical Round Nose	ZL	SL	KEL	014
	锥形尖头 Conical Pointed Nose	ZM	SM	SKM	015
	倒锥形 Inverted Cone	ZN	SN	WKN	016

旋转锉编码体系

Burr Blanks Encoding System



- ①：表示形状代码 GESAC Shape Code
- ②：表示型号小类代码 Model Small Class Code
- ③：产品外径 OD
- ④：产品高度 Height
- ⑤：产品流水号 Product Serial Number

适用于ZA型、ZC型、ZD型、ZE型、ZF型、ZG型、ZH型、ZJ型、ZK型、ZL型、ZM型、ZN型旋转锉
Suitable for GESAC Shape ZA, ZC, ZD, ZE, ZF, ZG, ZH, ZJ, ZK, ZL, ZM, ZN

产品介绍

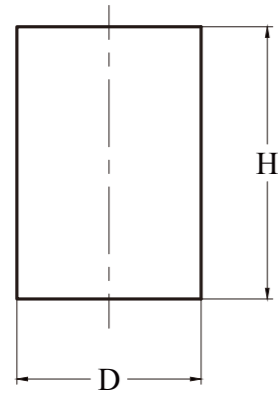
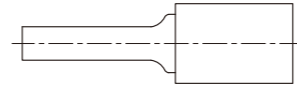
Product Introduction

圆柱形旋转锉毛坯

Shape ZA, Cylindrical

适用于生产圆柱形的旋转锉刀

Suitable for making Cylindrical Carbide Burr Tools



金鹭型号 GESAC Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H
ZA10604	BSA-51 S	6.73±0.13	4.90±0.25
ZA10612	BSA-51	6.73±0.13	12.70±0.25
ZA10819	BSA-2	8.31±0.13	19.05±0.25
ZA10919	BSA-3	9.91±0.13	19.05±0.25
ZA11125	BSA-4	11.51±0.13	25.40±0.25
ZA11325	BSA-5	13.08±0.13	25.40±0.25
ZA11625	BSA-6	16.26±0.13	25.40±0.25
ZA11919	BSA-72	19.48±0.15	19.05±0.25
ZA11925	BSA-7	19.48±0.15	25.40±0.25
ZA12225	BSA-8	22.66±0.15	25.40±0.25
ZA12525	BSA-9	25.88±0.18	25.40±0.25

注：可按客户要求规格生产

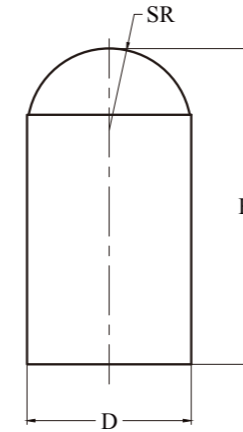
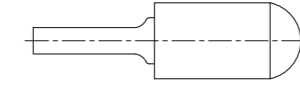
Note: Can be customized according to customer's requirements

圆柱形球头旋转锉毛坯

Shape ZC, Cylindrical Round Nose

适用于生产圆柱形球头旋转锉刀

Suitable for making Cylindrical Round Nose Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR
ZC10612	BSC-51	6.73±0.13	12.70±0.25	3.37
ZC10819	BSC-2	8.31±0.13	19.05±0.25	4.17
ZC10919	BSC-3	9.91±0.13	19.05±0.25	4.95
ZC11125	BSC-4	11.51±0.13	25.40±0.25	5.77
ZC11325	BSC-5	13.08±0.13	25.40±0.25	6.55
ZC11625	BSC-6	16.26±0.13	25.40±0.25	8.13
ZC11912	BSC-15	19.48±0.15	12.70±0.25	9.75
ZC11919	BSC-16	19.48±0.15	19.05±0.25	9.74
ZC11925	BSC-7	19.48±0.15	25.40±0.25	9.75
ZC12525	BSC-9	25.88±0.18	25.40±0.25	12.95

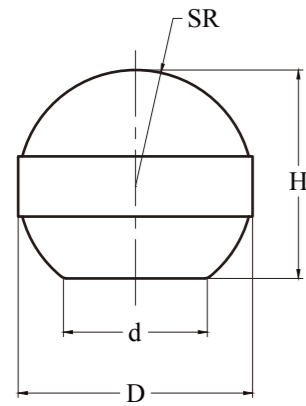
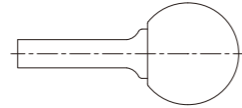
注：可按客户要求规格生产

Note: Can be customized according to customer's requirements

圆球形旋转锉毛坯

Shape ZD, Spherical

适用于生产圆球形旋转锉刀
Suitable for making Spherical Carbide Burr Tools



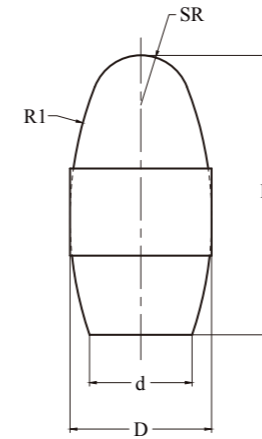
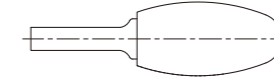
型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR
ZD10807	BSD-2	8.31±0.13	7.15±0.13	8.31
ZD10908	BSD-3	9.91±0.13	8.59±0.13	9.91
ZD11110	BSD-4	11.51±0.13	10.08±0.13	11.51
ZD11311	BSD-5	13.08±0.13	11.58±0.2	13.08
ZD11614	BSD-6	16.26±0.13	14.58±0.2	16.26
ZD11917	BSD-7	19.48±0.15	17.58±0.2	19.48
ZD12523	BSD-9	25.88±0.18	23.6±0.25	25.88

注：可按客户要求规格生产
Note: Can be customized according to customer's requirements

椭圆形旋转锉毛坯

Shape ZE, Oval

适用于生产椭圆形旋转锉刀
Suitable for making Oval Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR	R1
ZE10609	BSE-51	6.73±0.13	9.53±0.25	2.51	10.85
ZE10915	BSE-3	9.91±0.13	15.88±0.25	4.09	22.35
ZE11322A	BSE-5	13.08±0.13	22.23±0.25	5.28	31.88
ZE11625	BSE-6	16.26±0.15	25.40±0.25	6.48	31.88
ZE11925	BSE-7	19.48±0.15	25.40±0.25	8.08	20.37

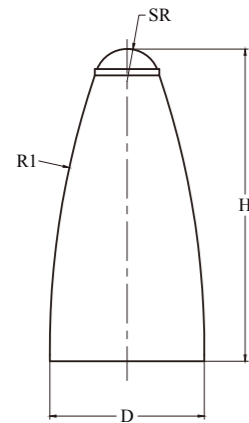
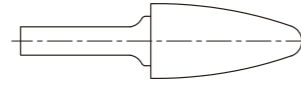
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Note: Can be customized according to customer's requirements

弧形圆头旋转锉毛坯

Shape ZF, Arch Round Nose

适用于生产弧形圆头旋转锉刀

Suitable for making Arch Round Nose Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR	R1
ZF20612	BSF-51	6.73±0.13	12.70±0.25	1.73	41.40
ZF20918	BSF-3	9.91±0.13	19.05±0.25	2.49	58.42
ZF21125	BSF-4	11.51±0.13	25.40±0.25	2.49	82.68
ZF21319	BSF-13	13.08±0.13	19.05±0.25	3.30	44.7
ZF21325	BSF-5	13.08±0.13	25.40±0.25	3.30	82.68
ZF21625	BSF-6	16.26±0.13	25.40±0.25	4.93	76.33
ZF21925	BSF-7	19.48±0.13	25.40±0.25	4.93	54.10
ZF21931	BSF-14	19.48±0.15	32.75±0.25	4.93	84.30
ZF21938	BSF-15	19.48±0.15	38.10±0.25	4.93	128.75

注：可按客户要求规格生产

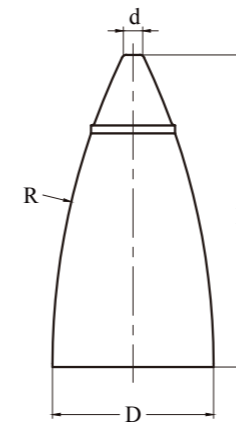
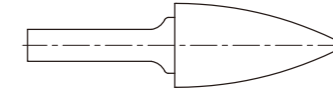
Note: Can be customized according to customer's requirements

弧形尖头旋转锉毛坯

Shape ZG, Arch Pointed Nose

适用于生产弧形尖头旋转锉刀

Suitable for making Arch Pointed Nose Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	Φd	R
ZG10612	BSG-51	6.73±0.13	12.70±0.25	1.07	25.53
ZG10825	BSG-2	8.31±0.13	19.05±0.25	1.40	50.93
ZG10919	BSG-3	9.91±0.13	19.05±0.25	1.42	38.23
ZG11319	BSG-13	13.08±0.13	19.05±0.25	1.85	33.48
ZG11325	BSG-5	13.08±0.13	25.40±0.25	1.85	57.28
ZG11625	BSG-6	16.26±0.13	25.40±0.25	1.85	47.75
ZG11925	BSG-7	19.48±0.15	25.40±0.25	1.91	41.43
ZG11938	BSG-15	19.48±0.15	25.40±0.25	2.24	86.31

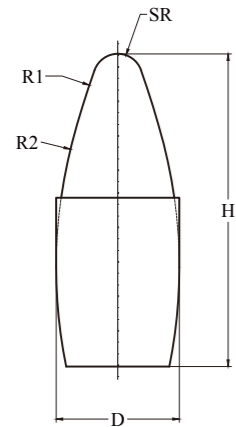
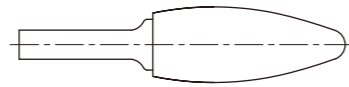
注：可按客户要求规格生产

Note: Can be customized according to customer's requirements

火炬形旋转锉毛坯

Shape ZH, Flame

适用于生产火炬形旋转锉刀
Suitable for making Flame Carbide Burr Tools



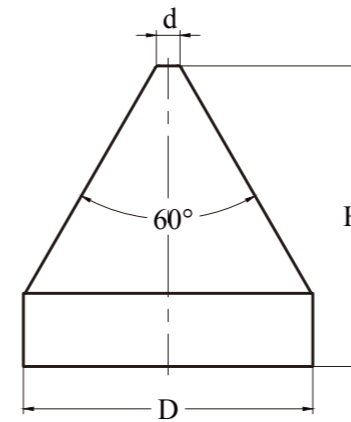
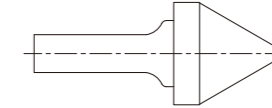
型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR	R1
ZH10819	BSH-2	8.31±0.13	19.05±0.25	1.73	27.13
ZH11331	BSH-5	13.08±0.13	31.75±0.38	2.51	50.93
ZH11636	BSH-6	16.26±0.13	36.53±0.38	2.51	19.18
ZH11941	BSH-7	19.48±0.15	41.28±0.51	4.11	47.78

注：可按客户要求规格生产
Note: Can be customized according to customer's requirements

60°圆锥形旋转锉毛坯

Shape ZJ, 60°Cone

适用于生产60°圆锥形旋转锉刀
Suitable for making 60°Cone Carbide Burr Tools



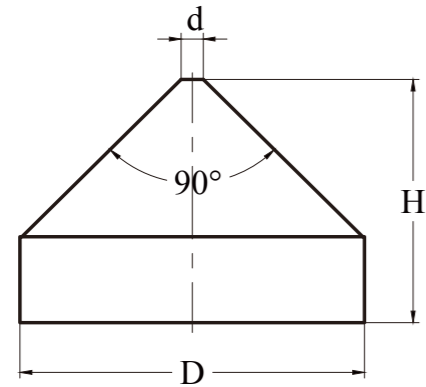
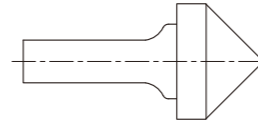
型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	Φd
ZJ10911	BSJ-3	9.91±0.13	11.13±0.25	0.81
ZJ11313	BSJ-5	13.08±0.13	13.89±0.25	0.81
ZJ11617	BSJ-6	16.26±0.13	17.48±0.25	1.60
ZJ11920	BSJ-7	19.48±0.15	20.24±0.25	1.60
ZJ12524	BSJ-9	25.88±0.18	24.61±0.25	3.18

注：可按客户要求规格生产
Note: Can be customized according to customer's requirements

90°圆锥形旋转锉毛坯

Shape ZK, 90° Cone

适用于生产90°圆锥形旋转锉刀
Suitable for making 90° Cone Carbide Burr Tools



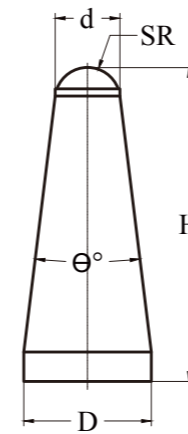
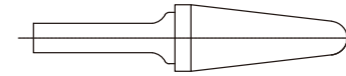
型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	Φd
ZK10907	BSK-3	9.91±0.13	7.95±0.25	0.81
ZK11309	BSK-5	13.08±0.13	9.53±0.25	0.81
ZK11612	BSK-6	16.26±0.13	12.29±0.25	1.60
ZK11913	BSK-7	19.48±0.15	13.89±0.25	1.60
ZK12516	BSK-9	25.88±0.18	16.28±0.25	3.18

注：可按客户要求规格生产
Note: Can be customized according to customer's requirements

锥形圆头旋转锉毛坯

Shape ZL, Conical Round Nose

适用于生产锥形圆头旋转锉刀
Suitable for making Conical Round Nose Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	SR	θ
ZL10825	BSL-2	8.31±0.13	25.78±0.25	1.52	14°
ZL10930	BSL-3	9.91±0.13	30.68±0.38	1.78	14°
ZL11332A	BSL-4	13.08±0.13	32.28±0.38	3.33	14°
ZL11633	BSL-5	16.26±0.13	33.86±0.38	4.90	14°
ZL11637	BSL-6	16.26±0.13	37.03±0.38	3.81	14°
ZL11941	BSL-7	19.48±0.15	41.81±0.51	5.64	14°

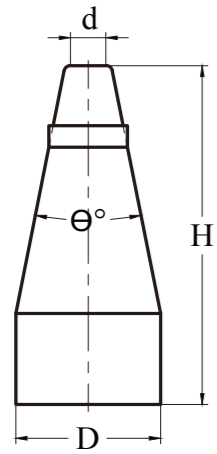
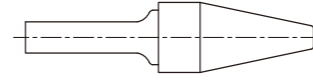
注：可按客户要求规格生产
Note: Can be customized according to customer's requirements

锥形尖头旋转锉毛坯

Shape ZM, Conical Pointed Nose

适用于生产锥形尖头旋转锉刀

Suitable for making Conical Pointed Nose Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	Φd	θ
ZM10919	BSM-4	9.91±0.13	19.30±0.25	1.85	28°
ZM11325	BSM-5	13.08±0.13	25.65±0.25	2.10	28°
ZM11628	BSM-6	16.26±0.13	28.98±0.38	2.03	31°

注：可按客户要求规格生产

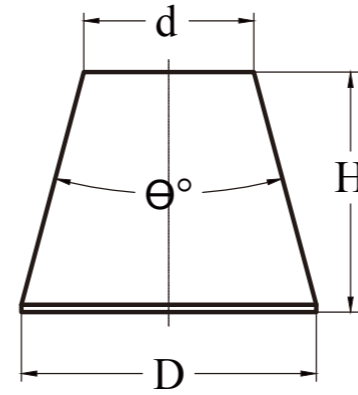
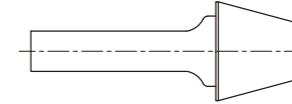
Note: Can be customized according to customer's requirements

倒锥形旋转锉毛坯

Shape ZN, Inverted Cone

适用于生产倒锥形旋转锉刀

Suitable for making Inverted Cone Carbide Burr Tools



型号 Type	ANSI型号 ANSI TYPE	外径 ΦD	高度 H	θ
ZN10909	BSN-2	9.9±0.13	9.53±0.25	10°
ZN11312	BSN-4	13.08±0.13	12.70±0.25	28°
ZN11619	BSN-6	16.26±0.13	19.05±0.25	18°
ZN11915	BSN-7	19.48±0.15	15.88±0.25	30°

注：可按客户要求规格生产

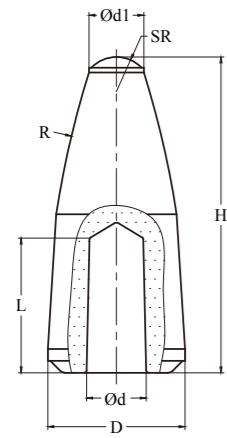
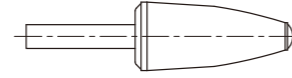
Note: Can be customized according to customer's requirements

弧形圆头带孔旋转锉毛坯

Shape ZF, Arch Round Nose with Brazing Hole

适用于生产弧形圆头带焊接孔旋转锉刀

Suitable for making Arch Round Nose with Brazing Hole Carbide Burr Tools



型号 Type	ΦD	H	SR	R	d	L
ZF30513	5.75±0.15	13.30±0.2	1.45	40	2.5	5.5
ZF30614A	6.65±0.15	13.80±0.2	2.5	40	2.5	5.5

注：可按客户要求规格生产

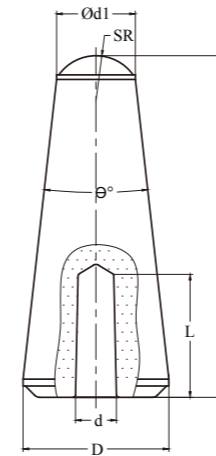
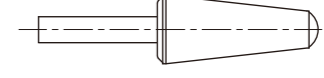
Note: Can be customized according to customer's requirements

锥形圆头带孔旋转锉毛坯

Shape ZL, Conical Round Nose with Brazing Hole

适用于生产锥形圆头带焊接孔旋转锉刀

Suitable for making Conical Round Nose with Brazing Hole Carbide Burr Tools



型号 Type	ΦD	H	SR	d	L
ZL30615	6.20±0.15	15.00±0.2	2.0	2.0	5.0
ZL30615A	6.40±0.15	15.00±0.2	2.0	1.8	5.4

注：可按客户要求规格生产

Note: Can be customized according to customer's requirements

硬度换算表

Hardness Change

维氏硬度 HV 荷重 (DPH)	布氏硬度 10mm球 荷重3000kg			洛氏硬度(3R)				洛氏薄片硬度(3R)			肖氏硬度 HS	抗拉强度 kg/mm ²	维氏硬度 HV 荷重 50kg
	标准球	Hult Green 球	碳化钨球	HRA 荷重60kg 金刚石	HRB 荷重100kg 1/6"球	HRC 荷重150kg 金刚石	HRd 荷重100kg 金刚石	15N 荷重 15kg	30N 荷重 30kg	45N 荷重 45kg			
1700	-	-	-	92.5	-	80.5	-	-	-	-	-	-	1700
1600	-	-	-	92.0	-	80.0	-	-	-	-	-	-	1600
1550	-	-	-	91.5	-	79.0	-	-	-	-	-	-	1550
1500	-	-	-	91.0	-	78.0	-	-	-	-	-	-	1500
1450	-	-	-	90.5	-	77.0	-	-	-	-	-	-	1450
1400	-	-	-	90.0	-	76.0	-	-	-	-	-	-	1400
1350	-	-	-	89.5	-	75.0	-	-	-	-	-	-	1350
1300	-	-	-	89.0	-	74.0	-	-	-	-	-	-	1300
1250	-	-	-	88.5	-	73.0	-	-	-	-	-	-	1250
1200	-	-	-	88.0	-	72.0	-	-	-	-	-	-	1200
1150	-	-	-	87.5	-	71.5	-	-	-	-	-	-	1150
1140	-	-	-	87.0	-	71.0	-	-	-	-	-	-	1140
1076	-	-	-	86.5	-	70.0	-	-	-	-	-	-	1076
1004	-	-	-	86.0	-	69.0	-	-	-	-	-	-	1004
940	-	-	-	85.6	-	68.0	76.9	93.2	84.4	75.4	97	-	940
920	-	-	-	85.3	-	67.5	76.5	93.0	84.0	74.8	96	-	920
900	-	-	-	85.0	-	67.0	76.1	92.9	83.6	74.2	95	-	900
880	-	-	767	84.7	-	66.4	75.7	92.7	83.1	73.6	93	-	880
860	-	-	757	84.4	-	65.9	75.3	92.5	82.7	73.1	92	-	860
840	-	-	745	84.1	-	65.3	74.8	92.3	82.2	72.2	91	-	840
820	-	-	733	83.8	-	64.7	74.3	92.1	81.7	71.8	90	-	820
800	-	-	722	83.4	-	64.0	73.8	91.8	81.1	71.0	88	-	800
780	-	-	710	93.0	-	63.3	73.3	91.5	80.4	70.2	87	-	780
760	-	-	698	82.6	-	62.5	72.6	91.2	79.7	69.4	86	-	760
740	-	-	684	82.2	-	61.8	72.1	91.0	79.1	68.6	84	-	740
720	-	-	670	81.8	-	61.0	71.5	90.7	78.4	67.7	83	-	720
700	-	615	656	81.3	-	60.1	70.8	90.3	77.6	66.7	81	-	700
690	-	610	647	81.1	-	59.7	70.5	90.1	77.2	66.2	81	-	690
680	-	603	638	80.8	-	59.2	70.1	89.8	76.8	65.7	80	232	680
670	-	597	630	80.6	-	58.8	69.8	89.7	76.4	65.3	79	228	670
660	-	590	620	80.3	-	58.3	69.4	89.5	75.9	64.7	79	224	660
650	-	585	611	80.0	-	57.8	69.0	89.2	75.5	64.1	-	221	650
640	-	578	601	79.8	-	57.3	68.7	89.0	75.1	63.5	77	217	640
630	-	571	591	79.5	-	56.8	68.3	88.8	74.6	63.0	-	214	630
620	-	564	582	79.2	-	56.3	67.9	88.5	74.2	62.4	75	210	620
610	-	557	573	78.9	-	55.7	67.5	88.2	73.6	61.7	-	207	610
600	-	550	564	78.6	-	55.2	67	88	73.2	61.2	74	203	600
590	-	542	554	78.4	-	54.7	66.7	87.8	72.7	60.5	-	200	590
580	-	535	545	78	-	54.1	66.2	87.5	72.1	59.9	72	196	580

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