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HARDER INDIA

Add: Khasra No 697 Duhai Industrial Area Meerut Road,
GHAZIABAD (U.P.)-201206

WhatsApp/Phone: +91 9910966411, +91 88008 02380

Email: harderindia1@gmail.com

Website: www.harderindia.com



01

SUPERABRASIVE WHEEL FOR INDEXABLE INSERTS GRINDING

PRODUCT INTRODUCTION

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Application

Mainly used for grinding the periphery and cutting edge of indexable inserts.



Main Features

Good surface accuracy retention, High cutting force, High durability, Long life.



Workpiece Material

Carbide, ceramics, cermets, PCD/PCBN , etc.



Matching Grinders

Germany WENDT, Japan WAIDA, Switzerland AGATHON, Switzerland EWAG, British COBORN and related manufacturers in China such as TDG-MT, BeiJing Hi-Powerful CNC Machine.



| Model | Profile sketches | Universally specs | |
|-------|------------------|-------------------|-------------|
| 6A2M | | 6A2M D*T*H*W*X | |
| | | D | 250、350 |
| | | W | 5-18 |
| | | X | 6-10 |
| 11A2T | | 11A2T D*T*H*W*X | |
| | | D | 300、350、400 |
| | | W | 3-25 |
| | | X | 6-10 |
| 12A2T | | 12A2T D*T*H*W* | |
| | | D | 220、350、400 |
| | | W | 3-18 |
| | | X | 6-10 |
| 15A2M | | 15A2M D*T*H*W*X | |
| | | D | 300、350、400 |
| | | W | 5-30 |
| | | X | 6-10 |

02

SUPERABRASIVE WHEEL FOR CUTTING TOOLS

PRODUCT INTRODUCTION



Application

Mainly used for the grinding of PCD/PCBN tools, CVD tools, MCD tools, milling cutters, reamers, drills etc.



Main Features

High grinding efficiency, good shape retention, high precision workpiece.

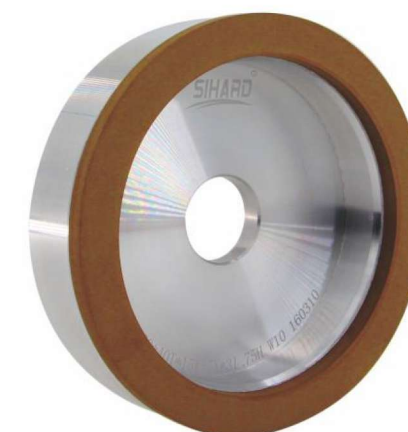
There are many pores in the grinding wheel, which are conducive to chip removal and heat dissipation during grinding without block and burning workpiece.

The grinding wheel has good self-sharpening, long dressing interval, and easy dressing.



Matching Grinders

COBORN,EWAG, ANCA, FARMAN, MYTECH etc.



03

SUPERABRASIVE WHEEL FOR CNC TOOL GRINDER

PRODUCT INTRODUCTION



Main Features

Perfect processing quality.

Suitable for high-efficiency grinding processing with fast feed.

Good wear resistance and shape keeping.



Workpiece Material

Carbide, cermet, high speed steel, stainless steel, etc.



Matching Grinders

WALTER,ANCA,ROLLOMATIC,DECKEL,SAACKE,MAKINO,DJTOL,BEIPING MACHINE etc.
five-axis or more CNC tool grinding machines.



04

GRINDING WHEEL FOR POWERFUL GROOVING

PRODUCT INTRODUCTION



Main Features

High cutting ability, large longitudinal feed, low load.

Long life and good stability of cutting edge.

Customized Service Available.



Application

Mainly used for grooving of CNC tools, such as tungsten carbide, cermet, high-speed steel, stainless steel drills, milling cutters, reamers.

05

DOUBLE SURFACE GRINDING DISC

PRODUCT INTRODUCTION



● Abrasion Resistance

It is 80-120 times life times of ordinary grinding wheel.

● Thermal Conductivity

Good grinding thermal conductivity, no workpiece burns.

● High Precision

Grinding workpieces with high precision and good surface quality.

● Efficient

Sharp cutting, high efficiency.



特点
FEATURE



Application

Mainly used in the surface grinding for automobile engine parts, air conditioner compressor parts, carbide tools, PCD/PCBN tools, precision bearings, hydraulic parts, pneumatic components, measuring tools, crystal gems, glass, ceramics, silicon wafers, alumina, magnetic materials etc.



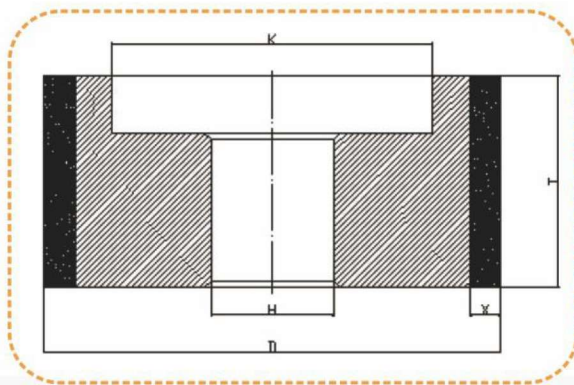
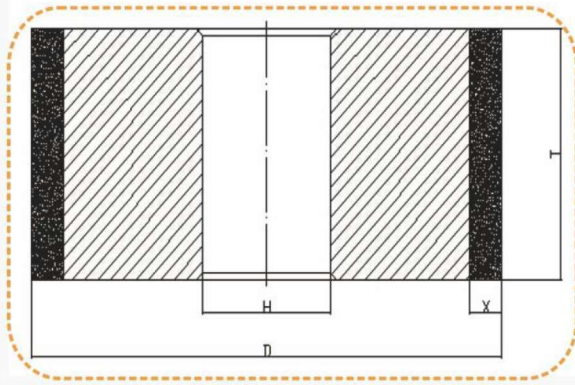
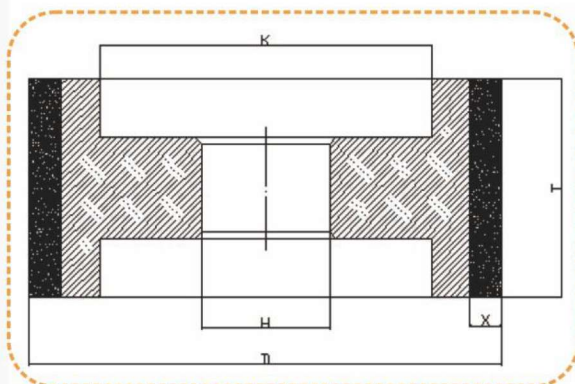
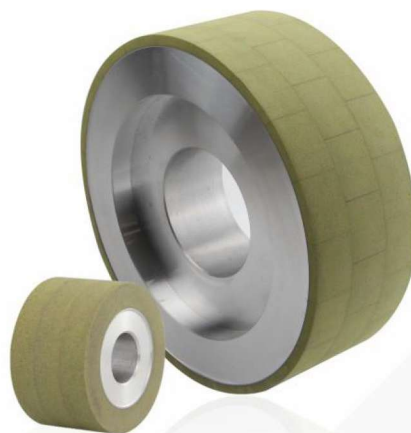
Matching Grinders

Domestic Double-Sided Grinder such as Xinxiang SKF, Xinxiang Wanhua, Xinxiang Sunrise, Wenzhou Baicheng, Suzhou HRT, and so on. Imported Double-Sided Grinder such as South Korea AM, Japan KOYO, Germany PETER WOLTERS, British LAPMASTER and so on.

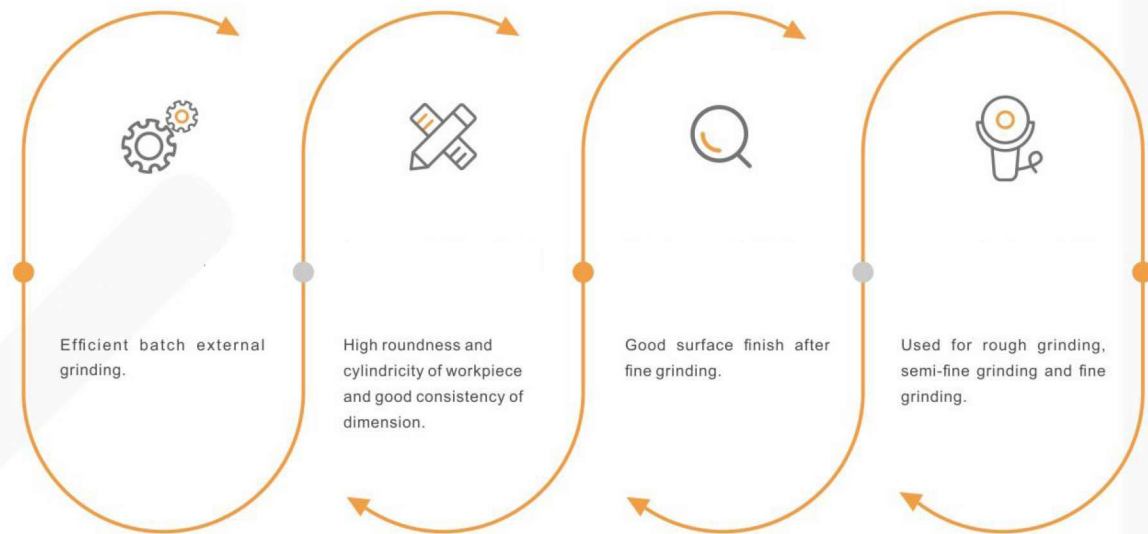
06

CENTERLESS GRINDING WHEEL

PRODUCT INTRODUCTION



Main Features



Applicable Processing

Mainly used for grinding carbide, ceramics, magnetic material, stainless steel, PCD/PCBN, bearing steel, special steel and other materials.



Matching Grinders

JAPAN KOYO, PARAGON, PALMARY, XIJI, HENFUX, HOTMAN FUXINCHENG etc.

07

SUPERABRASIVE WHEEL FOR PEEL GRINDING

PRODUCT INTRODUCTION



Main Features

High grinding efficiency and durability.

Good shape retention.

Good consistency of workpiece dimension.



Matching Grinders

Mainly used for peel grinding of tungsten carbide, high speed steel and stainless steel.

08

SEMICONDUCTOR THINNER GRINDING WHEEL

PRODUCT INTRODUCTION

Back grinding wheels are mainly used for the thinning and fine grinding of the silicon wafer. These products produced by our institute which possess superior grinding performance and high cost. Performance are among the top level worldwide. They can be used with the Japanese, German, American, Korean and Chinese grinders.

Workpiece processed: silicon wafer of discrete devices, integrated chips (IC) and virgin etc.

Material of workpiece: monocrystalline silicon and some other semiconductor materials.

Applications: back thinning, rough grinding and fine grinding.



Excellent grinding performance



High cost performance

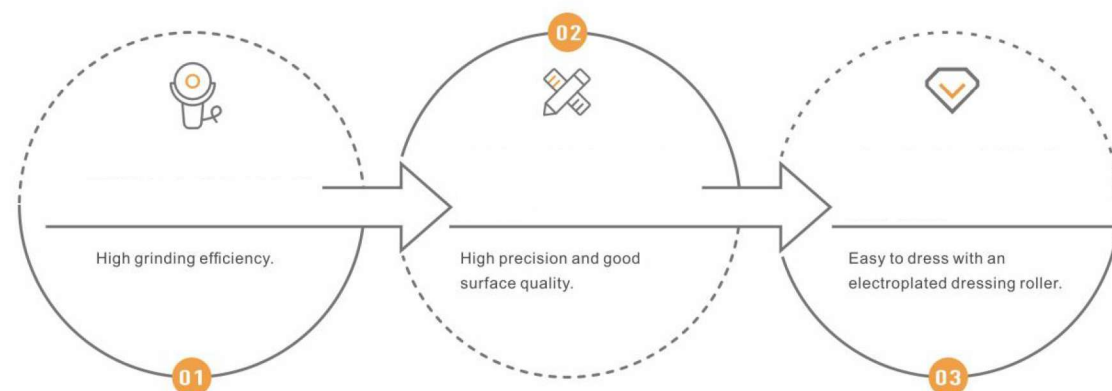
09

HIGH SPEED VITRIFIED BOND CBN GRINDING WHEEL

PRODUCT INTRODUCTION



Main Features



Application

Mainly used for the precise grinding of the camshaft of CAM.
Mainly used for the precise grinding of crankpin, main journal, flange neck, thrust face and end face.
High speed and high efficiency grinding of gearbox gear shaft journals and gear external circles.
High efficiency grinding of gear shafts, gear inner holes and end faces.
Efficient grinding of CVT gearbox pulley shaft journal, pulley cone surface, and inner and outer ball grooves of the pulley.



Workpiece Material

Cast Iron: Chilled cast iron, ductile iron, gray cast iron, alloy cast iron, etc.
Steel Parts: 20Cr, 20CrMnTi, 40Cr, 42CrMo, GCr15, #45 Steel, #55 Steel, 80B high-carbon steel.



Matching Grinders

NAXOS: NAXOS-UNION-P310×1250, GF70.
TOTODA: GCS63, GL5P-63, GL6P-100, GCH120B, GC32M-63, GCH63B, GL63M-T.
JUNKER: JUCAM5002/10, JUCAM500, JUCRANK5000, 6000.
SCHAUDT: CF41, CF61, ZEUSMX, ZXII.
LANDIS: LT1, LT2.

10

VITRIFIED BOND CBN INTERNAL GRINDING WHEEL

PRODUCT INTRODUCTION



Main Features

High grinding efficiency.

High precision of grinding workpiece and good surface quality.

Easily dress with a diamond dressing wheel.



Application

In the automotive industry, connecting rod ends, hydraulic and pneumatic cylinder, CVJ ball cages, inner and outer raceways, automobile motor hydraulic tappets, gear holes, automobile pump stators, gun barrels, air-conditioning compressor roller, cylinders, Grinding of flange covers, ball and roller bearings and other workpieces. It is equipped with high-precision imported and domestic CNC internal grinder.

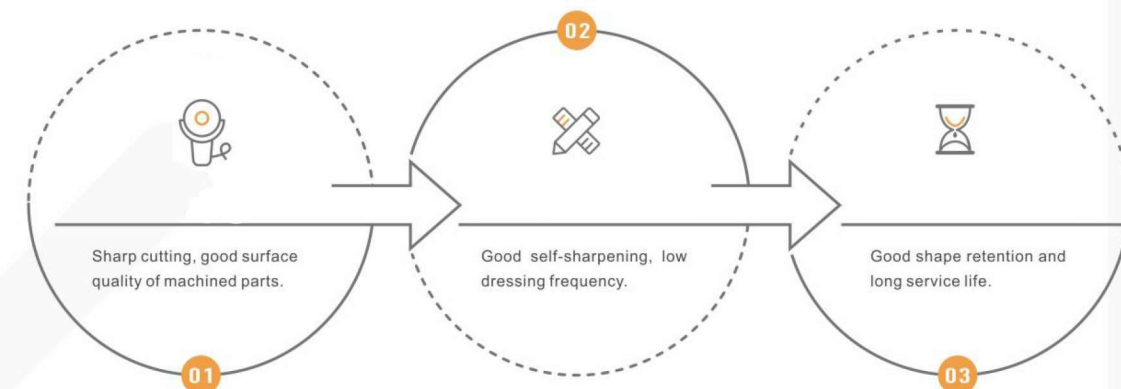
11

GRINDING WHEEL FOR WOODWORKING TOOL

PRODUCT INTRODUCTION



Main Features



Application

Front-end sharpening and knife sharpening of solid carbide saw blades, high-speed steel saw blades, welded carbide circular saw blades and band saws.



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GRINDING WHEEL FOR GLASS EDGING MACHINES

PRODUCT INTRODUCTION

Henan Xinyuan Superhard Material Co.,Ltd is the parent company of Henan Sihard Technology Co.,Ltd.Xinyuan specializes in the prodcution of various grinding wheels for glass.

GRINDING WHEELS FOR STRAIGHT LINE DOUBLE EDGING MACHINE



GRINDING WHEELS FOR BEVELLING MACHINE



PROFILING WHEEL-PE/PA WHEEL



DRILLING, MILLING AND GRINDING TOOLS FOR GLASS PROCESSING CENTERS



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VITRIFIED BOND GRINDING WHEEL

PRODUCT INTRODUCTION

Sihard has developed many high-performance vitrified bond CBN and diamond grinding wheels with diameters ranging from 2mm to 1200mm, which are used in many different industries.



Application

- Automobile parts.
- Bearing Industry.
- Aerospace Industry.
- Turbine Industry.
- PCD PCBN grinding.
- Contour grinding of threaded plates.
- Outer diameter grinding of printing rollers, shafts and rods.
- Surface grinding of ceramic parts.
- Flat surface, outer diameter and grinding operation of various parts.
- Crankshaft and camshaft grinding.
- Finish machining of steam turbine parts.

We provide customers with specific applications for vitrified bond diamond, CBN grinding wheels, special tools series.

RESIN BOND WHEEL SERIES

Sihard provides a wide range of resin bond diamond/CBN grinding wheels, with wheel diameters ranging from 5mm to 700mm, which are used in many different industries.

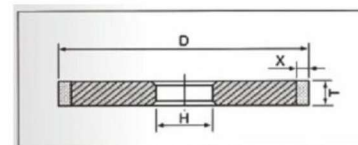


Application

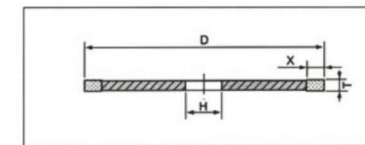
- Rotating tool.
- Cutting tool industry.
- Aerospace Industry.
- Ceramic and tile grinding.
- Woodworking tools.
- Tungsten carbide roller grinding.
- Tool regrinding/recovery.
- Optical profile grinding.
- Double disc grinding.
- Centerless grinding.

We also provide customized resin bond grinding wheels for grinding precision parts in machine tools, aerospace, defense, watch and mold industries.

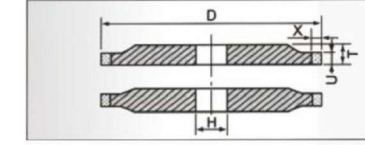
1A1 Stright



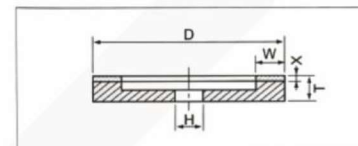
1A1R Cuitting



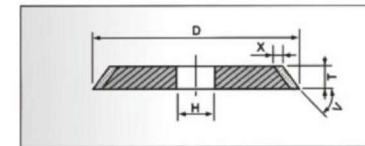
3A1/14A1 Straight With Boss



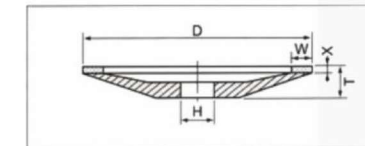
6A2 Plain Cup



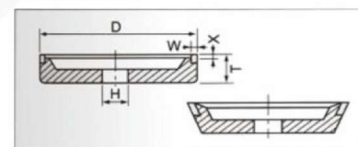
1V1 Straight With Angle



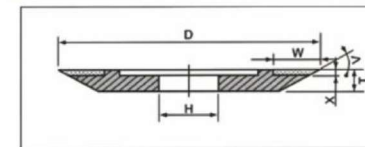
12A2 Dish



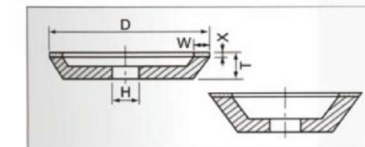
6A9/11V9 Corner Cup



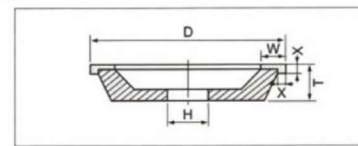
4B2 One Side V Face



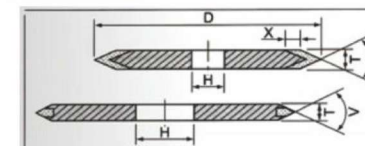
11A2/11B2 Flair Cup



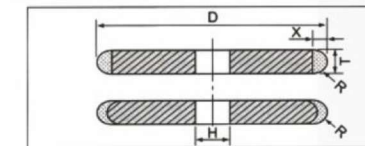
11C9/11Y9 L-shaped Flair Gup



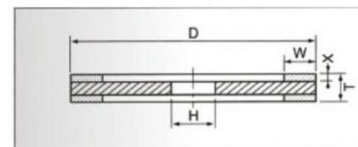
1EE1/1E6Q V Face



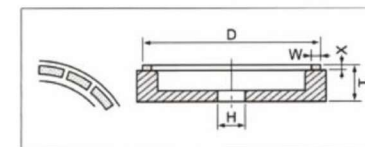
1F1/1FF1 Straight R



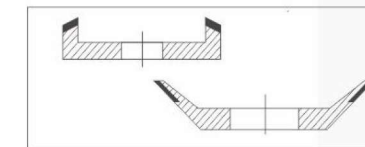
9A3 Both Side Cup



6A2S Segment Cup



6V5/12V9 Corner Cup



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TYPES OF DIA AND CBN

PRODUCT INTRODUCTION

- D– Natural diamond.
- SD-Synthetic diamond.
- SDC-Synthetic diamond with metal coating.
- CBN–Cubic Boron Nitride.
- CBNC- Cubic Boron Nitride with metal coating.

| Application of diamond & CBN | | |
|------------------------------|--------------------------|-----------------------------|
| Diamond | | CBN |
| Carbon | Silicon | SKH |
| Ge | Glass | SK |
| Cast iron | Plastics | SKS |
| Quartz | Rubber | SUJ |
| Crystal | Graphite | SUS |
| Stone | Speckstone | Cr |
| Pitch | Granite | Die steel |
| Asbestos | Marble | Alnico magnetic alloy |
| GaAs | Concrete | Permalloy |
| Carbide | Polycrystalline material | Iron silicon aluminum alloy |
| Ferrite | Iron titanium material | SUH |
| Cermet | Iron alloy | SCM,SNCM,SCr |
| Acrylic | Rare earth magnet | Heart–resistance alloy |
| Glass fibre | Jet alloy | Nichrome |
| refractory | traditional common wheel | Titanitum |
| Spray coating | FRP | Special cast iron |
| Carbide tools | | Nickel alloy |
| PCBN | | Stellite |
| PCD | | Metal coating |
| Ceramics | | Inconel |

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PARTICLE SIZE TABLE

PRODUCT INTRODUCTION

| CHINA Standard | FEPA Standard | US Standard | JIS Standard |
|----------------|---------------|-------------|--------------|
| 60/70 | D (B) 251 | 60/70 | #60 |
| 70/80 | D (B) 213 | 70/80 | #70 |
| 80/100 | D (B) 181 | 80/100 | #80 |
| 100/120 | D (B) 151 | 100/120 | #100 |
| 120/140 | D (B) 126 | 120/140 | #120 |
| 140/170 | D (B) 107 | 140/170 | #140 |
| 170/200 | D (B) 91 | 170/200 | #170 |
| 200/230 | D (B) 76 | 200/230 | #200 |
| 230/270 | D (B) 64 | 230/270 | #230 |
| 270/325 | D (B) 54 | 270/325 | #270 |
| 325/400 | D (B) 46 | 325/400 | #320 |
| 400/500 | D (B) 40 | 400/500 | #400 |
| W50 | D (B) 35 | 40–50 μ m | #500 |
| W40 | D (B) 30 | 30–40 μ m | #600 |
| W35 | D (B) 25 | 20–40 μ m | #700 |
| W28 | D (B) 20 | 20–30 μ m | #800 |
| W25 | D (B) 15 | 15–25 μ m | #1000 |
| W20 | D (B) 15B | 10–20 μ m | #1200 |
| W14 | D (B) 15A | 8–16 μ m | #1500 |
| W12 | D (B) 10 | 6–12 μ m | #2000 |
| W10 | D (B) 7 | 5–10 μ m | #2500 |
| W7 | D (B) 5 | 4–8 μ m | #3000 |
| W5 | D (B) 3 | 3–6 μ m | #4000 |
| W3.5 | D (B) 2 | 2–4 μ m | #5000 |
| W1.5 | D (B) 1 | 1–2 μ m | #6000 |