



ZHENGZHOU JINZUAN DIAMOND TOOL CO., LTD.



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郑州金钻金刚石工具有限公司

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郑州金钻金刚石工具有限公司专注于超薄金刚石/CBN 切割片和砂轮的研发制造,多年来经过不断积累形成了科学系统的设计理念和生产工艺,同时培养了一批高素质的团队。为了满足各种加工环境的需求,我公司为客户提供了各种形式的切割片和砂轮,包括超薄金属/树脂结合剂金刚石切割片、金属/树脂/陶瓷结合剂砂轮、CBN 切割片等等。

郑州金钻金刚石工具有限公司以严格的质量管理和控制体系保证产品质量的稳定性和一致性。立足超硬材料行业,依靠技术创新,为广大客户提供具有竞争力的产品。

我们将进一步扩大经营规模,使产品更加多样化和更高质量,以满足客户的更高要求,真诚欢迎国内外各界朋友前来参观合作!本着“专业、诚信、共赢”的经营理念,我们期待与您合作!

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BRAIN JINZUAN
Zhengzhou Jinzuan Diamond Tool Co., Ltd. is committed to the R&D and manufacturing of ultra-thin diamond cutting discs. After years of accumulation, the scientific and systematic design concept have been formed, advanced and efficient manufacturing technology have been invented, and a high-quality team has been cultivated. In order to satisfy the needs of various processing environments, our company provides customers with various forms of cutting wheels and grinding wheels, including ultra-thin metal/resin bond diamond cutting discs, metal/resin/vitreous bond grinding wheels, CBN cutting discs, etc.

Zhengzhou Jinzuan Diamond Tool Co., Ltd. guarantees the stability and consistency of product quality with strict quality management and control system. Based on the superhard material industry and relying on technological innovation, we provide our customers with competitive products.

We will further expand the scale of operation and make products more diversified and higher quality to meet the higher requirements of customers. We sincerely welcome friends from all walks of life at home and abroad to visit and cooperate. In the "professional, honest, win-win" business philosophy, we look forward to cooperating with you!

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ABOUT US 关于我们

Production Capacity 生产能力

公司占地面积1600m², 拥有自动抛光机、自动压片机、线切割设备、数控机床等在内的多种设备, 满足多种材料加工需求, 年产量可达180,000片, 产品远销国内外, 受到了客户的一致好评。

The company covers an area of 1600m² and has a variety of equipment including automatic polishing machines, automatic tablet press, wire cutting equipment, CNC machine tools, etc., to meet the processing needs of various materials. The annual output can reach 180,000 pieces, and the products are sold at home and abroad, which have been well received unanimous praise from customers.



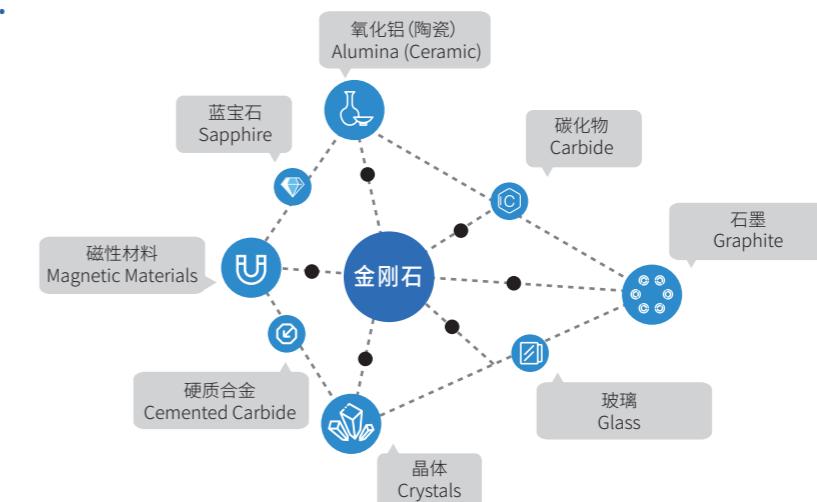
Introduction of Diamond/CBN 金刚石/CBN介绍

超硬磨料是用于描述金刚石和CBN（立方氮化硼）的术语。金刚石是努氏硬度表上最硬的物质，也是唯一能够磨削超硬材料的磨料。CBN是20世纪50年代发展起来的一种人工合成的新型材料，硬度仅次于金刚石。尽管CBN和金刚石都是超硬磨料，但其使用领域因材料而异。一般来说，金刚石用于磨削非金属硬脆性材料，而立方氮化硼用于磨削铁基材料。

Superabrasive is a term used to describe Diamond and CBN (Cubic Boron Nitride). Diamond is the hardest substance on the Knoop Hardness Scale and the only abrasive capable of grinding ultra-hard materials. CBN is a new type of artificially synthesized material developed in the 1950s, with a hardness second only to diamond. Although CBN and Diamond are both superabrasive, the areas of use vary considerably by material. In general, diamond is used for grinding non-metallic hard and brittle materials, while CBN is used to grind ferrous materials.

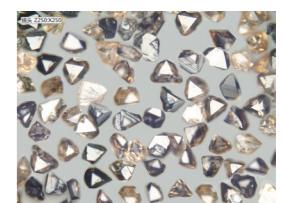
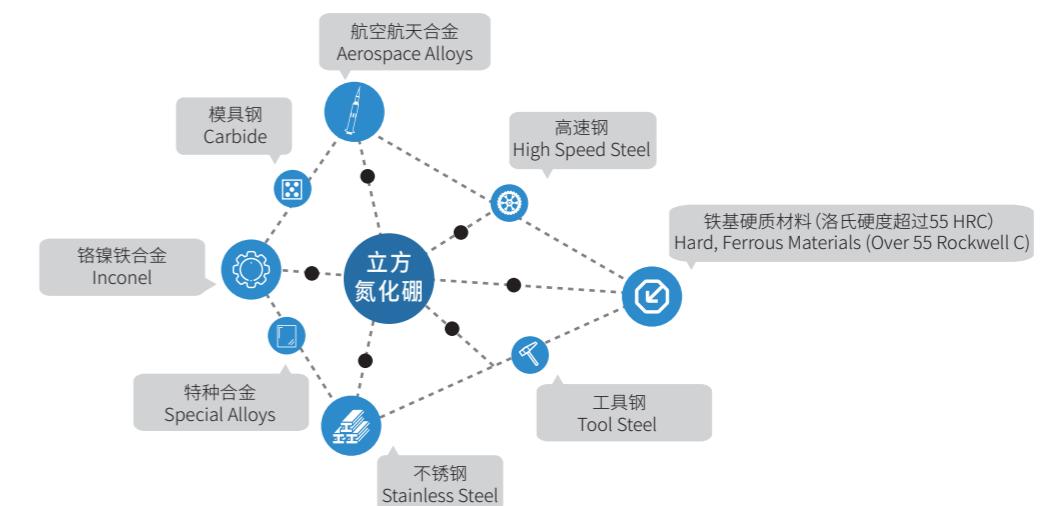
金刚石用于:

Diamond:



立方氮化硼用于:

CBN:



Metal Bond Cutting Discs

金属结合剂切割片

金属结合剂金刚石切割片分基体式切割片和整体式切割片。基体式金刚石切割片也称作外环型金刚石切割片，即切割片外圆为金刚石工作层，中心部分采用高强度金属基体，由于高刚性金属芯体与外环的结合剂融为一体，获得了高刚性和强度，切割加工时就不易变形，可以实现高负荷，深度切割。磨料可选金刚石或CBN。

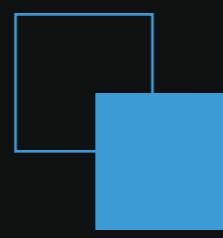
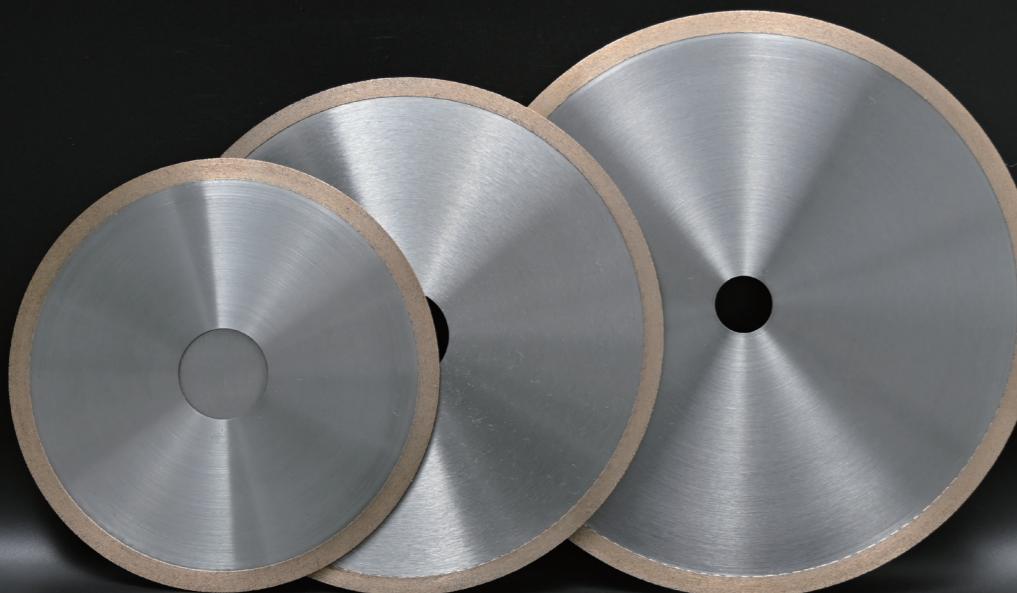
金属结合剂金刚石切割片磨料把持力、耐磨性强，刃口形状保持性好，使用寿命长。

直径范围50~600mm，厚度范围0.2~4mm，内孔、直径、厚度、磨料粒度、浓度等参数都可根据需要进行定制。

Metal bond diamond cutting discs are divided into basic cutting discs and integral cutting discs. The diamond cutting disc with metal plate is also called the diamond cutting disc with ring disc, that is, the outer ring of the cutting disc is the diamond working layer, and the central part adopts a high-strength, high-rigidity base plate. Since the high-rigidity metal plate is integrated with the bond of the outer ring disc, high rigidity and strength are obtained, and it is not easy to deform during cutting, and high-load and deep cutting can be realized.

Metal bond diamond cutting discs have strong abrasive holding power and wear resistance, good cutting edge shape retention, and long service life.

The diameter range is 50~600 mm and thickness range is 0.2~4 mm. Parameters such as inner hole, diameter, grit and concentration can be customized according to requirements.

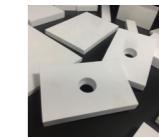


Metal Bond Cutting Discs

金属结合剂切割片

Advanced Ceramics Cutting Disc

金属结合剂先进陶瓷切割片



先进陶瓷是近年兴起的新型材料，具有耐超高温、高硬度、耐酸碱腐蚀，不导磁不导电，特殊光色效果，在航空航天、通信、汽车、化工、医疗、电子、精密机械等军工民用行业有广泛的用途。先进陶瓷往往较难加工，因此选择合适的金刚石切割片尤其重要。

Advanced ceramics are new materials that have emerged in recent years. They are resistant to ultra-high temperature, high hardness, acid and alkali corrosion, non-magnetic and non-conductive, and special light and color effects. They are used in aerospace, communications, automobiles, chemicals, medical, electronics, and precision machinery. It has a wide range of uses in military and civilian industries. Advanced ceramics are often difficult to machine, so choosing the right diamond cutting wheel is especially important.

- 高纯度氧化铝陶瓷

High-Purity Alumina

- 氧化锆陶瓷

Zirconia Ceramics

- 碳化硅陶瓷

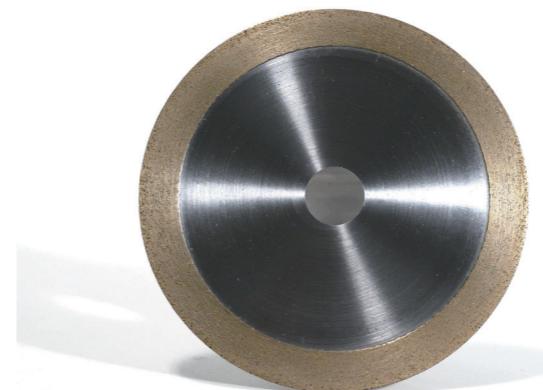
Silicon Carbide Ceramics

- 氮化硅陶瓷

Silicon Nitride Ceramics

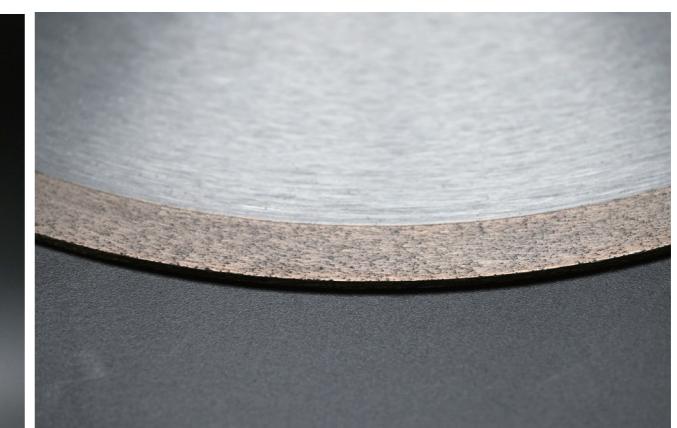
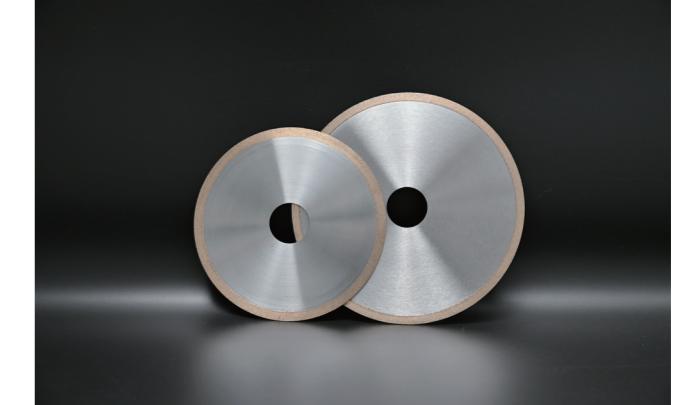
Chamfer cutting disc for alumina ceramics

氧化铝陶瓷倒角切割片

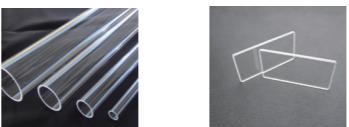


Cutting disc for zirconia ceramics

氧化锆陶瓷切割片



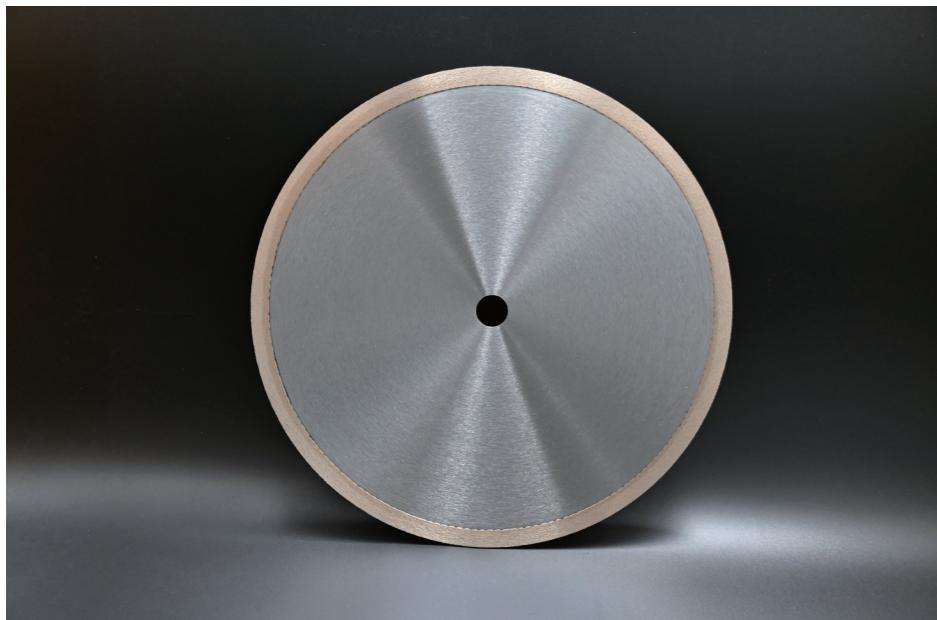
Special Glass Cutting Disc 金属结合剂玻璃切割片



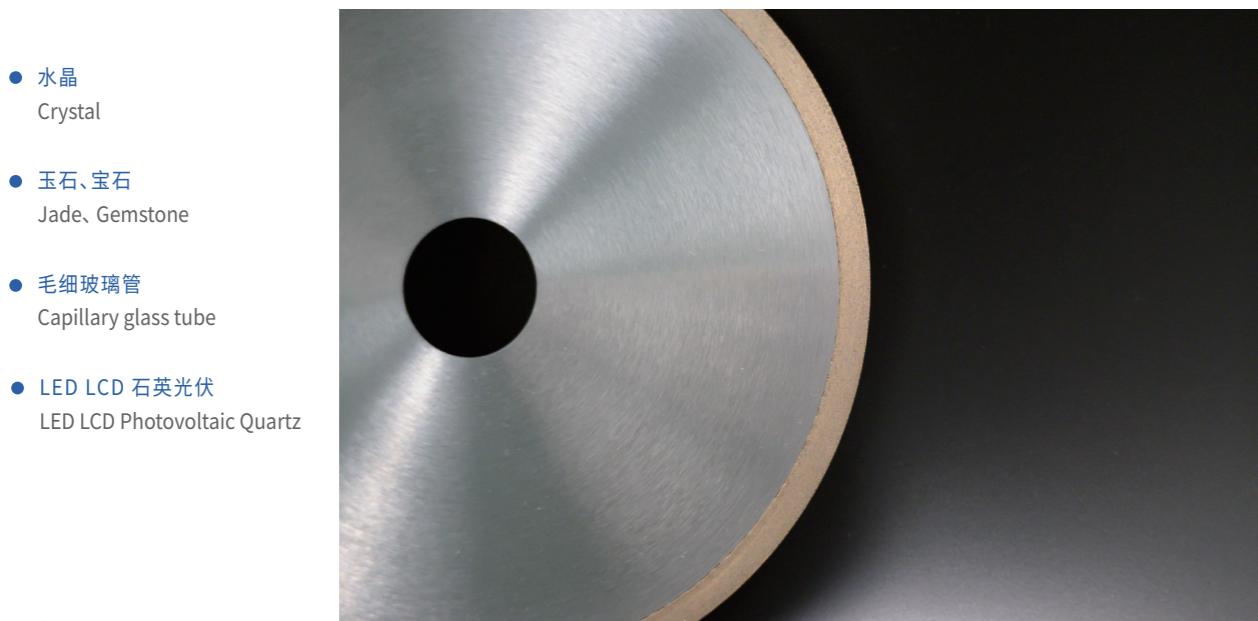
常见的玻璃材质有石英玻璃、高硼硅玻璃、光学玻璃等等。我公司生产的玻璃切割片有如下特点：基体刚性强，不易变形，耐磨性强；开料锋利，开槽表面光滑无崩边；适合于单片切割与多刀组合切割。

Common glass materials include quartz glass, high borosilicate glass, optical glass, and so on. The glass cutting discs produced by our company have the following characteristics: The base metal plate has strong rigidity, is not easily deformed, and has strong wear resistance; Sharp cutting, smooth grooving surface without chips; Suitable for single cutting and gang wheel cutting.

Metal bond glass cutting pieces
金属结合剂玻璃切割片



- 光学玻璃
Optical Glass
- 石英玻璃
Quartz Glass
- 微晶玻璃
Glass-Ceramics
- 高硼硅玻璃
High Borosilicate Glass



- 水晶
Crystal
- 玉石、宝石
Jade, Gemstone
- 毛细玻璃管
Capillary glass tube
- LED LCD 石英光伏
LED LCD Photovoltaic Quartz

Special Ultra-Thin Cutting Disc For Metallographic Cutting Machine

金相切割机专用超薄切割片

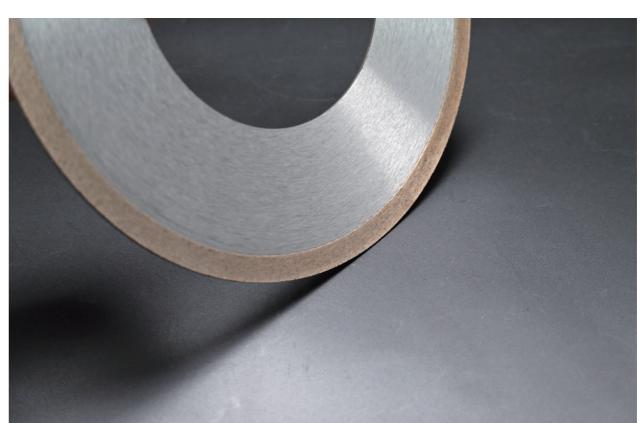
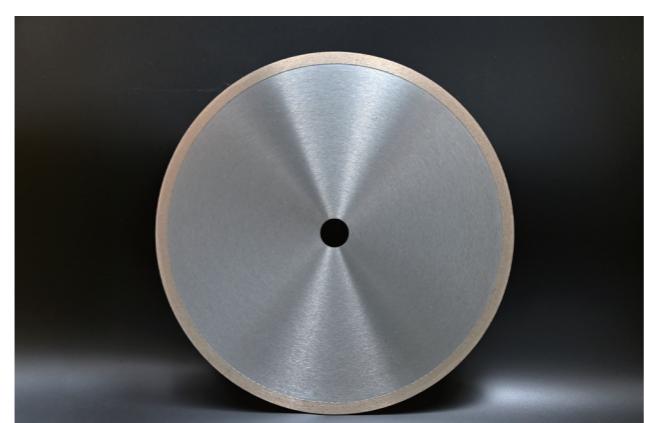
我公司可以生产用于金相测试的金相机专用切割片，用于微观结构检查的样品制备，良好的切割质量可以节约大量的时间。金相机专用切割片可以用于玻璃、陶瓷、线路板、金属、电子元器件等材料的切割、开槽。常用的直径规格为 100、125、150、175、200mm 等等。

Our company can produce cutting discs for metallographic testing of precision cutting machines. Good cutting quality can save a lot of time for sample preparation for microstructure inspection. The special cutting blade for metallographic cutting machines can be used for cutting and slotting materials such as glass, ceramics, circuit boards, metals, electronic components, etc. The commonly used diameter specifications are 100, 125, 150, 175, 200mm, etc.

Metal bond cutting disc for metallographic sample cutter
金属结合剂金相机切割片



Metal bond cutting disc for circuit board
金属结合剂线路板用切割片



Resin Bond Cutting Discs

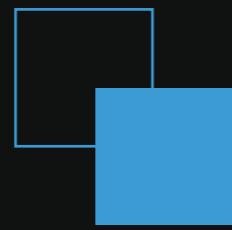
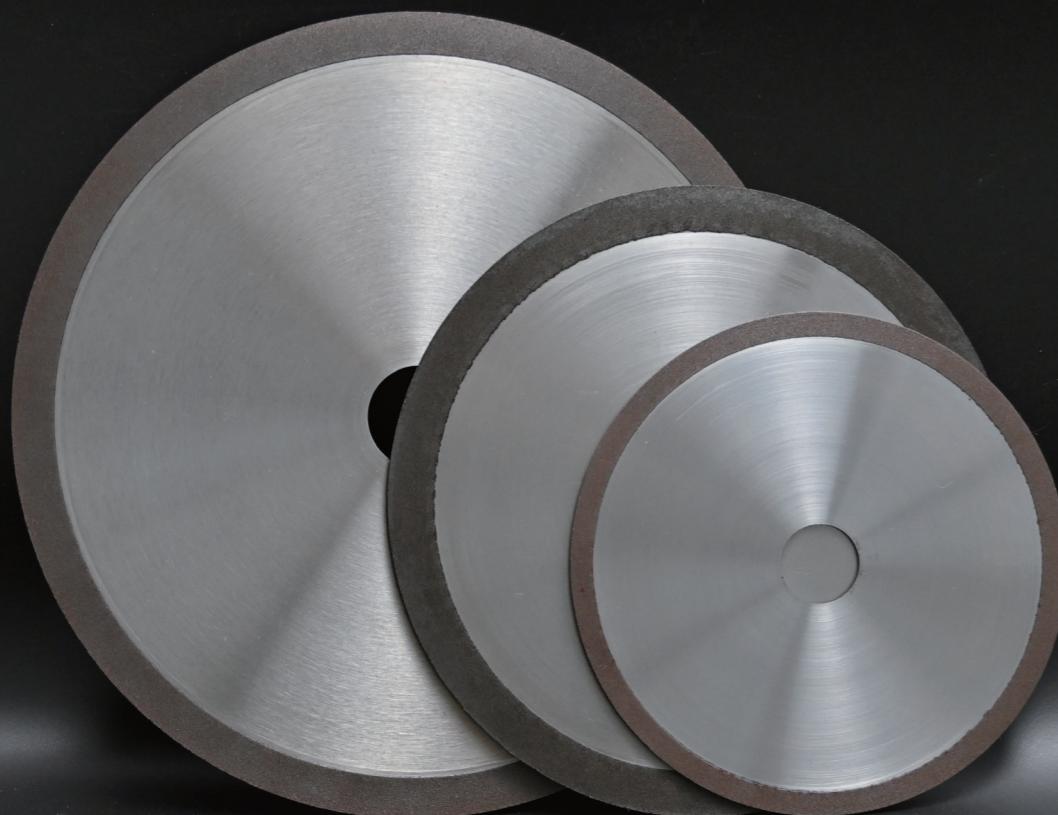
树脂结合剂切割片

树脂结合剂金刚石切割片自锐性好，切割锋利，效率高，易实现大切深和大进给；结合剂富有弹性，可提高加工质量和工件光洁度。通过选择不同的结合剂种类，可以适合各种不同材质的切断，开槽。

直径范围50~600mm，厚度范围0.5~4mm，内孔、直径、粒度、浓度等参数都可根据需要进行定制。

The resin bond cutting disc has good self-sharpening, sharp cutting, high efficiency, and easy to achieve large cutting depth and large feed. The bond is elastic, which can improve the processing quality and the smoothness of the workpiece. By choosing different types of bond, this diamond cutting disc can be suitable for cutting and grooving of various materials.

The diameter range is 50~600mm and a thickness range is 0.5~4mm. Parameters such as inner hole, diameter, thickness, grit and concentration can be customized according to requirements.



Resin Bond Cutting Discs 树脂结合剂切割片

Advanced Ceramics Cutting Disc 树脂结合剂先进陶瓷切割片



先进陶瓷是近年兴起的新型材料，具有耐超高温、高硬度、耐酸碱腐蚀，不导磁不导电，特殊光色效果，在航空航天、通信、汽车、化工、医疗、电子、精密机械等军工民用行业有广泛的用途。先进陶瓷往往较难加工，因此选择合适的金刚石切割片尤其重要。

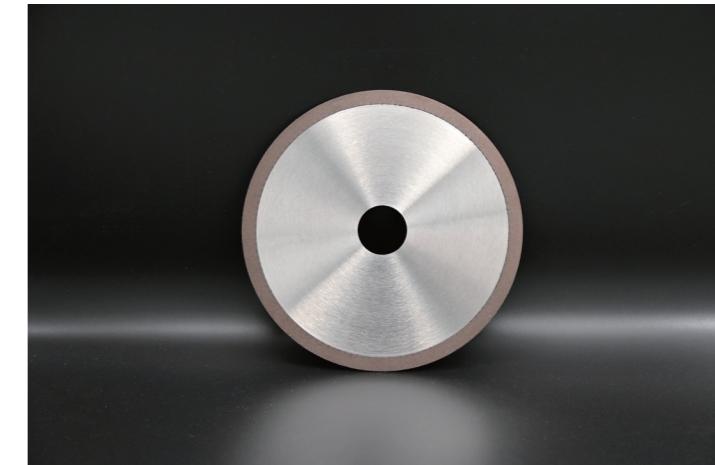
Advanced ceramics are new materials that have emerged in recent years. They are resistant to ultra-high temperature, high hardness, acid and alkali corrosion, non-magnetic and non-conductive, and special light and color effects. They are used in aerospace, communications, automobiles, chemicals, medical, electronics, and precision machinery. It has a wide range of uses in military and civilian industries. Advanced ceramics are often difficult to machine, so choosing the right diamond cutting wheel is especially important.

Resin bond silicon carbide cutting blades 树脂结合剂碳化硅切割片



- 高纯度氧化铝陶瓷
High-Purity Alumina
- 氧化锆陶瓷
Zirconia Ceramics
- 碳化硅陶瓷
Silicon Carbide Ceramics
- 氮化硅陶瓷
Silicon Nitride Ceramics

Resin bond cutting disc for alumina ceramics
树脂结合剂氧化铝切割片



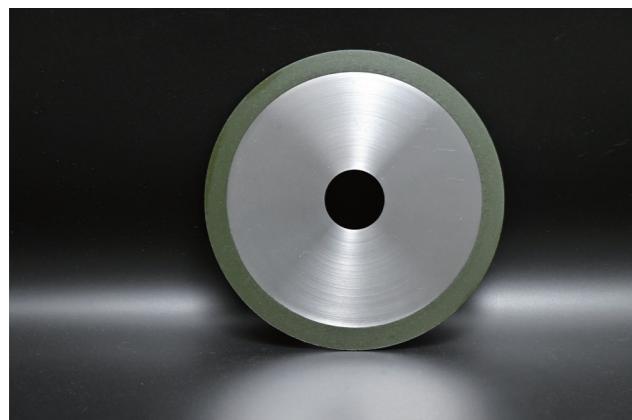
Resin Bond Cutting Disc for Glass 树脂结合剂玻璃切割片



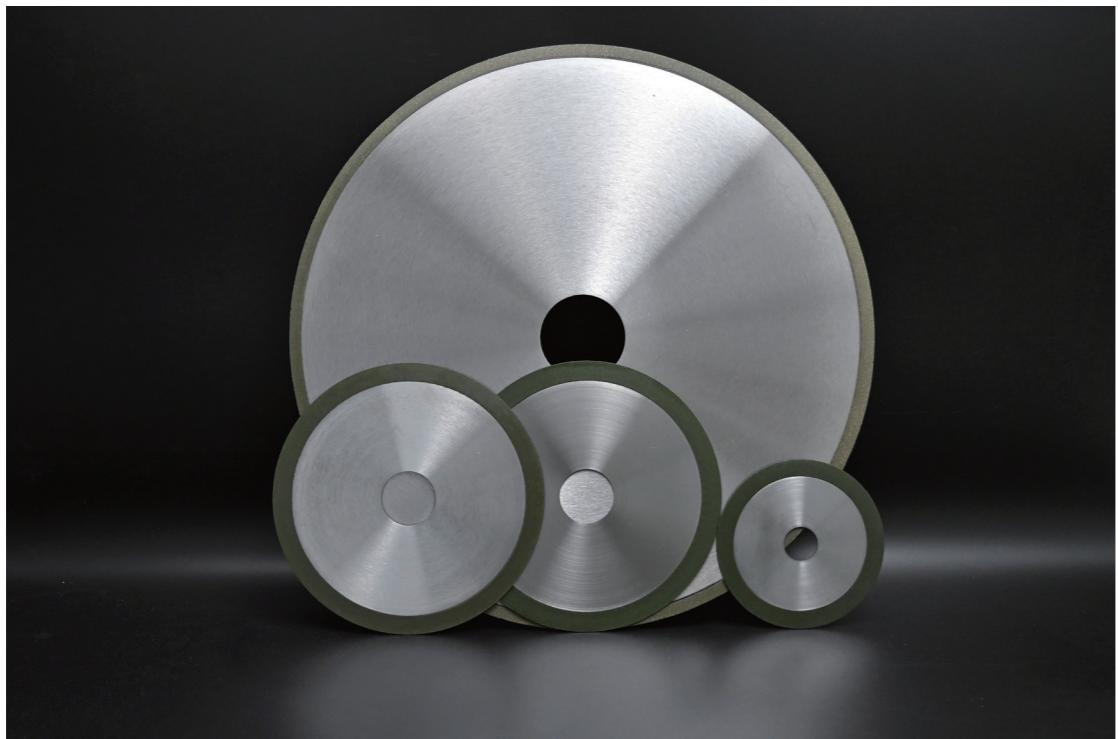
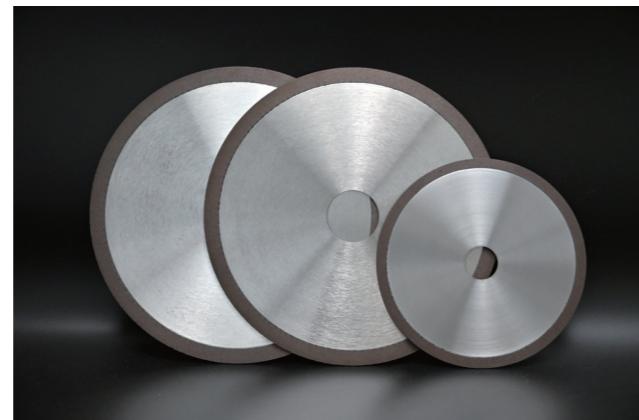
常见的玻璃材质有石英玻璃、高硼硅玻璃、光学玻璃等等。树脂结合剂玻璃切割片相对于金属结合剂切割片拥有更高的锋利度和更好的切割质量，尤其适合于玻璃管、宝石、水晶、玉石玛瑙、玻璃杯、茶漏等材料的精密切割。

Common glass materials include quartz glass, high borosilicate glass, optical glass, and so on. Resin bonded glass cutting discs have higher sharpness and better cutting quality compared to metal bonded cutting discs, especially suitable for precision cutting of materials such as glass tubes, gemstones, crystals, jade agates, glass cups, tea glasses, etc.

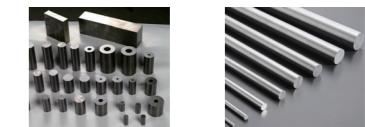
Cutting disc for quartz glass
石英玻璃切割片



Cutting disc for high borosilicate glass
高硼硅玻璃切割片



Cutting Disc for Cemented Carbide 树脂结合剂硬质合金切割片



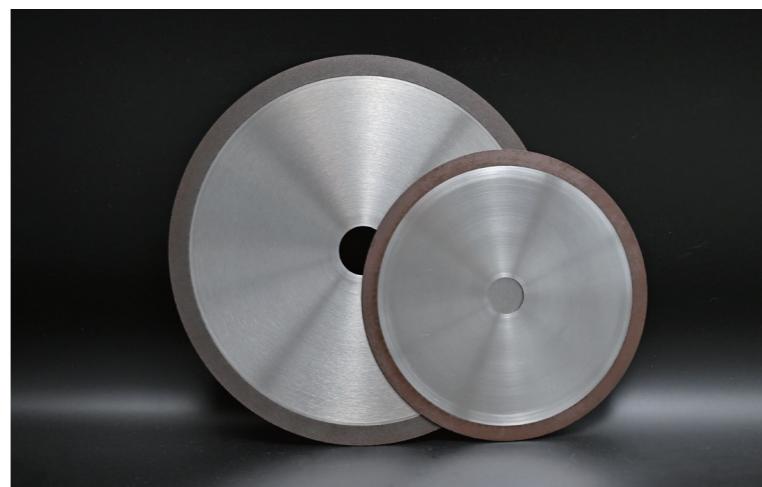
硬质合金是由难熔金属的硬质化合物和粘结金属通过粉末冶金工艺制成的一种合金材料。硬质合金具有硬度高、耐磨、强度和韧性较好、耐热、耐腐蚀等一系列优良性能，特别是它的高硬度和耐磨损性，使得切削过程异常困难，我公司研发的硬质合金专用树脂结合剂切割片，具有切割锋利，切口窄，断面光滑，切割效率高等优点，是您理想的切割工具。

Cemented carbide is an alloy material made of hard compounds of refractory metals and bonding metals through powder metallurgy. Cemented carbide has a series of excellent properties such as high hardness, wear resistance, good strength and toughness, heat resistance, and corrosion resistance. Especially its high hardness and wear resistance make the cutting process extremely difficult. The resin-bonded cutting Discs for alloys developed by our company have the advantages of sharp cutting, narrow incision, smooth section, and high cutting efficiency. They are your ideal cutting tools.

Cutting disc for tungsten carbide
碳化钨切割片



Cutting disc for cemented carbide
硬质合金切割片



- 高速钢
High Speed Steel

- 模具钢
Die Steel

- 合金钢
Alloy Steel

- 不锈钢
Stainless Steel

- 硬质合金
Cemented Carbide

- 钨钢
Tungsten Steel

- 刀具
Cutter

- 钻头
Drill Bit

Metal Bond Grinding Wheels

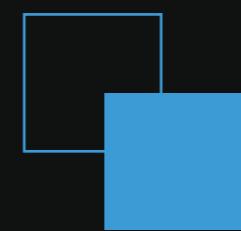
金属结合剂砂轮

金属结合剂砂轮，就是以金属粉末作为联结剂，将金刚石烧结在基体金属板上，结合力强，金刚石不易脱落，稳定耐用。金属结合剂砂轮具有效率高、自锐性好、除渣率高、附着力强、耐磨性好等特点。金属结合剂砂轮多用于玻璃、瓷砖、先进陶瓷、蓝宝石等材料的磨削抛光。

直径范围为 50~600mm；厚度范围为 0.5~100mm；粒度范围为 60~3000#。我们还可以根据客户的要求设计和制造非标准砂轮。

Metal bond diamond and CBN grinding wheels are made from the sintering of metals powder and other compounds with either Diamond or Cubic Boron Nitride (CBN). Metal bond grinding wheels have features of high efficiency, good self-sharpening, high stock removal, strong hold and good abrasion resistance. Metal bonded grinding wheels are commonly used for grinding and polishing materials such as glass, ceramic tiles, and advanced ceramics.

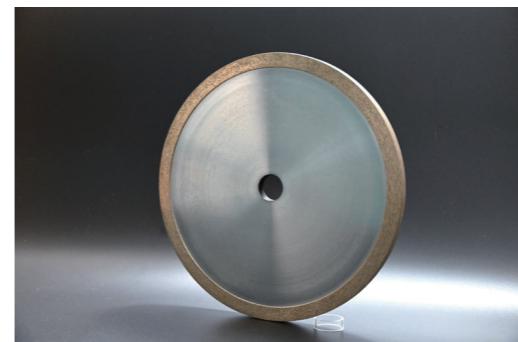
The diameter range is 50 ~ 600mm; the thickness range is 0.50 ~ 300 mm; the grit size range is 60~3000#. We can also design and make nonstandard grinding wheels according to customers' requirement.



Metal Bond Grinding Wheels

金属结合剂砂轮

Special grinding wheel for glass surface grinding
玻璃平面磨削专用砂轮



Single bevel grinding wheel for glass ceramics
玻璃陶瓷单斜边砂轮



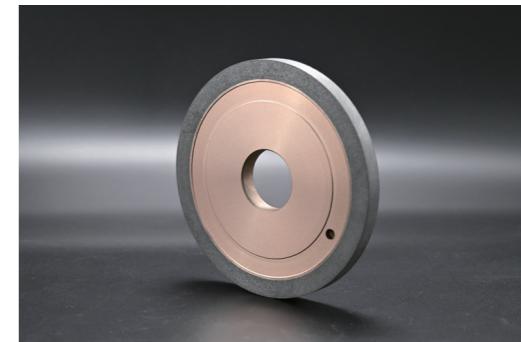
Grinding disc for crystal/glass/ceramic
水晶/玻璃/陶瓷磨盘



Grinding disc for goblet glass
高脚杯玻璃磨盘



Strong grinding wheel for slotting
强力开槽砂轮



Special grinding wheel for glass surface grinding
1F1 圆弧边砂轮



14A1 grinding wheel for quartz slotting
14A1石英开槽砂轮



Resin Bond Grinding Wheels 树脂结合剂砂轮

树脂结合剂金刚石/CBN 砂轮具有自锐性好、磨削过程中产生的热量低、不易堵塞、磨削过程中工件烧伤现象少等特点。树脂结合剂具有一定的弹性，有利于提高工件表面的粗糙度，主要用于精磨、半精磨、磨锐、抛光等工艺。因此，树脂结合剂金刚石和CBN 砂轮在磨削和切削领域得到了广泛的应用。

直径范围为 50~600mm;厚度范围为 0.5~100mm;粒度范围为 80#~5000#.我们还可以根据客户的要求设计和制造非标准砂轮。

Resin bond diamond & CBN grinding wheels have features of good self-sharpening, low heat generated during grinding, not easy to block and reduces the phenomenon of working burns during grinding. Resin bond has a certain elasticity and is conducive to improving the roughness of the work piece surface, mainly used for fine grinding, semi-fine grinding, sharpening grinding, polishing and other processes. Therefore, resin bond diamond and CBN grinding wheels are widely used in the field of grinding and cutting.

The diameter range is 50 ~ 1000mm; the thickness range is 0.5 ~ 300 mm; the grit size range is 80# ~ 5000#. We can also design and make nonstandard grinding wheels according to customers' requirement.

Grinding wheel for cemented carbide
硬质合金磨削砂轮



6A2 Resin bond grinding wheel
6A2树脂砂轮

Combination of resin grinding wheels
树脂砂轮组合



Single bevel grinding wheel for grooving
单斜边开槽树脂砂轮

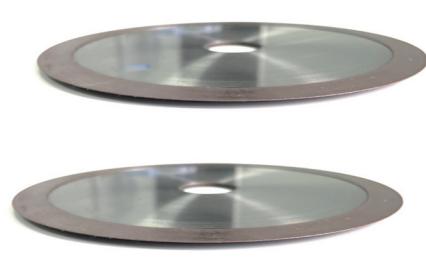
Thining wheel for photovoltaic industry
光伏减薄砂轮



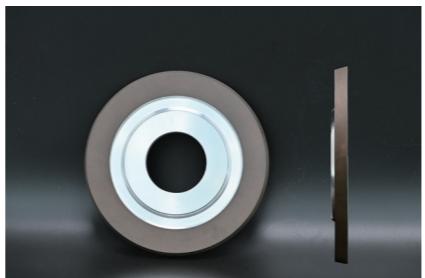
6A2 Resin bond grinding wheel
6A2 树脂砂轮



CBN Grinding wheel for alloy & steel
CBN合金、钢磨削砂轮



CBN Grinding wheel for alloy & steel
CBN合金、钢磨削砂轮



Vitrified Bond Grinding Wheel 陶瓷结合剂砂轮

陶瓷结合剂砂轮磨削效率高,不易堵塞和发热,具有更高的硬度,工作表面容屑性能好,切削锋利、热膨胀量小,容易控制加工精度,一般用于粗磨、半精磨,以及接触面大的成型磨削。

直径范围为 50~600mm;厚度范围为 0.5~100mm;粒度范围为 80#~5000#.我们还可以根据客户的要求设计和制造非标准砂轮。

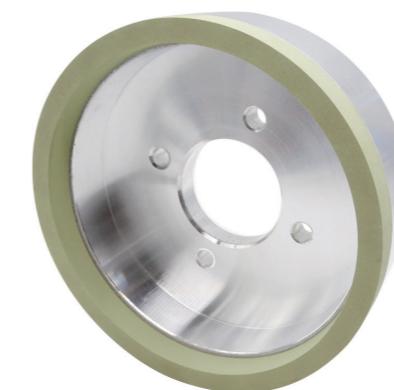
The vitrified bond grinding wheel has high grinding efficiency, is not easy to block and generate heat, has higher hardness, good chip holding performance on the working surface, sharp cutting, small thermal expansion, and easy control of machining accuracy. It is generally used for rough grinding, semi-fine grinding, and forming grinding with large contact surfaces.

The diameter range is 50 ~ 1000mm; the thickness range is 0.5 ~ 300 mm; the grit size range is 80# ~ 5000#. We can also design and make nonstandard grinding wheels according to customers' requirement.

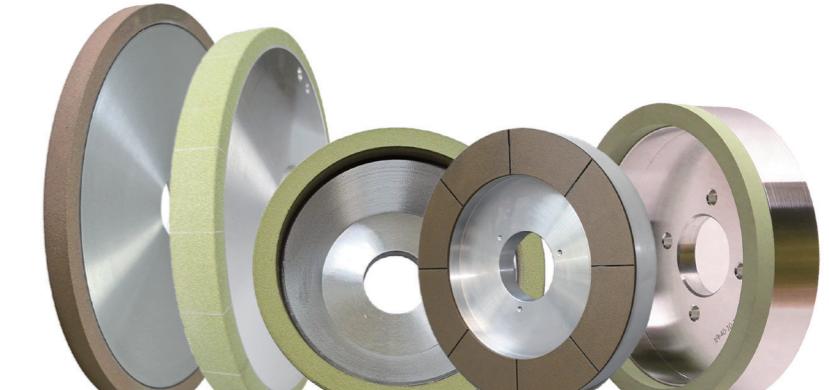
Vitrified bond parallel grinding wheel
陶瓷结合剂平行砂轮



Vitrified bond parallel grinding wheel
陶瓷结合剂碗形砂轮



Vitrified bond grinding wheels
陶瓷结合剂砂轮系列



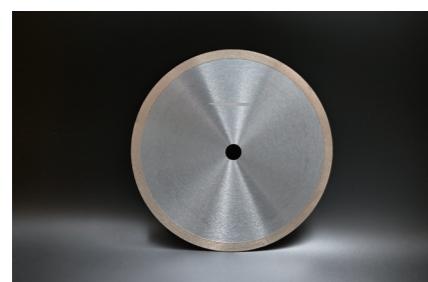
Product Application Display

产品应用展示

- Application fields of diamond ultra-thin precision cutting wheels:

金刚石超薄精密切割片应用领域

- 玻璃材料:各种玻璃管、玻璃壶口、茶漏、高硼硅玻璃(电子烟管)、毛细玻璃管、光学玻璃、石英玻璃、微晶玻璃、宝石、水晶、玉石;
- 陶瓷材料:氧化铝、氧化锆、碳化硅、碳化钨、氮化硼、黑陶瓷、琉璃制品;
- 研磨材料:耐火材料、超精油石;
- 磁性材料:磁芯、磁片、磁环、永磁铁氧体、稀土钕铁硼;
- 合金材料:高速钢、模具钢、合金钢、不锈钢;
- 脆金属材料:YG系列硬质合金,钨钢圆棒。
- 半导体材料:碳化硅、硅片、单晶硅、多晶硅、太阳能电池
- 光学材料:LED、LCD、石英光伏。
- Glass materials:** various glass tubes, glass kettles, tea cups, high borosilicate glass (electronic cigarette tubes), capillary glass tubes, optical glass, quartz glass, microcrystalline glass, gemstones, crystals, jade;
- Ceramic materials:** alumina, zirconia, silicon carbide, carborundum, boron nitride, black ceramics, and glass products;
- Grinding materials:** refractory materials, super essential oil stones;
- Magnetic materials:** magnetic core, magnetic sheet, magnetic ring, permanent magnetic ferrite, rare earth neodymium iron boron;
- Alloy materials:** high-speed steel, mold steel, alloy steel, stainless steel;
- Brittle metal material:** YG series hard alloy, tungsten steel round rod.
- Semiconductor materials:** silicon carbide, silicon wafers, monocrystalline silicon, polycrystalline silicon, solar cells
- Optical materials:** LED, LCD, quartz photovoltaic.



瓷砖切割片
Cutting disc for ceramics tiles



岩板专用切割片
Cutting disc for sintered stone



蓝宝石切割片
Cutting disc for sapphire

High precision brazed cutting disc
高精度钎焊切割片



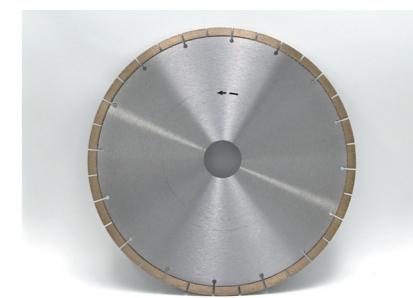
CBN cutting disc for tungsten steel
CBN 切割片



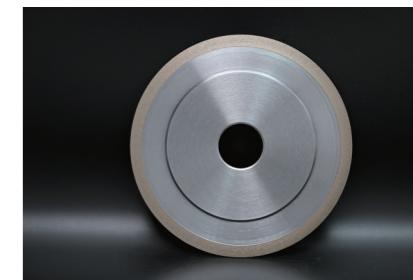
1A8 Cutting disc for CNC machine
1A8 数控机床专用切割片



Cutting disc for marble
大理石花岗岩切割片



14A1 Resin bond grooving wheel
14A1 双斜边树脂开槽砂轮

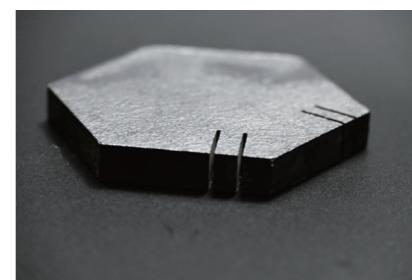


Cutting effect display
切割效果展示

Cutting effect of borosilicate glass
硼硅玻璃切割效果



Cutting effect of SiC ceramic
碳化硅陶瓷切割效果



Cutting effect of alumina ceramics
氧化铝陶瓷切割效果



Cutting effect of carbon fiber
碳纤维切割效果



Cutting effect of quartz glass
石英玻璃管切割效果

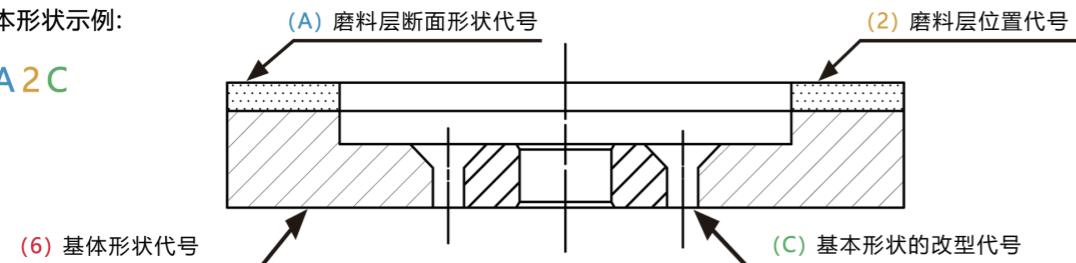


Main Shape Codes For Diamond Cutting Discs/Grinding Wheels

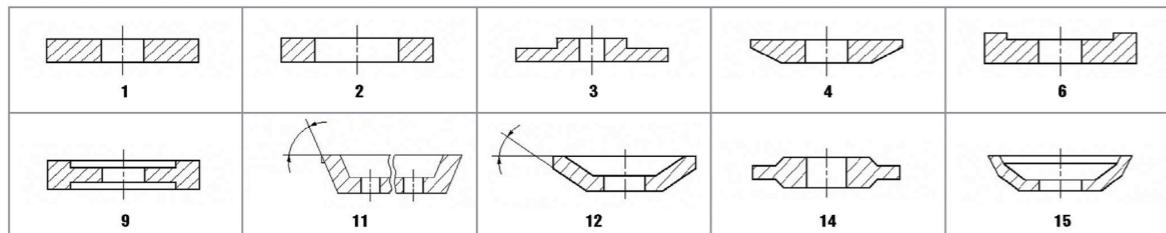
金刚石切割片/砂轮的主要形状代号

基本形状示例:

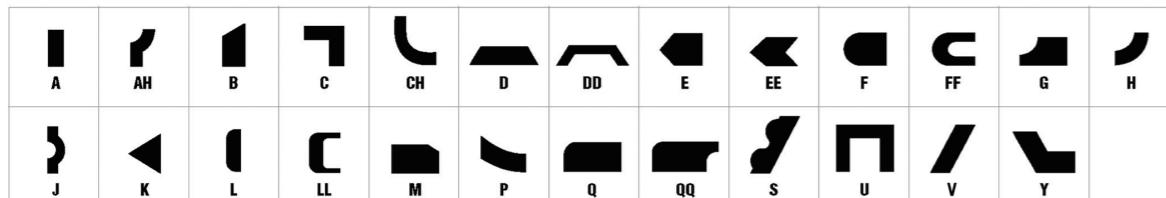
6 A 2 C



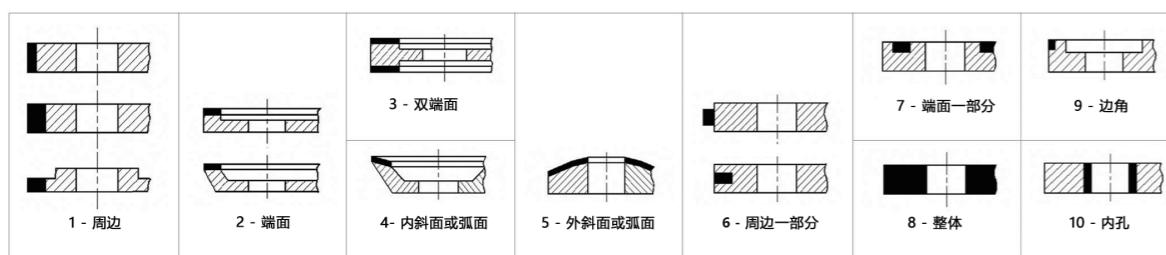
1. 基体基本形状代号 Basic shape code of the substrate



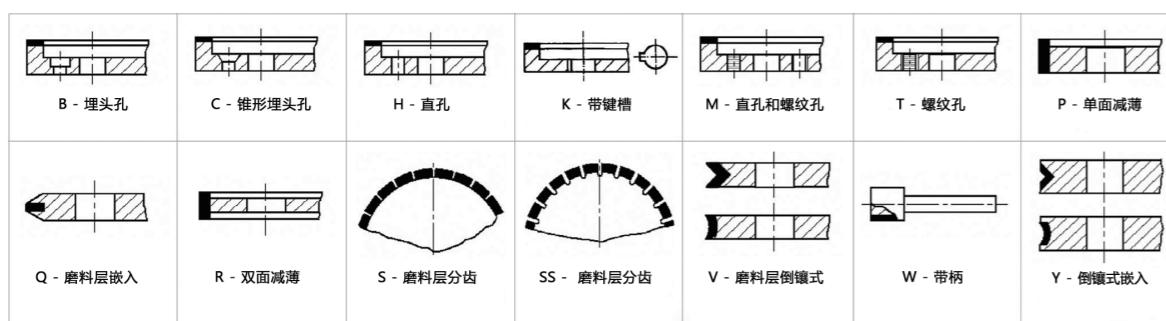
2. 磨料层断面形状代号 Abrasive layer cross-sectional shape code



3. 磨料层在基体上的位置代号 Location code of abrasive layer on the substrate



4. 基体基本形状的改型代号 Modification code for the basic shape of the substrate



Common Specifications and Sizes of Ultra-Thin Cutting Disc

超薄金刚石切割片常用规格尺寸表

外径 Diameter (mm)	厚度 Thickness (mm)	0.2	0.3	0.5~0.6	0.7~0.9	1.0	1.2~1.3	1.4~1.6	1.8	2.0~2.2	2.4~2.6	3.0~4.0	直径精度误差(mm) Diameter Accuracy
50~100 (2~4")													
110													
125 (5")													
140													
152 (6")													
160													
177 (7")													
182													
204 (8")													
250 (10")													
300 (12")													
350 (14")													
400 (16")													
450~600 (18"~24")													
厚度精度误差(mm) Thickness Accuracy	±0.02	±0.05											

备注: 灰色单元表示常用尺寸, 其他规格尺寸或精度 (包括但不限于本表格) 可以根据需要定制。

Remark: Gray cells indicate the regular demensions, other specifications or accuray required (including but not limited to this sheet) could be customized.

Abrasive Granularity and Concentration Selection Rules

磨料粒度、浓度选用规则

人造金刚石粒度的粗细以粒度号表示。粒度的粗细直接影响工件表面的粗糙度、切割效率及切割片损耗。选择粒度原则上是在满足加工工件要求的条件下选用尽可能粗的粒度, 这样可以提高切割效率, 降低切割片损耗。金刚石浓度则根据切割材料的不同进行选用, 常用材料都有大致的浓度范围, 此外可以根据您的需要进行定制, 详情可咨询技术服务人员。

The diameter of the synthetic diamond grain size is expressed by the granularity number. The diamond grit size directly affects the roughness of the workpiece surface, cutting efficiency and cutting discs loss. In principle, the choice of particle size is to choose the larger particle size as possible under the condition of meeting the requirements, which can improve the cutting efficiency and reduce the loss of cutting discs. In addition, customization can be made according to your needs, and details can be consulted with technical service personnel.

磨料类型 Abrasive Type	浓度 Concentration	代号 Code	体积 Volume	克拉数 Carat/cm ³
金刚石/立方氮化硼 Diamond/CBN	25%	25	6.25	1.1
	50%	50	12.5	2.2
	75%	75	18.75	3.3
	100%	100	25	4.4
	150%	150	37.5	6.6

切割工序 Cutting Procedure	粗切 Rough Cutting	半精切 Semi-finish Cutting	精切 Precision Cutting	研磨抛光 Polishing
粒度选择 Granularity Selection	30~80#	100~200#	230~500#	W40~W1

Selection of Various Bond for Cutting Discs 各种结合剂切割片的选用

结合剂种类及特征 Bond Types and Characteristics				
代号 Code	M	V	B	P
结合剂类型 Bond Type	金属结合剂 Metal Bond	陶瓷结合剂 Vitreous Bond	树脂结合剂 Resin Bond	电镀结合剂 Electroplated Bond
磨料种类 Abrasives Type	金刚石/CBN Diamond or CBN			
结构示意图 Structure Schematic				
结构特点 Structure Features	无气孔 No Pores	有气孔 Many Pores	无气孔 No Pores	单层、双层或多层 Single Double or Multi Layer
性能特点 Physical and Chemical Properties	强度高，韧性好，寿命长，适合强力切割，自锐性差 High strength, good toughness, long life, suitable for strong cutting, poor self-sharpening	切削锋利，结合力强，热稳定性好，化学稳定性好，自锐性好，易控制加工精度及修整 Sharp cutting, strong binding force, good thermal stability, good chemical stability, good self-sharpening, easy to control machining accuracy and trimming	有一定弹性，自锐性好，锋利度高，切割完成的工件表面质量好，粗糙度低，与金属结合剂相比寿命较低 It has certain elasticity, good self-sharpness, high sharpness, good surface quality of cut workpiece, low roughness, and lower service life compared with metal bond	磨料密度高，锋利，切割效率高，排屑好，不易烧伤工件，无需修整，寿命短 High abrasive density, sharp, high cutting efficiency, good chip removal, not easy to burn the workpiece, no need for trimming, short life
切割能力 Cutting Performance				→ 强 Strong
寿命 Lifespan	长 Long ←			

结合剂 Bond Type	代号 Code	主要用途 Main Applications
金属结合剂 Metal Bond	M	金刚石：用于先进陶瓷、硬质合金、磁性材料、光学玻璃、宝石、石英、水晶、印刷电路板等材料的切断或切槽。 立方氮化硼：工具钢、轴承钢、耐热钢等材料。 Diamond: Mainly used for cutting off or slotting of Advanced ceramics, Cemented carbide, Magnetic materials, Optical glass, Gems, Quartz, Crystal, Glass Tubes, etc. CBN: Tool steel, Bearing steel, Heat-resistance steel and so on.
树脂结合剂 Resin Bond	B	金刚石：主要用于陶瓷、水晶、石英、宝石、硬质合金、磁性材料、电光玻璃管、光学玻璃等硬脆材料的切槽和切断。 立方氮化硼：主要用于工具钢、模具钢、轴承钢、耐热钢、不锈钢、铸铁等各种铁系金属材料的切槽和切断。 Diamond: Mainly used for grooving and cutting of hard and brittle materials such as Ceramics, Crystals, Quartz, Gems, Cemented carbide, Magnetic materials, Electro-optic glass tubes, and optical glass. CBN: Mainly used for grooving and cutting of various Iron-based metal materials such as Tool steel, Die steel, Bearing steel, Heat-resistant steel, Stainless steel, and Cast iron.
陶瓷结合剂 Vitreous Bond	V	金刚石用于硬质合金、PCD刀具、PCBN刀具、陶瓷、金属陶瓷等材料的加工。 立方氮化硼用于铸铁类(合金铸铁、冷激铸铁、球墨铸铁)、钢类(45#钢、55#钢、20Cr等)、曲轴、长轴、丝杆、凸轮轴、微型轴承、大型精密工件、仪表等合金的加工。 Diamond: Mainly used for processing cemented carbide, PCD, PCBN, ceramics, cermets and other materials. CBN: Mainly used for Cast iron (alloy cast iron, chilled cast iron, ductile iron), Steel (45# steel, 55# steel, 20Cr, etc.), crankshaft, long shaft, screw rod, camshaft, miniature bearings, large precision workpieces, instruments and other alloy processing.
电镀结合剂 Electroplated Bond	P	金刚石用于玻璃、宝石、陶瓷、硬质合金、水晶、铁氧体磁性材料等材料的粗切。 立方氮化硼用于铸铁、铸造合金钢、钛合金等金属材料的机械加工。 Diamond: Mainly used for rough cutting of materials such as Glass, Gems, Ceramics, Hard alloys, Crystals, Ferrite magnetic materials, etc. CBN: Mainly used for machining for Cast iron, Cast alloy steel, Titanium alloy and other metal materials.

金刚石磨料用于加工硬而脆的材料，例如硬质合金刀具、陶瓷、玻璃等工件；

CBN磨料适用于生产加工硬而韧的材料尤其是黑色金属，如各种各样的钢件、铸铁等，汽车零部件-曲轴、凸轮轴等，液压配件，压缩机零部件等。

Diamond abrasives are used to process hard and brittle materials, such as cemented carbide tools, ceramics, glass and other workpieces;

CBN abrasives are suitable for the production and processing of hard and tough materials, especially ferrous metals, such as various steel parts, cast iron, etc., autoparts-crankshafts, camshafts, etc., hydraulic parts, compressor parts, etc.

Order Guideline 产品订购须知

初次订货时，请您提供以下参数，便于我们协助您选择最适合的切割片和砂轮。

型号:1A8、1A1、1A1R、3A1、14A1、1B1、1E1 等。

规格尺寸:磨料、粒度、结合剂、外径、厚度、内径、磨料工作层宽度、基体厚度等。

用途:工件名称、切割尺寸、切割材料;切槽、切断等。

使用条件:机床、砂轮速度、进给速度、切割深度;干式切、湿式切等。

切割要求:切割精度、崩口要求、加工表面完整性等。

特殊要求:是否组刀使用、树脂切割片和砂轮是否需要导电、

切割片和砂轮外圆是否带水槽、水槽尺寸数量、1A1型切割砂轮基体外侧面是否有排屑槽等。

Please provide the following parameters for first order, so that we can assist you in selecting the most suitable cutting blade and grinding wheel.

Types: 1A8, 1A1, 1A1R, 3A1, 14A1, 1B1 and so on.

Specification: Abrasive type, grit, bond type, outer diameter, thickness, inner diameter, work layer width, steel plate thickness and so on.

Usage: The work piece, cutting size, cutting material, grooving or cutting off and so on.

The application conditions: The machine, the rotational speed, feed speed, cutting depth, dry or wet cutting and so on.

Cutting requirement: Cutting precision, chipping request, superficial integrity and so on.

Special requirement: for example: Whether gang saw use, whether the resin bond cutting wheel needs electric conduction, whether there are water slots on the periphery of cutting wheel, number and specification of the water slots, whether 1A1 type cutting wheel with steel plate has slots for removing chips on the outer profile and so on.

金刚石超薄精密切割片的使用注意事项:

(1) 在金刚石超薄精密切割片装机前请仔细检查，如果有缺口或其它破损，请停止使用。

(2) 当金刚石超薄精密切割片标有旋转方向时，要与机床回转方向一致。相反则切割不锋利，难以发挥切割砂轮的性能。

(3) 切割过程中若发现异常，应立即停机，排查原因；

(4) 当切割不锋利时，要对金刚石超薄精密切割片进行修整开刃。若继续使用会出现过热、超负荷而使切割片破损的可能。

(5) 金刚石超薄精密切割片回转中，严禁用手操作进行切割，更不能用手及身体接触砂轮。

(6) 金刚石超薄精密切割片严禁用于切槽或切断以外的作业，避免因受力不均而发生意外情况。

(7) 金刚石切割片切割效果与主轴的安装精度、法兰盘的大小有直接关系，若安装误差大，会影响切割精度和效果。

(1) Please check carefully before installing the diamond ultra-thin precision cutting disc, if there is a gap or other damage, please stop using it.

(2) When the diamond ultra-thin precision cutting disc is marked with the direction of rotation, it must be consistent with the direction of rotation of the machine tool. On the contrary, the cutting is not sharp, and it is difficult to exert the performance of the cutting wheel.

(3) If any abnormality is found during the cutting process, stop the machine immediately and check the cause;

(4) When the cutting is not sharp, the diamond ultra-thin precision cutting disc should be trimmed and sharpened. If you continue to use it, overheating and overloading may cause the cutting disc to be damaged.

(5) During the rotation of the diamond ultra-thin precision cutting disc, it is strictly forbidden to cut by hand, let alone touch the grinding wheel with hands and body.

(6) Diamond ultra-thin precision cutting discs are strictly prohibited for operations other than grooving or cutting to avoid accidents due to uneven force.

(7) The cutting effect of the diamond cutting disc is directly related to the installation accuracy of the spindle and the size of the flange. If the installation error is large, it will affect the cutting accuracy and effect.