

Vitrified Diamond/CBN Wheel

Super abrasive

Vitrified bond which is retentive and chemically stable is suitable for grinding hard-to-grind materials and high efficiency and precision grinding.

It is difficult to manufacture vitrified wheels, but we can manufacture vitrified wheels with a variety of characters through long time study.

Features

- We adopt ceramics body has good accuracy, rigidity and cooling performance.
- Unique pore ability by Pore Tec
- Dry grinding is O.K.
- good grinding and grinding accuracy
- no worry of detachment
- little dimension change by grinding heat
- Side-dressing is O.K.
- good cooling effect
- Wheel weight is light.



User's comments

- Grinding sintered diamond is good. And grinding CBN tip is good.
[wheel : 6A2 125x25x31.75 10Wx2χ TDC 800 Q 125 V1] [grinding : tool grinding] [material : sintered diamond]
- Compared with other manufacturers, Teiken vitrified diamond wheel provides stable fine roughness and the reduction of the number of dressing.
[wheel : 14A1 400x50x203.2 18ux5χ TD 140 N 75 100 V6] [grinding : surface grinding] [material : SiC ceramics]
- For rough groove grinding of drill, compared with other manufacturers, Teiken vitrified diamond wheel provides good grinding, less loading and less shape change.
[wheel : 1A1 100x20x31.75 x3χ TD 140 N 100 V6] [grinding : tool grinding] [material : cemented carbide]

RZ series

High Performance Wheel



RZ wheels provide high quality grinding depending on the polycrystalline complex structure of the abrasive.

Both good cutting performance and few abrasive grain loss are achieved because of the grit's micro fracturing.

Cutting performance of RZ grows several times as much as conventional WA wheel. Additionally, the RZ wheel is easier to be formed than CBN wheel.

We offer RZ, RZW, RZi, RZSS, and RZdolce according to user's grinding condition.

Features

- high quality grinding
- easy forming wheel
- low grinding resistance
- extending dressing interval

User's comments

■High accuracy grinding is achieved by RZ46H wheel to grind 0.18mm for 0.2mm stock removal. Additionally, RZ wheel continues good cutting performance though the wheel size is smaller. RZ dresser also provides extending dressing interval.

[wheel size:1A 305*38*127 RZ 46 H 9 V 30, grinding method:surface grinding, workpiece material:SKD11,HRC62]

■RZ wheel provides reduction of dressing frequency and grinding time thanks to continuance of good cutting performance

RZ dresser lasts longer than single-point dresser because of the stability and durability.

[wheel size:7A 305*35*127 RZ 80 H 8 V 30, grinding method:cylindrical grinding, workpiece material:SKH51, workpiece size:φ50*40L]

■Thanks to good cutting performance, dressing interval extends.

[wheel size:1A 760*75*304.8 RZ 80 G 9 V 30, grinding method:cylindrical grinding, workpiece material:hard chrome plating material, workpiece size:φ310*1450L]



BK wheel

Resin wheel with pore



TEIKEN have tried solving the problems about grinding to improve abrasive, bond, filler and structure.

But businesses such as requirements, accuracy, efficiency, grinding performance and cost reduction from users, are challenged.

We would like to consider trying our new wheel with pores that we developed.

Features

- low grinding resistance depending on pores
- long dressing interval
- good grinding sound
- continuance of good cutting performance
- good discharging chips and grinding heat
- structure with pores
- abrasive and bond



BK wheel spec

TDC	140	L	75	B	2	K2
Abrasive Grain TDC, TD, TDM, TBN	Grain Size #80~2000	Grade A~T	Concentration 50~125	Bond	Type 1・2・3・ 5・6・P	Pore Number 1・2・3・ 4・5・6

■ BK wheel provides few grinding burnings and reduction of grinding time to a quarter without breaking.

[wheel size:6A2 150*40*40 15W*5*10E TDC 120 L 75 B2K5, grinding method:tool grinding, workpiece material:cermet]

■ Thanks to pores, BK wheel does not bring on grinding burnings.

[wheel size:1A1 180*10*31.75*3*BY1°TD 1500 D 75 B6K6, grinding method:surface grinding, workpiece material:hard metal]



Synergy Wheel Synergy

Knows everything & change everything by the grinding sound



Synergy wheel is resinoid type wheels (dia/cBN) has a ceramics core.

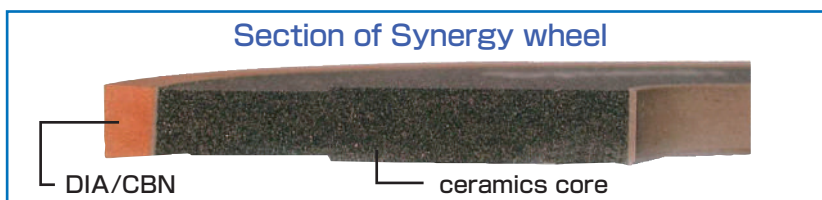
This wheel has high grinding performance than the resinoid type and vitrified type has a metal core.

This wheel decreases dimension error from temperature change and reduce grinding noise.

Features

- high dimensional accuracy
- reduce grinding noise
- good finish surface roughness
- decrease dimension error from temperature change.

Section of Synergy wheel



User's comments

- Synergy wheel has high grinding performance than the vitrified wheel and that tool life is improved.
[wheel spec : 1A1 300x25x127 3χ TBN 140 L 75 BS2K3] [surface grinding] [material : dies steel HRc60]
- Synergy wheel reduce warpage of thin materials than the resinoid type wheel.
[wheel spec : 14A1 300x32x127 x25ux3χxBT3° TBN 140 M 75 BS2K3] [surface grinding] [material : dies steel, DC53 HRc58]
- The resinoid type wheel has metal body is difficult to machine workpiece with aiming dimension. But Synergy wheel is easy.
[wheel spec : : 3A1 250x25x76.2 x10ux3χxBT2° TDC 400 N 100 BS2K2] [cylindrical grinding] [material: tungsten carbide]
- Reduce machining time by almost 50% of the after-process by changing Synergy wheel from the resinoid type wheel.
[wheel spec : 14A1 180x10x31.75 5ux3χxBT3° TDC 270 L 75 BS2K2] [surface grinding] [material: tungsten carbide]
- Synergy wheel has high grinding performance than the wheel in the past.
[wheel spec : 1A1 180x10x31.75 3χ TD 1500 D 75 BS6K6] [surface grinding] [material: tungsten carbide]



HW series

What About "WA+GC" ??



To grind prehardende steel, generally, aluminum abrasives is used.Each abrasive has different property such as polycrystal,single crystal,hard and friable.

HW wheel provides high quality performance by making full use of each property.

HW is useful for cost reduction because of not using ceramic abrasive and reduced dresser wear.

HW is useful as the following,

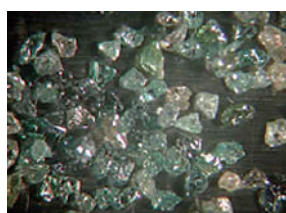
- all-in-one using
- Cost-cutting for ceramic wheel user
- High dimension accuracy of work piece

Features

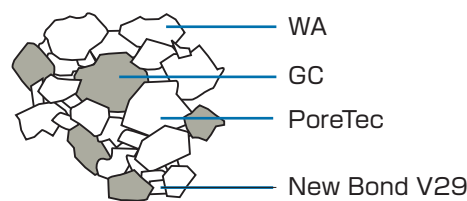
- wide application
- good finish of grinding and dressing
- reduced grinding burnings



WA



GC



User's comments

■Thanks to the efficiency of HW wheel, the wheel can be used for some kinds of material. HW wheel saves operators the trouble of exchanging wheels.

[wheel size:1A 405*75*127 HW 60 J 8 V 29, grinding method:cylindrical grinding, workpiece material:SUS304 and SUS403]

■Abrasive grain loss of HWS wheel is only 0.5mm per 0.1mm stock removal, and the wheel provides good cutting performance, good surface roughness and reduces grinding time in half.

[wheel size:1A 510*50*127 HWS 60 H 9 V 29, grinding method:surface grinding, workpiece material:CEAN1 (HRC38),HPM77(HRC32) and PSL(HRC38)]



BPD Wheel

Heat Resistance wheel



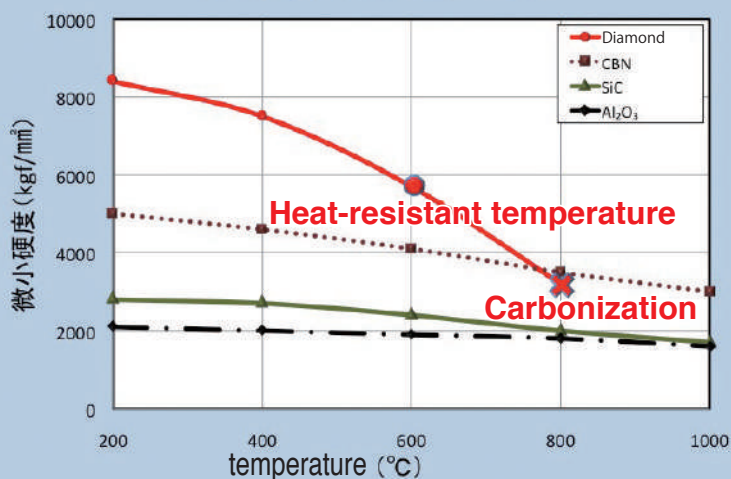
BPD wheels have less incidence of burn is bonded by high thermal conductive resin.

This wheel is best for the grinding is accompanied by heat generation (dry grinding or heavy grinding) and retention of wheel shape.

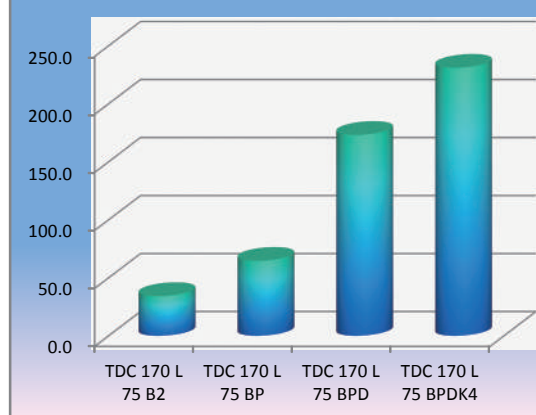
Features

- dry grinding/wet grinding
- Increase depth of cut
- High cooling performance
- Long tool life

Temperature dependence of hardness of abrasive grains



Grinding ratio



■BPD wheels have less incidence of burn and tool life is improved.

[wheel spec : 14A1 180x8x31.75 1.5ux3yxBT1° TBN 170 N 100 BPD] [profile grinding] [materials : High speed steel, dies steel]

■BPD wheel has better grinding performance than resinoid wheels and deliver equal performance of metal bonded wheels. In using a metal bonded wheel, we need wet grinding. However BPD wheel can be used for dry grinding.

[wheel spec : 3A1 75x5x22.23 1ux5x TDC 325 N 100 BPD] [profile grinding] [material : tungsten carbide]

SPW

Almighty wheel



To grind steel-based hardening materials, aluminum abrasive(for example WA,PA and SA etc.) is used.

Each abrasive has different property such as polycrystal,single crystal,hard and friable,SPW wheel provides high quality performance by making full use of each property.

SPW is useful for cost reduction because of not using ceramic abrasive and reduced dresser wear.

SPW wheels have many effects as the following.

- cost reduction for ceramic wheel user
- increasing the precision of grinding
- improving in quality of large size grinding wheel
- grinding hard chrome-plating material
- reduction of dresser wear
- all-in-one using

Features

- high performance for profile and dressing
- reduced grinding burning
- good surface roughness
- wide application

User's comments

- SPW wheel provides good cutting performance and extending dressing intervals.
[wheel size:22 405*75*152.4 SPW 80 K 8 V 30, grinding method:cylindrical grinding, workpiece material:]
- SPW wheel provides reduction of abrasive grain loss and increasing the precision of grinding. In addition, dressing intervals extend by using RZ dresser.
[wheel size:1A 355*38*127 SPW 46 H 8 V 30, grinding method:surface grinding, workpiece material:]
- Thanks good cutting performance and few chip clogging, frequencies of dressing are reduced.
[wheel size:1A 355*25*127 SPW 60 I 8 V 30, grinding method:cylindrical grinding, workpiece material:SUS304, workpiece size:φ100*300-400L]

P T II

Large pores make good, small pores make fine



PTII wheels combine performance for reduction of grinding burnings and good performance for metal materials.

PTII is suitable for difficult-to-cut materials, such as stainless and aluminum.

Features

- Structure to suit for grinding metal materials
- Reduction of grinding heat because of good discharging of chips
- Good workpiece tolerance

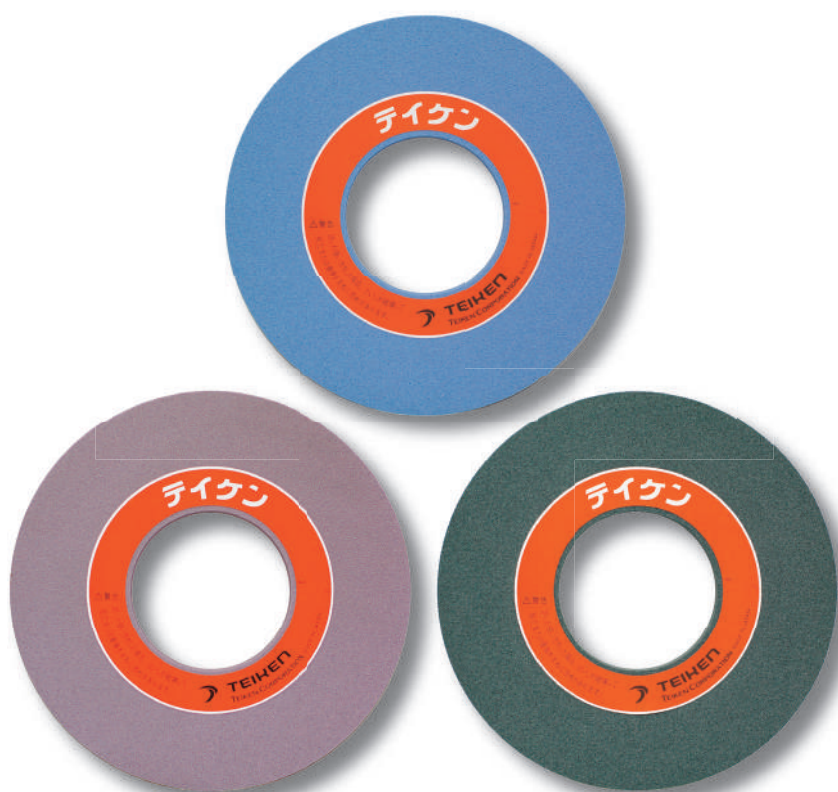
User's comments

- Thanks to reduction of chip-cloggings and good cutting performance, PTII provides reduction of the frequency of dressing and grinding time. As a result, grinding capacity doubled.
[wheel size:1A 760*75*304.8 GC 80 I 14 V 4M, grinding method:cylindrical grinding, workpiece material:SUS303]
- Used standard GC60H→clogged quickly, needed dressing many times, it took long time to grind. After use PTII less clog, less dressing time, good grinding and fine roughness. Time of grinding can save 15-20min/pc to 2min/pc.
[wheel size:1A 300*38*127 GC 80 H 15 V 4M, grinding method:surface grinding, workpiece material:SUS304]
- PTII resolved the problems of chips clogging and dressing frequency, and provided good surface roughness and reduction of grinding time at one-tenth.
[wheel size:1A 350*38*76.2 GC 80 H 15 V 4M, grinding method:cylindrical grinding, workpiece material: SUS304]
- Thanks to few chip clogging and reduced grinding burning, a workpiece is ground without dressing.
[wheel size:1A 510*50*127 GC 60 H 15 V 4M, grinding method:surface grinding, workpiece material:ductile 400]



Dolce series

New High Porous Wheel



User's comments

■ Workpiece is hard chrome plating. Conventional wheel caused loading and grinding sound became loudly with grinding 0.03mm. So, this wheel often needed dressing. However, Dolce can grind 0.1mm with no problem. Dolce is less-wearing and makes grinding time short.

[wheel size : 1A 510x75x177.8 RZW 60 F 10 V29d] [grinding method : surface grinding : wet] [workpiece : hard chrome plating 600x400]

■ This operation was difficult because of burning and scratches conventionally. However dolce causes few loading and burning. Therefore, this good grinding performance makes this operation easy. Moreover, dolce can grind SUS304 as well as plating.

[wheel size : 1A 760x75x304.8 RZW 80 E 60 10 V29d] [grinding method : surface grinding : wet] [workpiece : hard chrome plating, SUS304, hastelloy]

■ Ceramic wheel was used in the past. This wheel speed is 1319m/min, table feeding speed is 40m/s, cutting depth is 3 μ m. However, dolce provides good performance and fine roughness even if grinding condition becomes hard.

Therefore, dolce makes grinding time short.

[wheel size : 7N 700x130x305 HWR 60 H 12 V29d] [grinding method : surface grinding : wet] [workpiece : cast iron]

We pursue grits and high-strength bond for a long time to improve grinding performance.

Dolce series is combined new softer bond with optimal size and amount of pores.

Porosity is equal to porous wheel "PTII" for soft material.

Grinding sound is light and soft. It is effective for high-strength material, thin plate and low stiffness material.

Dolce enables to select finer grits than before because of low heat generation. Therefore, dolce is suitable for high precision grinding.

Grits are 3 types.

"RZ type" is made of high performance ceramic grits.

"SPW type" is suitable from plain steel to hardening steel.

"HW type" enables to mix WA and GC.

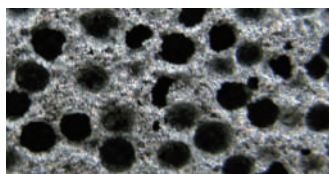
You can choose the best from above.

PT

Roots of TEIKEN porous wheel



conventional products



PT

PT wheel is great for soft and heat-labile materials such as rubber and plastic.

PT wheel has large spherical pores uniformly. The size and volume of pores are able to be controlled by our technology to control hardness of wheels.

Recently PT wheel is used to grind not only rubber but metal materials.

Features

- Few chip clogging
- Controll of size and volume of pores for workpiece and grinding condition
- Few grinding burnings
- Good surface finish

User's comments

- reduction of grinding time thanks to decrease chip clogging and increase the stock removal
[Wheel spec:1A 405*45*203.2 GC 80 HH 23 V4PO, Grinding method:cylindrical grinding, Workpiece material:urethane rubberroll]
- 3 kinds of grinding wheel(rough,medium and fine) are reduced 2 kinds of that(rough and fine) and grinding time is reduced.
[wheel size:1A 610*75*304.8 GC 180 GG 34 V 4PO, grinding method: cylindrical grinding, workpiece material:paper roll and urethan(hardness:90°-95°)]
- Good efficiency thanks to decrease chip clogging and get stable surface.
[Wheel spec.:1A 760*100*304.8 GC 80 GG 23 V4PO, Grinding method:cylindrical grinding,Workpiece material:urethane rubber,synthetic rubber]
- Reduction of grinding time and good cutting performance thanks to decrease chip clogging
[wheel size:1A 305*250*76.2 GC 80 HH 23 V 4PO, grinding method:cylindrical grinding,workpiece material:urethan and synthetic rubber]



PT Magnum

Super Porous Wheel



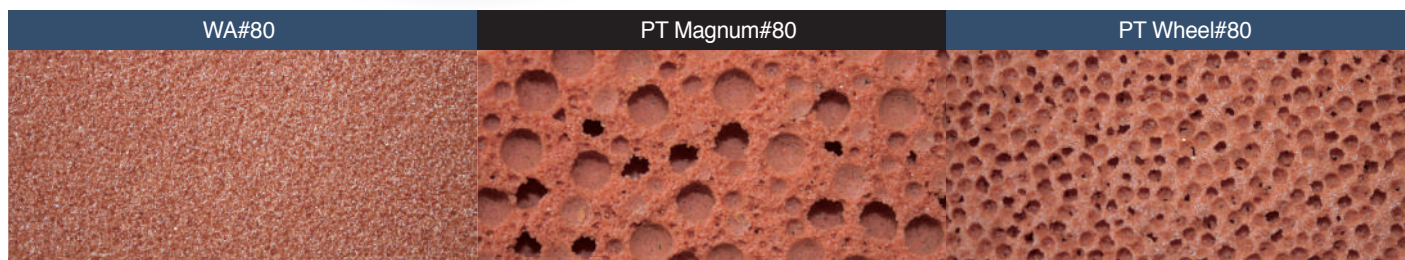
PT Magnum is super porous wheel developed from PT wheel is a longtime seller.

Maximum pore diameter is 6mm.

Moreover, combination of large and small pores increases porosity.

PT Magnum is very effect for heat-labile work, grinding occurs a lot of chips and grinding is easy to clogging such as rubber, urethane, and resin.

Using both PT and PT Magnum as the situation demands expects additional effect.



User's comments

■ Conventional grit size was #100. Problems of conventional wheel were scratches, feed marks and poor surface roughness. However, PT Magnum resolved all problems. Moreover, grinding time was made short. Traditional wheel took 10 hours to remove 1.2mm, but PT Magnum removes it in about 5 hours.

[wheel size : 1A 760x100x304.8 GC 46 DE 125 V4PO] [grinding method : cylindrical grinding] [workpiece material : urethane synthetic rubber roll (rubber hardness 90°)]

■ Workpiece is ATM roller. Conventional wheel is PT wheel and it provides good grinding. Meanwhile PT Magnum are tested. The difference is the following and PT Magnum provides better results. ① Time until clogging occurs is long. If chip clogging occurred, PT Magnum can keep grinding with visually confirmation. ② If chip clogging occurred, chips are removed by air blow. ③ If chips were not removed by air blow, they can be removed by wetting.

[wheel size : 1A 405x25x152.4 GC 120/150 FE 125 V4PO] [grinding method : cylindrical grinding] [workpiece : urethane, synthetic rubber]

Precision Groove

PGG series

Grinding wheels

Top Share Series



PGG series is able to be shaped less than 0.1mm thick.

Alumina-abrasive and vitrified-bond wheel
Standard JW series : #80-#1200JW80 ~ 1200

High-performance RZ series : #80-#220

Alumina-and-silicon-carbide-abrasive and vitrified-bond wheel
HW series for difficult-to-cut materials : #80-#800

User can choose product to suit their condition such as dresser, grinding machine and grinding method. Furthermore we provide suitable wheels to meet user's grinding condition.

Features

- highly easily-shaped
- decrease time of wheel shaping
- precision auto-dressing

Every grid Groove thickness & corner R

#120	Groove thickness : 0.5~6.0 (mm)	corner R : 0.05~ (mm)
#180	Groove thickness : 0.4~4.0 (mm)	corner R : 0.03~ (mm)
#240	Groove thickness : 0.3~2.0 (mm)	corner R : 0.025~ (mm)
#320	Groove thickness : 0.15~0.5 (mm)	corner R : 0.02~ (mm)
#500	Groove thickness : 0.1~0.3 (mm)	corner R : 0.01~ (mm)
#800	Groove thickness : 0.08~0.2 (mm)	corner R : 0.01~ (mm)

■Because of JW wheel's stability, good cutting performance continues without getting holes.

JW wheel provides high accuracy grinding and shapes corner easily.

[wheel size:1A 180*6.4*31.75 JW 320 K 9 V 27, grinding method:surface grinding, workpiece material:vacuum hardening SKS3]

■HW400L provides reduction of grinding time because the amount of dressing is 50mu and shaping corner is easy.

[wheel size:1A 180*6.4*31.75 HW 400 L 10 V 29, grinding method:surface grinding, workpiece material:SKH51, grinding condition:groove grinding, 0.6mm in width, 1mm in depth, 100L in length]



PGG Series standard stock

JW Series

形状	size	spec
1A	180□6.4□31.75	JW120J
1A	180□6.4□31.75	JW150J
1A	180□6.4□31.75	JW240J
1A	180□6.4□31.75	JW320 I
1A	180□6.4□31.75	JW320K
38.39	180□6.4□31.75 U=3	JW500 I
38.39	180□6.4□31.75 U=3	JW500K
38.39	180□6.4□31.75 U=3	JW800 I
38.39	180□6.4□31.75 U=3	JW800K

regarding product form

(1A)



(38A)



regarding size

the size for standard stock item is suitable for standard form grinding machine

for custom order, it can be suitable for various sizes

regarding hardness

we line up standard stock for grinding wheel with different hardness, this can be used with different

- ①dressor (single point/forming/point/RZ/impli/twin rotary dressor)
- ②grinding machine (general purpose/CNC), processing content (form/groove width/corner)

precaution

upto the situation, we may change the standard stock item and its quantity

if order one item in big quantity, we may request to deliver separately or custom made (long delivery time) upto the situation for getting order, some items may be sold out. If you keep strictly for delivery time, please check the stock situation first

HW Series

形状	size	spec
1A	180□6.4□31.75	HW120J
1A	180□6.4□31.75	HW150J
1A	180□6.4□31.75	HW240J
1A	180□6.4□31.75	HW320I
1A	180□6.4□31.75	HW320K
38.39	180□6.4□31.75 U=3	HW500I
38.39	180□6.4□31.75 U=3	HW500K

RZ Series

形状	size	spec
1A	180□6.4□31.75	RZ120K
1A	180□6.4□31.75	RZ180K

