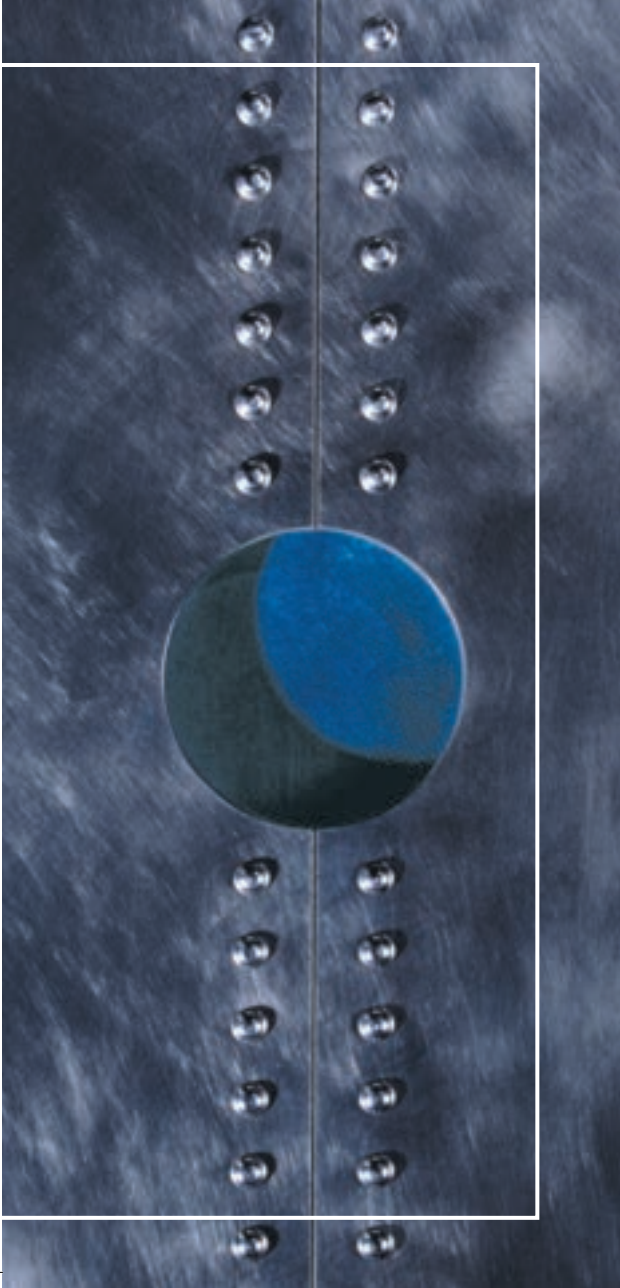




K-PRIX[®]

QUALITY ABRASIVE PRODUCTS



K-PRIX means the combination of quality, cost and service...

 CHEIL GRINDING WHEEL IND. CO., LTD.

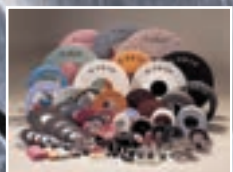


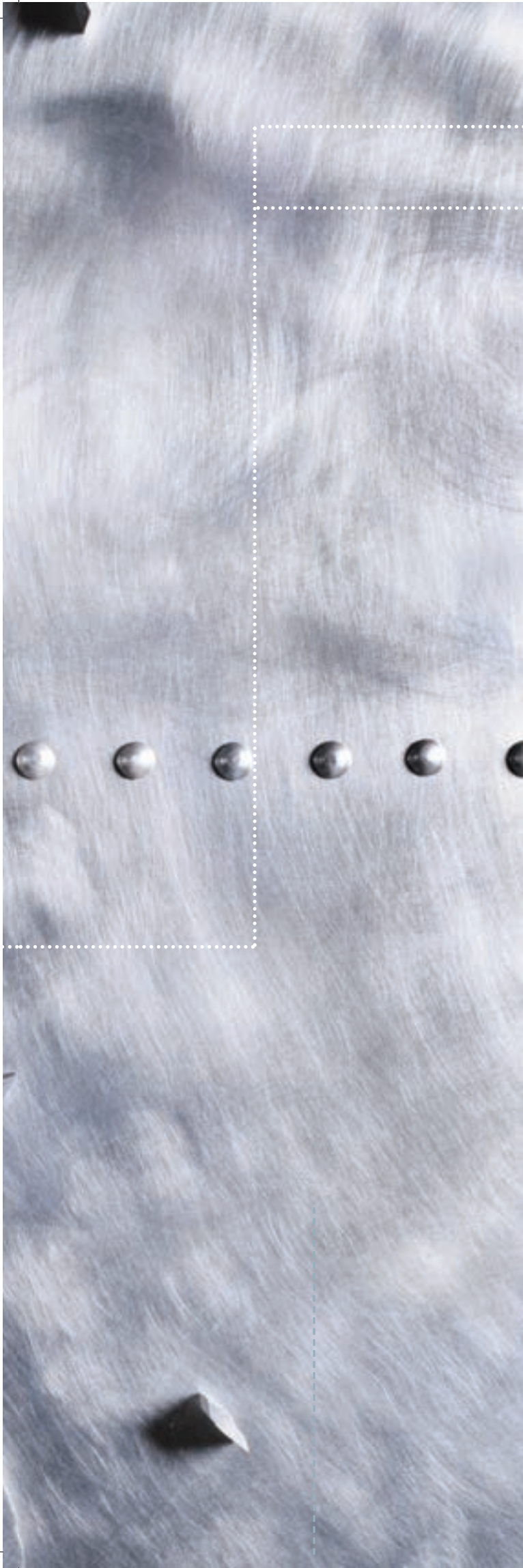


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QUALITY ABRASIVE PRODUCTS

MAKE YOUR BUSINESS BETTER AND SAFER





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INTRODUCTION

Since 1955, Cheil Grinding Wheel Ind. Co., Ltd. has been manufacturing high quality grinding wheel products to meet the wide range of industrial grinding, cutting and finishing applications. In addition to the tight quality control standards, high performance, safety and durability more than 150,000 different specifications have been manufacturing in variations of Vitrified, Resinoid, Rubber, Epoxy, MgO, CBN, Diamond wheel.

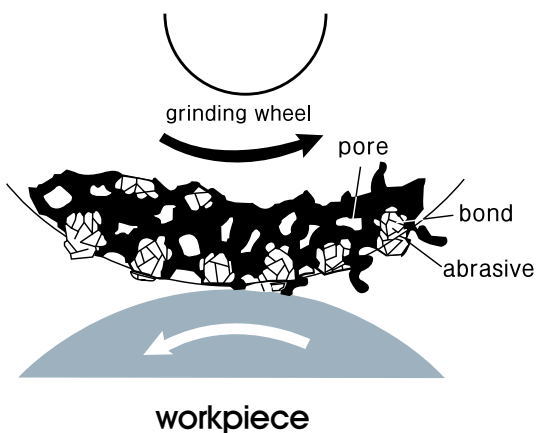
Since the first introduction of K-PRIX brand abrasive products in 1984, they have earned worldwide recognition as the combination of quality, cost and service.



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means the
combination of
quality, cost,
and service...*

GRINDING WHEEL

A grinding wheel is a self-sharpening tool composed of discrete abrasive grains held together by a bonding agent with composite structure of many clearance allowance for the cutting edges. The characteristics of a grinding wheel depends upon the combined elements of abrasive, grit size, grade, structure and bond.



■ The main components of Grinding wheel

Element	Character
Abrasive	The abrasive grain is the element that actually performs the cutting activity in the grinding process. And the choice of abrasive grain depends on the material to be ground.
Bond	The role of bond is to hold the individual grains together. The type of bond depends on the operating speed of wheel, the type of operation and the surface finish required.
Pore	The exists between grains and bond. In order to provide chip clearance, air space(pore) must be existed between grains and bond. Dense spacing is denoted by low numbers and open spacing by high numbers.





ABRASIVE

Kinds	Character	Application
A Regular AluminumOxide	· High hardness and toughness · Crystal Form : α -Al ₂ O ₃ · True density : 3.96g/cm ³ · Melting point : 2000°C · Hardness : Mohs 9.0	Unhardened common steel SS
WA White AluminumOxide	Crystal Form : α -Al ₂ O ₃ · True density : 3.96g/cm ³ · Melting point : 2000°C · 99% Al ₂ O ₃ · Hardness : Mohs 9.0	· Hardened carbon steel · Alloy steel · Tool steel (SxxC, Scr, SK, SUH)
32A SA	Single crystal · True density : 3.96g/cm ³ · Hardness : Mohs 9.0 · Melting point : 2000°C · Particle shape : sharp	Including Cr.W stainless steel · Tool steel(SUS, SKH, SUH)
C GC	98% SiC · Crystal Form : Hexagonal system · True density : 3.20g/cm ³ · Hardness : Mohs 9.0 · Melting point : 2300°C	· Ceramics polishing · Plastic · Rubber · Non-ferrous metals
PA RA Pink AluminiumOxide	99.5% Al ₂ O ₃ , Crystal Form : α -Al ₂ O ₃ · True density : 3.97g/cm ³ · Melting point : 2000°C · Hardness : Mohs 9.0	· Hardened carbon steel · Alloy steel · Tool steel (SxxC, Scr, SK, SUH)
Z AZ Zirconia Aluminium Oxide	Crystal Form : Mono-Clinic · True density : 3.97g/cm ³ · Melting point : 1900°C · 71% Al ₂ O ₃ +25% ZrO ₂	· Alloy steel · Stainless steel · Cast iron

GRIT

The size of abrasive grain is indicated in terms of the mesh(Screen size), coarser grains by low numbers and finer grains by high numbers.

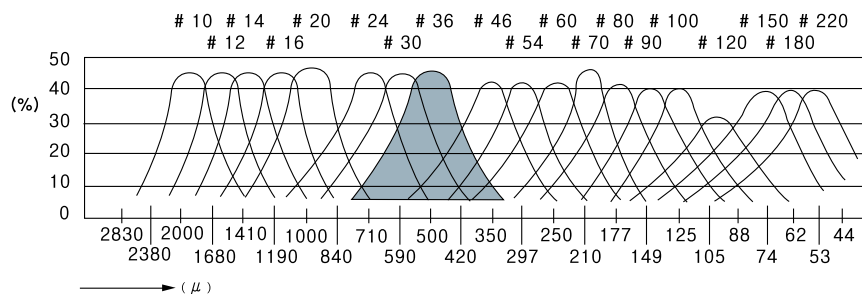
Coarse grits are in use for soft, ductile, stringy materials for fast stock removal rough grinding, large contact area, high grinding pressure. Finer grits in use for obtaining smooth finish, hard & brittle materials, small contact area and form holding of small & narrow corners.



Grit size of grinding wheels

Group	Grain size
Coarse grain	8 10 12 14 16 20 24
Normal grain	30 36 46 54 60 70
Fine grain	80 90 100 120 150 180 220
Very fine grain	240 280 320 400 500 600 700 800 1000 1200 2500

Grit distribution graph



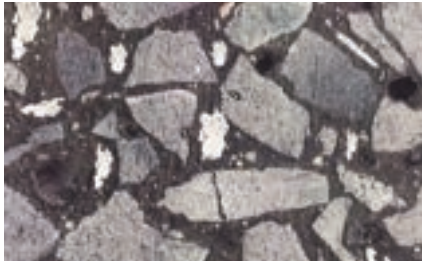


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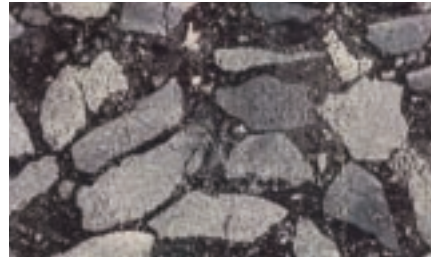
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GRADE(STRENGTH OF BONDING)

The relative holding power of the bond which holds abrasive grains within a wheel—degree of "hardness" of strength is indicated softer grades in low alphabet and harder grades in high alphabet.



Abrasive grains with light bond coating and weak connecting bond posts as in a relatively soft grade wheel. (Bright areas are the pores, required for chip clearance).

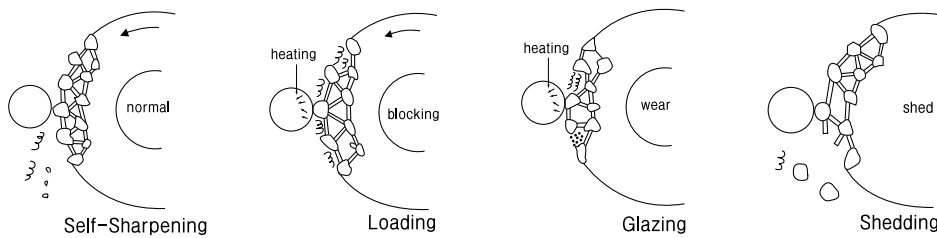


Abrasive grains of same size but with heavier bond coating and thicker, stronger bond posts as in a hard grade wheel.

Grade Table

Very soft	Soft	Medium	Hard	Very hard
A,B,C,D,E,F,G	H,I,J,K	L,M,N,O	P,Q,R,S	T,U,V,W,X,Y,Z

Normal Grinding and Abnormal Grinding



STRUCTURE

The relative grain spacing in a wheel. Dense spacing is denoted by low numbers and open spacing by high numbers. Wheel structures are depending upon the material to be ground, rate of stock removal, accuracy and surface finish required.

Structure table

Structure Number	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Grain Percentage(%)	62	60	58	56	54	52	50	48	46	44	42	40	38	36	34
Short designation	Dense(D)					Medium(M)					Open(W)				



BOND

"Posts" holding abrasive grains in the wheel. The type of bond which depends on the wheel operating speed, the type of operation and the surface finishing required.

K-PRIX grinding wheels are made with five types of bonds: (V)Vitrified, (B)Resinoid, (MgO) Oxychloride magnesium, (E)Epoxy, (R)Rubber.

BOND		MARK	Manufacturing method	Character
Vitrified	Ceramic Bond	V	Make up of feldspar and clays selected for their fusibility and carefully processed. The pressed blanks are dried in chambers with automatically controlled temperature and then baked in kilns at a temperature about 1300°C.	Porosity and strength of wheels made with this bond give high stock removal and their rigidity helps in the attainment of high precision grinding works. This bond is not affected by water, acid, oils or ordinary temperature variations.
Resinoid	Synthetic Resin bond	B	The mixture consist of abrasive, synthetic resin and a plasticizer. The blanks are placed in kilns without previously dried. The bonding agent is hardened at temperature between 160°C and 200°C.	This bond is excellent for cut-off wheels, depressed center wheels, especially for ultra high speed work. Accuracy is not the first considering factor.
MgO	Oxychloride Magnesium Bond	O	The abrasive grains are added into a mixture of the magnesium oxide and magnesium chloride which is formed and hardened at ordinary temperature.	This bond is excellent for cool cutting even without a coolant and is very suitable for grinding springs, bearing house by double disc grinders. Also, it is widely used in dry grinding works.
Epoxy	Epoxy Bond	E	It is madeup of the mixture of abrasives, Epoxy binder and then hardened at a normal temperature.	The epoxy wheel is not affected by water and acid, and more elastic than resinoid wheel. It is widely used in need of high stock removal works.
Rubber	Rubber Bond	R	It is made with natural or synthetic rubber as a binder and cured at a low temperature.	The rubber wheel which has a good elasticity and strong hardness is used under the wet grinding condition for precision grinding works as the regulating wheels for centerless grinding works. The weakness of the rubber wheels is certainly to be used with the coolant because of a variation by heating at a high revolution speed.



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CHEIL GRINDING WHEEL MARKING

WA		60		K		7		V	
ABRASIVES		GRIT SIZE		GRADE		STRUCTURE		BOND TYPE	
A	Regular	10	Coarse	A	Soft	1	Dense	V:Vitrified	
	Aluminum Oxide	12	↑	B	↑	2	↑	B:Resinoid	
		14		C		3		R:Rubber	
WA	White	16		D		4		O:MgO	
	Aluminium Oxide	20		E		5		E: Epoxy	
		24		F		6			
19A	Mixture of A&WA	30		G		7	To		
FA	Semi-friable	36		H		8			
	Aluminium Oxide	46		I		9			
		54		J	To	10			
PA,RA	Pink	60	To	K		11			
	Aluminium Oxide	80		L		12			
		100		M		13			
SA(HA)	Single Crystal	120		N		14	Open		
	Aluminium Oxide	150		O					
		180		P					
23A	Mixture of A&SA	220		Q					
AZ	Zirconium Oxide	280		R					
		320		S					
C	Black	400		T					
	Silicon Carbide	500		U					
		600		V					
GC	Green	800		W					
	Silicon Carbide	1000		X					
		1200	Fine	Y					
RC	Mixture of C&GC			Z	Hard				

FACTORS AFFECTING WHEEL SELECTION

Considering to select a suitable specification of grinding wheel

1. The material to be ground and its hardness

- ABRASIVE : Aluminum oxide for steel and steel alloys.
Silicon carbide for cast iron, non-ferrous and non-metallics.
- GRIT SIZE : Fine grit for brittle materials. Coarse grit for ductile materials.
- GRADE : Hard grade for soft materials. Soft grade for hard materials.

2. The amount of stock to be removed and the finish required

- GRIT SIZE : Coarse grit for rapid stock removal as in rough grinding.
Fine grit for high finishing.
- BOND : Vitrified for precision cutting. Resinoid and Rubber for high speed cutting.

3. Wet or dry

- GRADE : Wet grinding, as a rule, permits use of wheels at least one grade harder than that of dry grinding without danger of burning the work.

4. The wheel speed

- BOND : Standard vitrified wheels are not exceeding 2,000mpm, for higher speeds are up to 3,600mpm.
Standard organic bonded wheels(Resinoid, Rubber or Epoxy) are used of most applications over 2,000mpm up to 6,000mpm.
- NOTE : Do not exceed the safe operating speed shown on a wheel tag or blotter.

5. The contact area of grinding

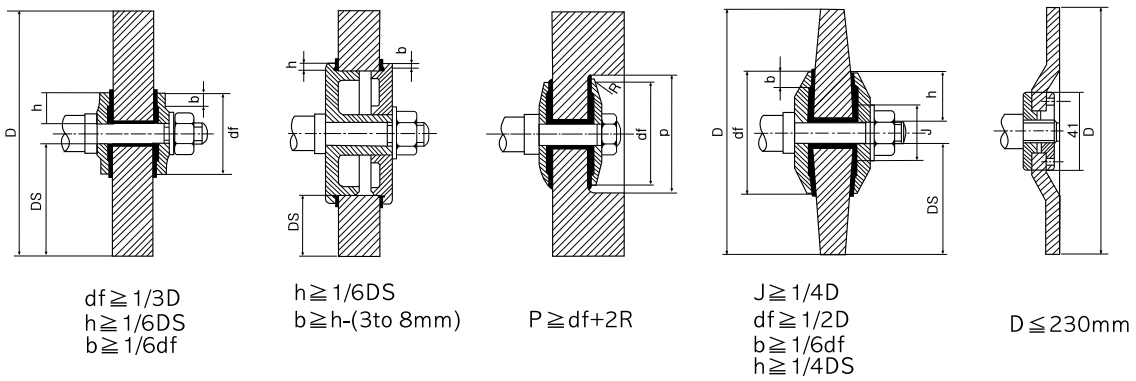
- GRIT SIZE : Coarse grit for large contact area.
Fine grit for small contact area.
- GRADE : The smaller contact area, the harder wheel.





GENERAL SAFETY GUIDE FLANGES

Grinding elements should be fastened safely. This should be done with fastening flanges as shown in the diagrams below.



PROTECTIVE GUARDS

Grinding elements should be covered by wheel guards on the grinding machine; These guards should be made of a suitable material, depending on the type of machine and use.

Diagram 1 Shows a wheel guard for a pedestal grinding machine(wheel stand); The effect angle of aperture should not exceed 65°.

Diagram 2 Shows a wheel guard, adjustable along the axis, for a manual grinding machine at the face of which the grinding element is applied.

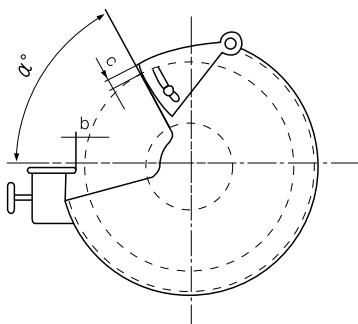


Diagram 1

- a 65° maximum
- b 3mm maximum
- c 5mm maximum

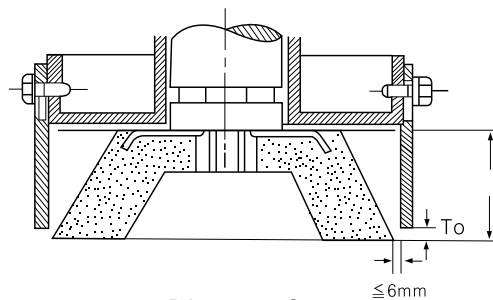


Diagram 2





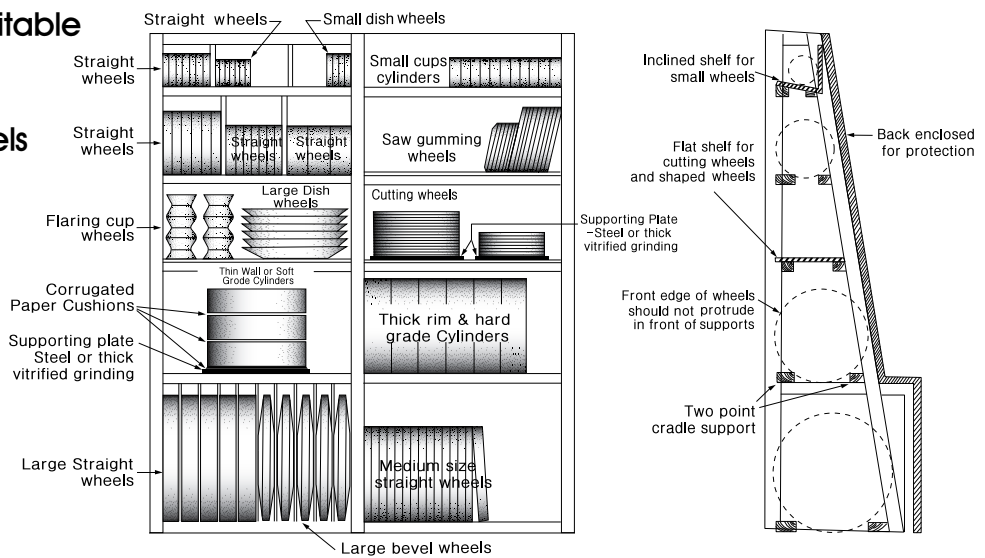
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STORE PROPERLY

DO :	DON'T :
1. Do check all shipments of grinding wheel for possible damage in transit.	1. Don't accept shipments of grinding wheels that show damage to the pallet, box or container.
2. Do carefully inspect the wheels in a shipment as they are unpacked.	2. Don't store grinding wheel in random manner or in an unprotected place.
3. Do ring test each vitrified wheel 4" and larger before mounting.	3. Don't handle grinding wheels carelessly.
4. Do store grinding wheels in a rack or on shelves designed to accept and protect them.	4. Don't retain wheels that may have been damaged or abused.
5. Do handle grinding wheels carefully because they are fragile and can be easily chipped, cracked or brocken.	5. Don't store wheels in a random manner with no regard to how long they have been in steroge.
6. Do store wheels so that the oldest wheel in stock are used first.	
7. Do store wheels in a dry, protected area free from extreme variations in temperature.	

A rack design suitable for handling of a wide variety of abrasive wheels



HANDLE SAFELY

DO :	DON'T :
1. DO always HANDLE AND STORE wheels in a CAREFUL manner.	1. DON'T use a wheel that HAS BEEN DROPPED or DAMAGED.
2. DO VISUALLY INSPECT all wheels before mounting for possible damage in transit	2. DON'T FORCE a wheel onto the machine or ALTER the size of the mounting hole-if wheel won't fit the machine, get one that will.
3. DO MAKE SURE MACHINE SPEED does not exceed MAXIMUM OPERATING SPEED marked on wheel or on its container	3. DON'T ever EXCEED MAXIMUM OPERATING SPEED established for the wheel.
4. DO CHECK MOUNTING FLANGES for equal and correct diameter. (Should bel at least 1/3 diameter of the wheel.)	4. DON'T use mounting flanges of which the bearing surfaces ARE NOT CLEAN, FLAT AND FREE FROM BURRS.
5. DO USE MOUNTING BLOTTERS supplied with wheels.	5. DON'T TIGHTEN the mounting nut EXCESSIVELY.
6. DO be sure WORK REST is properly adjusted.(Should be center of wheel or above and no more than 1/8" away form wheel.)	6. DON'T grind on the SIDE OF THE WHEEL unless wheel is specifically designed for that purpose. (See the current ANSI B7.1 Safety Requirements for exceptions.)
7. DO always USE A PROPERLY DESIGNED SAFETY GUARD covering at least one-half of the grinding wheel.	7. DON'T start the machine until the WHEEL GUARD IS IN PLACE.
8. DO allow NEWLY MOUNTED WHEELS to run at operating speed, with guard in place, for at least one minute before grinding.	8. DON'T STAND DIRECTLY IN FRONT of a grinding wheel whenever a grinder is started.
9. DO always WEAR SAFETY GLASSES or equivalent proper eye protection when grinding.	9. DON'T grind material for which the WHEEL IS NOT DESIGNED.
10. DO TURN OFF COOLANT before stopping wheel to avoid creating an out-of-balance condition.	10. DON'T JAM work into the wheel.
	11. DON'T GRIND without proper ventilation.



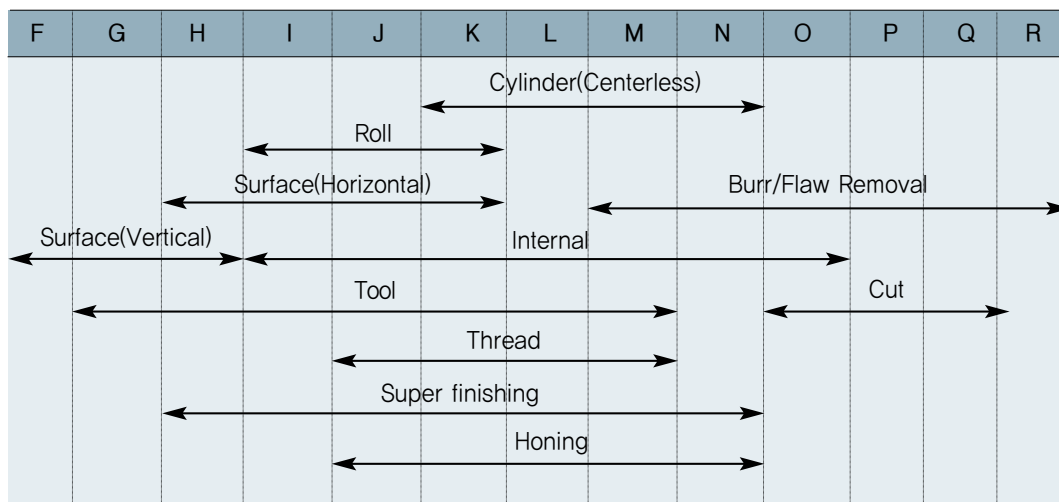


TROUBLE SHOOTING

Precision grinding – Cylindrical, Centerless, Surface, Tool & Cutter

The problem	The Cause	The Solution
Chatter-spaced Marks on the Work Surface	Machine Vibration	Check alignment & couplings
	Infeed rate too low	Increase infeed rate
	Work speed too slow	Increase work speed
	Wheel out of balance	Rebalance carefully, repeat after truing
	Wheel out of round	True before & after balancing. True sides safely
	Wheel too hard	Select softer grade or coarser grit
Scratching-Poor	Machine vibration	Check for vibration of the machine & for vibration transmitted to the machine. Repair/replace machine parts
Poor finish	Dirty Coolant	Provide efficient filter, clean tank often, flush guards
	Faulty wheel conditioning	Use sharper tools, flush wheel after conditioning, condition more frequently
	Wheel out of round	Repeat truing process, true sides to face.
	Wheel too coarse	Select finer grit size
	Wheel too soft	Select harder grade, decrease work speed & infeed rate.
	Infeed rate too high	Reduce rate of infeed
Heat/Stress Damage (Burning)	Infeed rate too high	Reduce rate of infeed
	Work speed too slow	Increase work speed
	Insufficient coolant	Increase coolant flow & check direction
	Wheel speed too high	Reduce wheel speed
	Insufficient conditioning	Condition wheel more frequently
	Wheel too hard	Select softer grade wheel
	Wheel too dense	Use more open structured wheel
Wheel Loading or Glazing	Faulty wheel conditioning	Use sharper tool, flush wheel after conditioning. Condition more frequently
	Faulty coolant	Increase coolant flow, Use cleaner, thinner coolant
	Wheel acts too hard	Increase infeed rate, work speed. Use softer or coarser wheel

TYPE OF GRINDING OPERATION AND RANGE OF AVAILABLE GRAIN SIZE





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TYPE OF OPERATION

Variation of grade for grinding conditions

Soft Grade	Condition	Hard grade
Hard Brittle	Work material	Soft Ductile
Wide	Area of contact	Narrow
Fast	Peripheral speed of G/W	Slow
Slow	Work peripheral speed	Fast
Good	Machine precision	Poor
Skilled	Worker	Unskilled

TYPE OF GRINDING OPERATION AND RANGE OF AVAILABLE GRAIN SIZE

#16	#20	#24	#30	#36	#46	#54	#60	#70	#80	#100	#120	#150	#180	#220	#240	#280
Burr/Flaw removal				Thread												
Cut-off								Honing								
Cylindrical(Centerless)grinding										Finishing						
Surface(Horizontal)grinding																
Surface(Vertical)grinding																
Internal grinding																
Tool grinding																

RANGE OF STANDARD PERIPHERAL SPEED OF WORKPIECE

Grinding Method		Unhardened Steel	Hardened Steel	Tool Steel	Cast Iron	Copper Alloy	Aluminum
Cylindrical Grinding	Rough Grinding	10~20	15~20	15~20	10~15	25~30	25~40
	Finishing	6~15	6~16	6~15	6~15	14~20	18~20
	Fine Finishing	5~10	5~10	5~10	5~10	-	-
Centerless Grinding	Finishing	11~20	21~40	21~40	-	-	-
Internal Grinding	Finishing	20~40	16~50	16~40	20~50	40~60	40~70
Surface Grinding (Horizontal)	Finishing	6~15	30~50	6~30	16~20	-	-

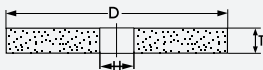
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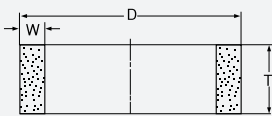


STANDARD WHEEL SHAPES

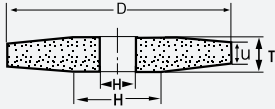
Type 41—Straight Cut-Off



Type 2—Cylinder



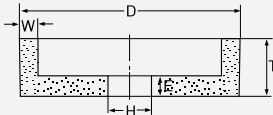
Type 4—Tapered Two Sides



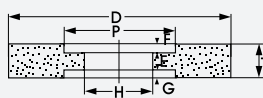
Type 5—Recessed One Side



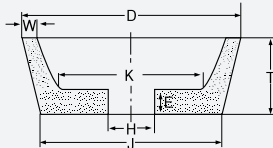
Type 6—Straight Cup



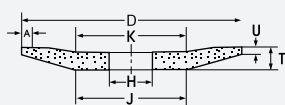
Type 7—Recessed Two Sides



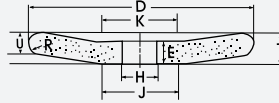
Type 11—Flaring Cup



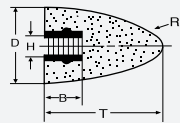
Type 12—Dish



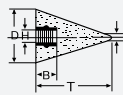
Type 13—Saucer



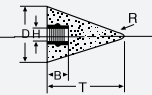
Type 16—Cone



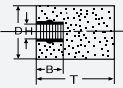
Type 17—Cone



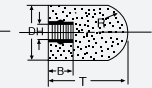
Type 17R



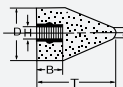
Type 18—Plug



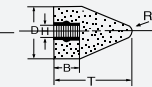
Type 18R



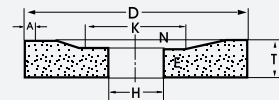
Type 19—Plug



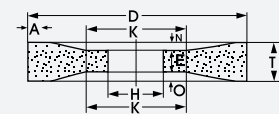
Type 19R



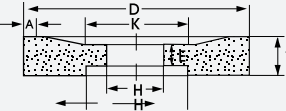
Type 20—Relieved One Side



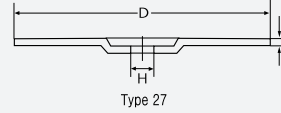
Type 21—Relieved Two Sides



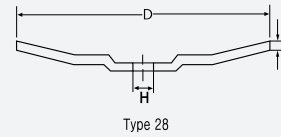
Type 22—Relieved One Side, Recessed One Side



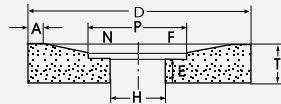
Type 27—Depressed Center



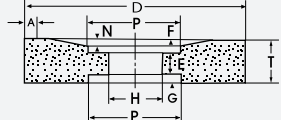
Type 28—Saucer



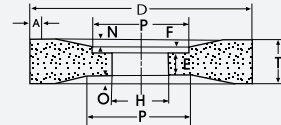
Type 23—Relieved & Recessed Same Side



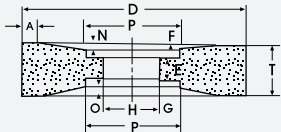
Type 24—Relieved & Recessed One Side, Recessed Other Side



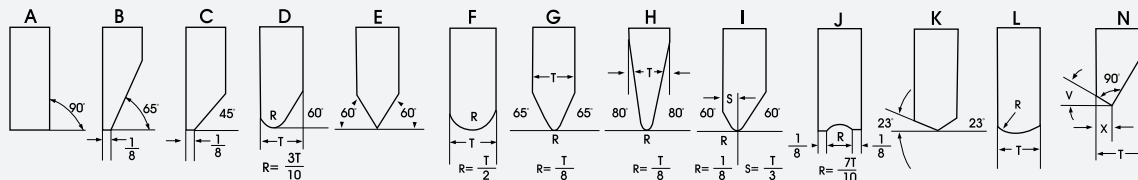
Type 25—Relieved & Recessed One Side, Relieved Other Side



Type 26—Relieved & Recessed Both Side



Standard wheel faces



K-PRIX®

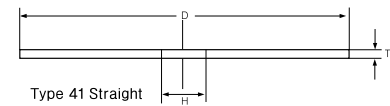
K-PRIX means the combination of quality, cost and service...

CUT-OFF WHEELS

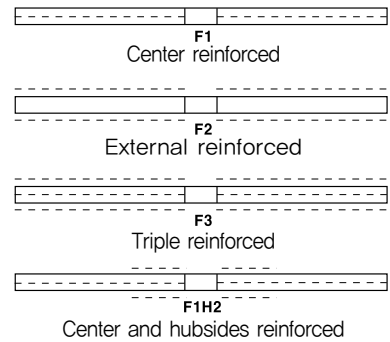
K-PRIX reinforced cut-off wheels are designed to easy performance, safety, low cost and ready availability for use with a wide range of ferrous and non-ferrous metal cutting applications such as bar stock, structural steel, tubing, sheet metal and etc. Reinforced cut-off wheels are used in all cutting operations where the work piece or the wheels is controlled by hand-held machines such as portable grinders, circular saws, chop saws, gas saws, stationary and swing flame cut-off machines.



Wheel shape








Reinforced method



General selection (specifications)



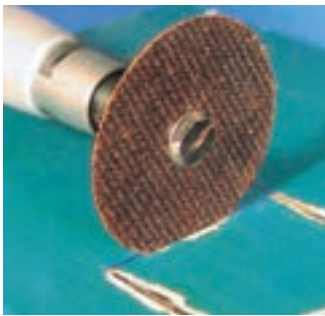
	A24R	General purpose wheels for the broad range of steel and ferrous metal.
	A30P	Fast cut wheels give a soft, free cutting action, and are especially good for efficient cutting of hard metals.
	A24LL	Long life wheels are designed for longer wheel life and good cutting performance.
	Z24	Zirconium wheel delivers the utmost in extra wheel life with fast cutting.
	ST24	Is for exceptional fast and cool cutting on stainless steel and hard materials.
	AL36	Is for first choice of many aluminum applications and non-ferrous metals with load-resistance.
	C24R	Is for general purpose applications in concrete, stone, masonry products.



Mini Cut-off wheels

For use on small wheel grinders, die grinders with straight or flexible shafts, K-PRIX external reinforced Mini cut-off wheels are used in various metal cutting, grooving, grinding and smoothing operations at foundries, fabrication shops, power plants, refineries and tool rooms.

Available wheel size & Standard Packing Quantity



Wheel size (DxTxH)		Max.RPM F2	Inner box/master carton Quantity(pcs)
Inch	mm		
2 x (1/32, 3/64, 1/16, 5/64, 1/8, 3/16) x (1/4,3/8)	50 x (1, 1.2, 1.6, 2, 3, 5) x (6.35, 9.53)	38,460	100 / 500
2 1/2 x (1/32, 3/64, 1/16, 5/64, 1/8, 3/16) x (1/4,3/8)	63 x (1, 1.2, 1.6, 2, 3, 5) x (6.35, 9.53)	30,000	100 / 500
3 x (1/32, 3/64, 1/16, 5/64, 1/8, 3/16) x (1/4,3/8)	75 x (1, 1.2, 1.6, 2, 3, 5) x (6.35, 9.53)	25,460	100 / 500

※ Please specify wheel thickness (T) and hole (H) when order.

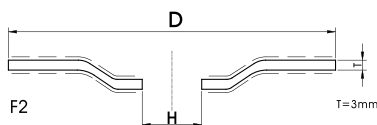
Cut-off wheels on Circular Saw & Depressed Center Cut-off wheels (Type42)

For use on circular saws and portable angle grinders into a fast, effective and economical tools cut metal, stainless steel, concrete, brick & masonry. K-PRIX external reinforced cut-off wheels meet the needs of quality performance, low cost and ready availability.

Available wheel size & Standard Packing Quantity



Wheel size (DxTxH)		Max. RPM	Standard packing
Inch	mm		
4 x (3/32, 1/8) x 5/8	100 x (2.5, 3) x 15.88	15,000	50
4 1/2 x (3/32, 1/8) x 7/8	115 x (2.5, 3) x 22.23	13,300	50
5 x (3/32, 1/8) x 7/8	125 x (2.5, 3) x 22.23	12,000	50
6 x (3/32, 1/8) x 7/8	150 x (2.5, 3) x 22.23	10,000	25
6 1/2 x (3/32, 1/8) x 7/8	165 x (2.5, 3) x 22.23	9,000	25
7 x (3/32, 1/8) x 7/8	180 x (2.5, 3) x 22.23	8,500	25
8 x (3/32, 1/8) x 7/8	205 x (2.5, 3) x 22.23	7,500	25
9 x (3/32, 1/8) x 7/8	230 x (2.5, 3) x 22.23	6,500	25



※ Hole in ◇ (diamond), 1/2" (12.7), 5/8" (15.88), 20, 7/8" (22.23), 1" (25.4), 1.1/8" (28.58), 30mm, 1.3/8" (34.92) available upon request, please specify (H) hole size when order.





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Cut-off wheels on Chopsaw

To meet the larger demand of the fast, clean and safe cutting on popular chopsaw machines in every metal fabricator—indeed any industry, K-PRIX provides two type of reinforced chopsaw wheel, (F2) external reinforced wheels for use on high powered chopsaws and (F1) center reinforced wheels on low powered chopsaws.

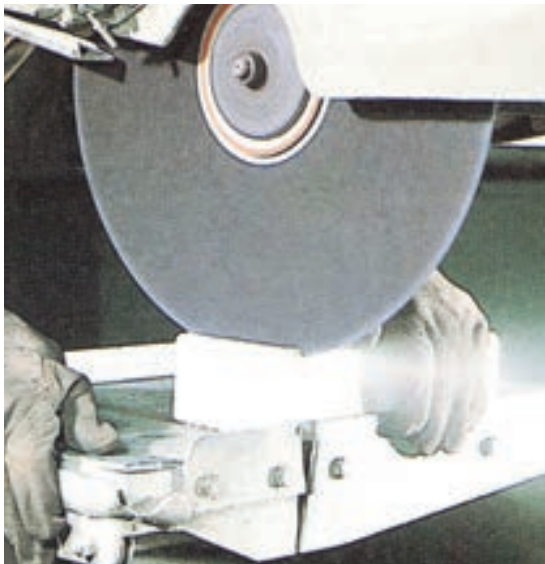


Available wheel size & Standard Packing Quantity

Wheel size (DxTxH)		Max.RPM		Standard packing
Inch	mm	F1	F2	
10 x (3/32, 1/8) x 1	255 x (2.5, 3) x 25.4	5,400	6,110	25
12 x (3/32, 1/8) x 1	305 x (2.5, 3) x 25.4	4,500	5,090	25
14 x (3/32, 1/8) x 1	355 x (2.5, 3) x 25.4	3,900	4,370	25
16 x (1/8, 5/32) x 1	405 x (3, 4) x 25.4	3,400	3,810	20

Cut-off wheels on Stationary Machine

These external reinforced wheels are designed for use on normal chopsaws, oscillation machines, and other cutting machines where the work piece is fixed and the cutting plane of the wheel is controlled by hand-held.



Available wheel size & Standard Packing Quantity

Wheel size (DxTxH)		Max. RPM	Standard packing
Inch	mm		
7 x 1/16 x H	180 x 1.6 x H	8,500	50
7 x 3/32 x H	180 x 2.5 x H	8,500	25
8x 1/16 x H	205 x 1.6 x H	7,500	50
8x 3/32 x H	205 x 2.5 x H	7,500	25
10 x 3/32 x H	255 x 2.5 x H	6,110	10
10 x 1/8 x H	255 x 3 x H	6,110	10
12 x 3/32 x 1	305 x 2.5 x 25.4	5,090	10
12 x 1/8 x 1	305 x 3 x 25.4	5,090	10
14 x 3/32 x 1	355 x 2.5 x 25.4	4,370	10
14 x 1/8 x 1	355 x 3 x 25.4	4,370	10
16 x 1/8 x 1	405 x 3 x 25.4	3,810	10
16 x 5/32 x 1	405 x 4 x 25.4	3,810	10
18 x 5/32 x 1	455 x 4 x 25.4	3,000	10
18 x 3/16 x 1	455 x 4.7 x 25.4	3,000	8
20 x 5/32 x 1	510 x 4 x 25.4	2,710	10
20 x 3/16 x 1	510 x 4.7 x 25.4	2,710	8
□24 x 1/4 x H	610 x 6 x H	2,260	5

□Available Hole(H) Size : 1, 1/2" (38.1mm), 2" (50.8mm)
3" (76.2mm), 100mm





Cut-off wheels on High speed gas/electric saw

K-PRIX high speed cut-off wheels are constructed of quality abrasive grains, extra high tensile fiber glass reinforcing and special resin bonds for the fast cutting, long wheel life and safety in gasoline (petroleum) and electric motor driven portable high speed saw applications and in high speed stationary machine applications.



A24R-HS	general purpose for metal
C24R-HS	general purpose for concrete brick and other masonry
A30P-HS	specially designed for rail track cut.
AC24-HS	for cutting ductile iron, cast iron, reinforced concrete pipe
C16T-HS	for free cutting action on asphalt.

※ Proper wheel selection gives maximum wheel life and quickest cut in respective applications.

Available wheel size & Standard Packing Quantity



Wheel size (DxTxH)		Max.RPM F2	Standard packing
Inch	mm		
12 x 1/8 x (1, 7/8, 20mm)	305 x 3 x (25.4, 22.23, 20)	6,300	10
12 x 5/32 x (1, 7/8, 20mm)	305 x 4 x (25.4, 22.23, 20)	6,300	10
14 x 1/8 x (1, 7/8, 20mm)	355 x 3 x (25.4, 22.23, 20)	5,400	10
14 x 5/32 x (1, 7/8, 20mm)	355 x 4 x (25.4, 22.23, 20)	5,400	10
16 x 1/8 x (1, 20mm, 1.1/4)	405 x 3 x (25.4, 20, 31.75)	4,780	10
16 x 5/32 x (1, 20mm, 1.1/4)	405 x 5 x (25.4, 20, 31.75)	4,780	10

Non reinforced Cut-off wheels

K-PRIX non-reinforced cut-off wheels are constructed of quality abrasive grains and special resin bond for fast cutting and long wheel life, and are widely used in various metal cutting, grooving at power plant, Aero space and Tool & Die industry.

Available wheel size



Wheel size (DxTxH)		Max.RPM
Inch	mm	
4 x (1/32, .045, 1/16, 5/64, 1/8) x H	100 x (1, 1.2, 1.6, 2, 3) x H	11900
6 x (1/32, .045, 1/16, 5/64, 1/8) x H	150 x (1, 1.2, 1.6, 2, 3) x H	7958
7 x (1/32, .045, 1/16, 5/64, 1/8) x H	180 x (1, 1.2, 1.6, 2, 3) x H	6820
8 x (.045, 1/16, 5/64, 1/8) x H	205 x (1.2, 1.6, 2, 3) x H	5968
9 x (.045, 1/16, 5/64, 1/8) x H	230 x (1.2, 1.6, 2, 3) x H	5261
10 x (1/16, 5/64, 1/8) x H	255 x (1.6, 2, 3) x H	4774
11 x (1/16, 5/64, 1/8) x H	280 x (1.6, 2, 3) x H	4320
12 x (1/16, 5/64, 1/8) x H	305 x (1.6, 2, 3) x H	3967
14 x (1/16, 5/64, 1/8) x H	355 x (1.6, 2, 3) x H	3400
16 x (3/32, 7/64, 1/8, 5/32) x H	405 x (2.5, 2.8, 3, 4) x H	2900

※ Please specify whee (T)Thickness and (H)hole when order.



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DEPRESSED CENTER CUTTING & GRINDING WHEEL

K-PRIX Depressed Center type grinding wheels and cutting wheels with the utmost in premium grinding performance are designed for use on right angle vertical shaft portable grinders whether electric or air powered.

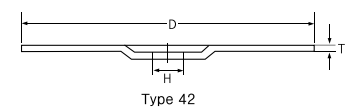
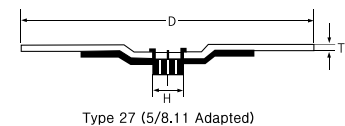
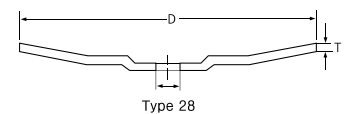
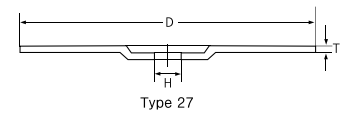
The unique of K-PRIX wheels have made them a popular and standard item in industry today. And they are widely used for such jobs as grinding off and smoothing weld bead, cleaning metal surface, cut-off gate and raiser, and finishing surface.



General selection (specification)

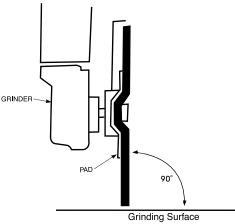
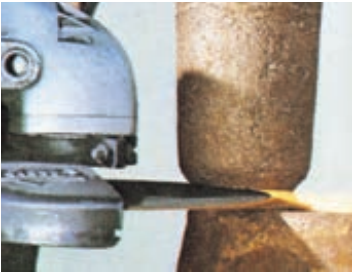
	<p>A24R (FOR GENERAL PURPOSE) is designed to provide high performance with long life for all general purpose stock removal metal working.</p>
	<p>C24R (FOR STONE) is for general purpose application in concrete, stone, masonry products.</p>
	<p>ST36 (FOR STAINLESS STEEL, IRON FREE) is for exceptional fast and cool cutting on stainless steel and hard materials.</p>
	<p>AL36 (FOR ALUMINIUM) is specially designed to resist loading when grinding aluminium and other non-ferrous metals.</p>

Wheel shapes





DEPRESSED CENTER CUTTING WHEEL, TYPE 42

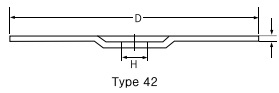


1. Additional specifications are available upon request.
2. Special requirements are available on request.

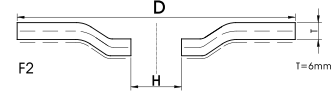
Available wheel size & Standard Packing Quantity

Wheel size (DxTxH)		MAX,RPM	Standard packing
Inch	mm		
4 x 1/8 x 5/8	100 x 3 x 15,88	15,000	50
4,1/2 x 1/8 x 7/8	115 x 3 x 22,23	13,300	50
5 x 1/8 x 7/8	125 x 3 x 22,23	12,000	50
6 x 1/8 x 7/8	150 x 3 x 22,23	10,000	50
7 x 1/8 x 7/8	180 x 3 x 22,23	8,500	50
9 x 1/8 x 7/8	230 x 3 x 22,23	6,500	50

■ Wheel shapes



■ Reinforced method



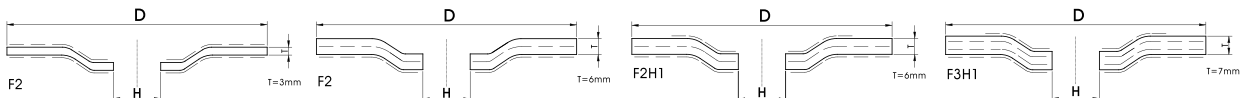
DEPRESSED CENTER GRINDING WHEEL, TYPE 27



Available wheel size & Standard Packing Quantity

Wheel size (DxTxH)		MAX,RPM	Standard packing
Inch	mm		
4 x 5/32 x 5/8	100 x 4 x 15,88	15,000	40
4 x 1/4 x 5/8	100 x 6,4 x 15,88	15,000	25
4,1/2 x 5/32 x 7/8	115 x 4 x 22,23	13,300	40
4,1/2 x 1/4 x 7/8	115 x 6,4 x 22,23	13,300	25
5 x 1/4 x 7/8	125 x 6,4 x 22,23	12,000	25
6 x 5/32 x 7/8	150 x 4 x 22,23	10,000	40
6 x 1/4 x 7/8	150 x 6,4 x 22,23	10,000	25
7 x 1/4 x 7/8	180 x 6,4 x 22,23	8,500	25
7 x 3/11 x 7/8	180 x 7 x 22,23	8,500	25
7 x 5/16 x 7/8	180 x 8 x 22,23	8,500	20
9 x 1/4 x 7/8	230 x 6,4 x 22,23	6,500	25
9 x 3/11 x 7/8	230 x 7 x 22,23	6,500	25
9 x 5/16 x 7/8	230 x 8 x 22,23	6,500	20
4,1/2 x 1/4 x 5/8-11	Adapted	13,300	10
5 x 1/8 x 5/8-11	Adapted	12,000	10
5 x 1/4 x 5/8-11	Adapted	12,000	10
7 x 1/4 x 5/8-11	Adapted	8,600	10
9 x 1/4 x 5/8-11	Adapted	6,600	10

■ Reinforced method



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RAILROAD RAIL CUT-OFF WHEELS

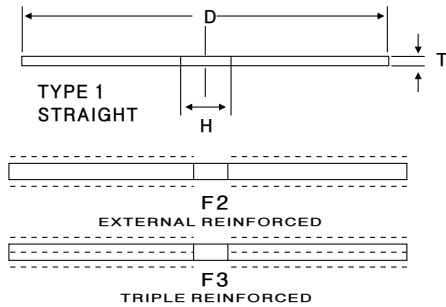


K-PRIX Railroad rail cut-off wheels which is designed for "on track" repair of rails, usually done dry on mobile gasoline-powered abrasive cutting machines.

These cut-off wheels are using for free-hand cutting, making of straight cut, precise and bur-free cutting.

K-PRIX Railroad rail cut-off wheels are usually available in diameters 12", 14", 16" with fiber glass reinforced for safety.

Wheel shape



Available wheel size & Standard Packing Quantity

Wheel size (DxTxH)		Max.RPM F2	Standard packing
Inch	mm		
12 x 5/32 x (1, 7/8, 20mm)	305 x 4 x (25.4, 22.23, 20)	6,300	10
14 x 5/32 x (1, 7/8, 20mm)	355 x 4 x (25.4, 22.23, 20)	5,400	10
16 x 5/32 x (1, 7/8, 20mm)	405 x 5 x (25.4, 22.23, 20)	4,780	10

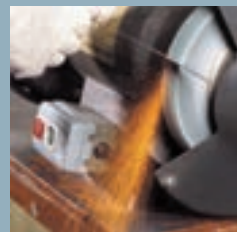


General selection(specification)

STANDARD	19A/57A 36 P BF
EXTRA	PCA 30 Q BE
PREMIUM	ZA 24 R BF



Make Your Business
Better and Safer





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GENERAL PURPOSE WHEELS FOR BENCH AND PEDESTAL GRINDERS

K-PRIX vitrified bonded general purpose grinding wheels for use on bench, floor stand and pedestal grinders are most economic and efficient in grinding of all steels.

They are designed for use of versatile off-hand grinding in deburring bar stock after cutting, and touching-up reconditioning and sharpening tools where precision grinding is not required.



Specification guide

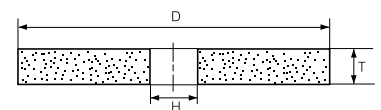
■ **Aluminum Oxide Wheels** (Gray color) are used for grinding all metals in a variety of grinding operations ranging from rough sharpening of miscellaneous work pieces to the off-hand grinding or sharpening of tools.

- Extra coarse : A24 for fast, free cutting and rough grinding.
- Coarse : A36/A46 for greater stock removal desired and surface finishing not critical on jobs.
- Medium : A60/A80 for general grinding to obtain acceptable metal removal and finish.
- Fine : A100/A120 for fine clean-up, reconditioning and deburring applications of small tools.

■ **Green Silicon Carbide Wheels** (green color) are used on the same machine to resharpener carbide tools and carbide-tipped saws, lathe tools, saws, milling cutters, masonry drill bits.

- Coarse : GC46/GC60 for fast and rough grinding of new tungsten carbide, salvaging broken or damaged tools.
- Medium : GC80 most common grit for grinding of every tungsten carbide tools.
- Fine : GC100/GC120 for fine finishing, reconditioning and deburring applications.

Wheel shape



Type 1 - Straight





To make wheel adaptable to many different sizes of spindles, hole reducing bushings can be packed with the wheel at a nominal charge upon request.



Available wheel size and Standard packing

Wheel size (DxTxH)		Max.RPM	Standard packing
Inch	mm		
3 x 1/2 x 1/2	75 x 13 x 12.7	8,276	80
3 x 3/4 x 1/2	75 x 19 x 12.7	8,276	80
3 x 1 x 1/2	75 x 25 x 12.7	8,276	80
4 x 1/2 x 1/2	100 x 13 x 12.7	6,207	40
4 x 3/4 x 1/2	100 x 19 x 12.7	6,207	20
4 x 1 x 1/2	100 x 25 x 12.7	6,207	20
5 x 1/2 x 1/2	125 x 13 x 12.7	4,966	25
5 x 3/4 x 1/2	125 x 19 x 12.7	4,966	20
5 x 1 x 1/2	125 x 25 x 12.7	4,966	20
6 x 1/2 x 1.1/4	150 x 13 x 31.75	4,136	25
6 x 3/4 x 1.1/4	150 x 19 x 31.75	4,136	20
6 x 1 x 1.1/4	150 x 25 x 31.75	4,136	20
7 x 1/2 x 1.1/4	180 x 13 x 31.75	3,600	30
7 x 3/4 x 1.1/4	180 x 19 x 31.75	3,600	20
7 x 1 x 1.1/4	180 x 25 x 31.75	3,600	20
8 x 1/2 x 1.1/4	205 x 13 x 31.75	3,170	15
8 x 3/4 x 1.1/4	205 x 19 x 31.75	3,170	10
8 x 1 x 1.1/4	205 x 25 x 31.75	3,170	10
8 x 1.1/4 x 1.1/4	205 x 32 x 31.75	3,170	8
8 x 1.1/2 x 1.1/4	205 x 38 x 31.75	3,170	7

Wheel size (DxTxH)		Max.RPM	Standard packing
Inch	mm		
10 x 3/4 x 1.1/4	255 x 19 x 31.75	2,483	10
10 x 1 x 1.1/4	255 x 25 x 31.75	2,483	10
10 x 1.1/4 x 1.1/4	255 x 32 x 31.75	2,483	8
10 x 1.1/2 x 1.1/4	255 x 38 x 31.75	2,483	7
10 x 2 x 1.1/4	255 x 50 x 31.75	2,483	5
12 x 1 x 1.1/4	305 x 25 x 31.75	2,069	5
12 x 1.1/4 x 1.1/4	305 x 32 x 31.75	2,069	4
12 x 1.1/2 x 1.1/4	305 x 38 x 31.75	2,069	4
12 x 2 x 1.1/2	305 x 50 x 38.1	2,069	3
14 x 1 x 1.1/2	355 x 25 x 38.1	1,800	5
14 x 1.1/2 x 1.1/2	355 x 38 x 38.1	1,800	4
14 x 2 x 1.1/2	355 x 50 x 38.1	1,800	3
14 x 3 x 1.1/2	355 x 75 x 38.1	1,800	2
16 x 2 x 1.1/2	405 x 50 x 38.1	1,552	2
16 x 3 x 1.1/2	405 x 75 x 38.1	1,552	1
18 x 2 x 1.1/2	455 x 50 x 38.1	1,379	2
18 x 3 x 1.1/2	455 x 75 x 38.1	1,379	1

※ Specific hole sizes are not shown on above, please specify (H) hole size when order.



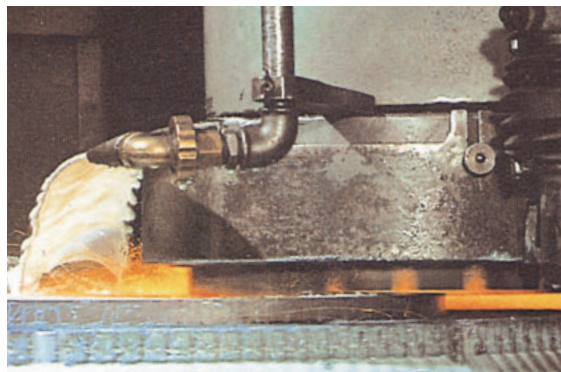


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SURFACE GRINDING WHEELS AND SEGMENTS

For reason of economy and productivity as well as quality of surface finish, accuracy and appearance, K-PRIX surface grinding wheels and segments are primarily used to produce flat surface in all tool rooms and production shops in the machine tool, air craft, automotive, cutlery, mold & die and hand tool industries.



Wheels on horizontal spindle grinders



Wheels on vertical spindle grinders



Segments





Wheels on horizontal spindle grinders

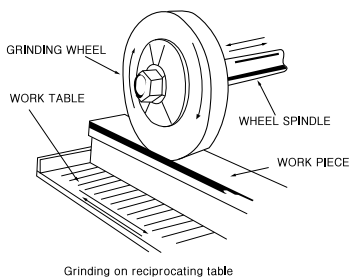
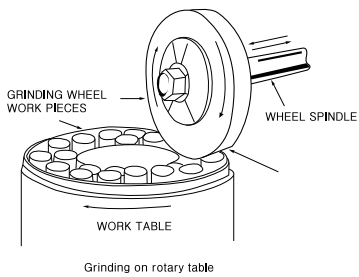
K-PRIX provides the wide variety of wheels shaped in type 1, 5, 7, in horizontal spindle type surface grinding machines.

Type 1 straight wheels or type 5, 7 recessed wheels in diameters ranging from 6"(150mm) to 36"(915mm) and in thickness from 1/8"(3mm) to 4"(100mm) are normally used on horizontal spindle reciprocating table and rotary table grinders.

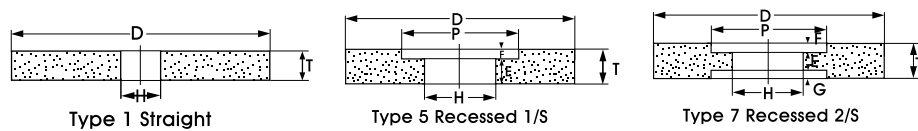
■ Specification guide

Material to be ground	Specification		
	D.6"-10"(150-255mm)	D.12"-16"(305-405mm)	D.18"-24"(455-610mm)
Steel			
- unhardened (soft)	19A46K	19A46J	19A36J
- hardened	WA46J	WA46I	WA36I
- tool & high speed	SA60J	SA54I	SA46H
- nitrided	WA46I	WA36H	WA36G
	C80J	C60I	C60H
Die steel			
- hardened	SA60I	SA54H	SA46H
- annealed	WA46J	WA46I	WA46I
Stainless steel	SA60I	SA54I	SA46H
- heat treated	FA60H	FA60I	FA46I
Cast Iron			
- ductile	SA60K	SA54J	SA46I
- gray	23A46J	23A36I	23A36I
- chilled	C46K	C36J	C36I
Stellite	23A0J5	23A46I	23A46H
Chrome plating	SA80J	SA80I	SA60H
Tungsten carbide			
- roughing	GC60I	GC46H	-
- finishing	GC120I	GC120H	-
Bronze, brass	C54J	C54J	C46I

■ Types of grinding



■ wheel shapes



Available wheel size

Common wheel sizes (DxTxH)	
Inch	mm
6 x (1/4, 3/8, 1/2, 5/8, 3/4, 1) x H	150 x (6, 10, 13, 16, 19, 25) x H
7 x (1/4, 3/8, 1/2, 5/8, 3/4, 1, 1.1/4) x H	180 x (6, 10, 13, 16, 19, 25, 32) x H
8 x (1/4, 3/8, 1/2, 5/8, 3/4, 1, 1.1/4) x H	205 x (6, 10, 13, 16, 19, 25, 32) x H
10 x (3/4, 1, 1.1/4, 1.1/2, 2) x H	255 x (19, 25, 32, 38, 50) x H
12 x (1, 1.1/4, 1.1/2, 2) x H	305 x (25, 32, 38, 50) x H
14 x (1, 1.1/4, 1.1/2, 2) x H	355 x (25, 32, 38, 50) x H
16 x (2, 3, 4) x H	405 x (50, 75, 100) x H
18 x (2, 3, 4) x H	455 x (50, 75, 100) x H
20 x (2, 3, 4) x H	510 x (50, 75, 100) x H

※ specify (H) hole size when order





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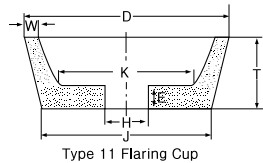
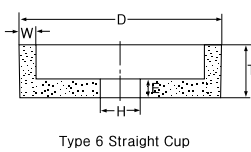
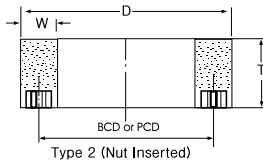
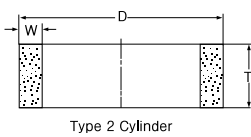
Wheels on vertical spindle grinders



Cylinder wheels, cup wheels are generally used on vertical spindle rotary and reciprocating table surface grinding machines.

K-PRIX provides a wide range of plane/plate mounted nut inserted type cylinder wheels, straight/tapered cup wheels which are composed with selected abrasive grits, grades, structures and best bonding systems to match any material removal or finish requirement from precision tool grinding room to rugged production job.

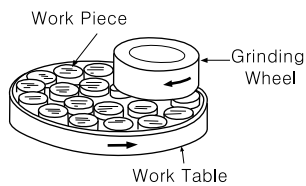
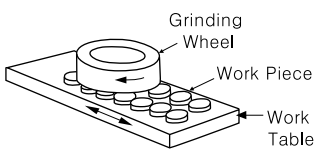
■ wheel shapes



■ Specification guide

Material to be ground	Starting specification for Cup & Cylinder
Steel	
-unhardened steel	19A46J
-(broad contact) hardened steel	SA46H
-(narrow contact) hardened steel	SA46I
-tool and high speed steel	SA46I
Die steel	WA46I
Stainless steel	SA46I
Cast Iron	C36I
Bronze, Brass, Ceramic	C46J

■ Types of grinding



Available wheel size

Type 2 (Ring / Cylinder)

Common wheel sizes (DxTxH)	
Inch	mm
8 x (3.1/2, 4, 4.1/2) x H	205 x (90, 100, 115) x H
10 x (3.1/2, 4, 4.1/2, 5, 5.1/2, 6, 7) x H	255 x (90, 100, 115, 125, 140, 150, 180) x H
12 x (4.1/2, 5) x H	305 x (115, 125) x H
14 x (4.1/2, 5) x H	355 x (115, 125) x H
16 x (4.1/2, 5) x H	405 x (115, 125) x H

Type 6 & 11 (Straight cup/ Flaring cup)

Common wheel sizes (DxTxH)	
Inch	mm
3 x 1.1/2 x H	75 x 38 x H
4 x (2, 2.1/2) x H	100 x (50, 63) x H
5 x (1.1/2, 1.3/4, 2, 2.1/2, 3) x H	125 x (38, 45, 50, 63, 75) x H
6 x (2, 3, 3.1/2) x H	150 x (50, 75, 90) x H
6.1/2 x (3, 3.1/4) x H	165 x (75, 85) x H
7 x (3, 3.5/32, 3.1/2, 4) x H	180 x (75, 80, 90, 100) x H
8 x (3.1/2, 4, 5) x H	205 x (90, 100, 125) x H
10 x (3.1/2, 4, 5, 6) x H	255 x (90, 100, 125, 150) x H
12 x (4, 4.1/2, 5) x H	305 x (100, 115, 125) x H
14 x (4, 5, 6, 8) x H	405 x (100, 125, 150, 205) x H

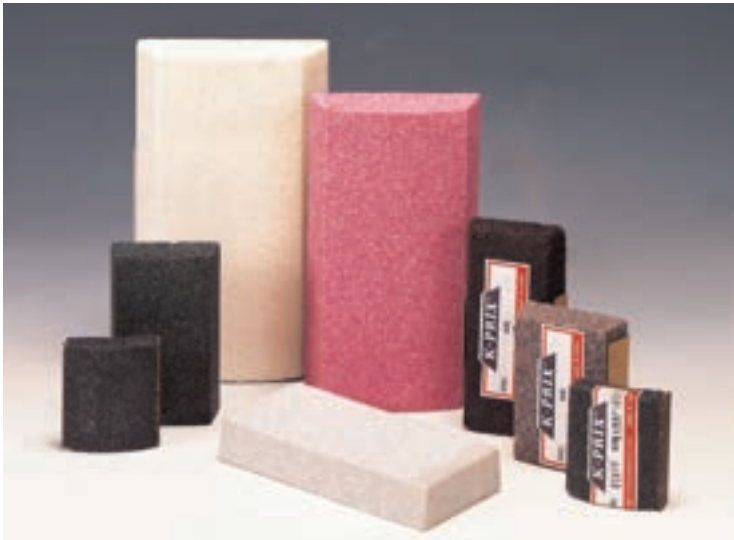
※ Please specify (H) Hole size when order





Segments

Segments are generally used on rotary table surface grinding machines and K-PRIX provides wide range of all purpose shapes, sizes and specifications of segments which are composed with selected abrasives in grits, grades, structures and best bonding systems to match any material removal or finish requirement from precision tool grinding room to rugged production job.



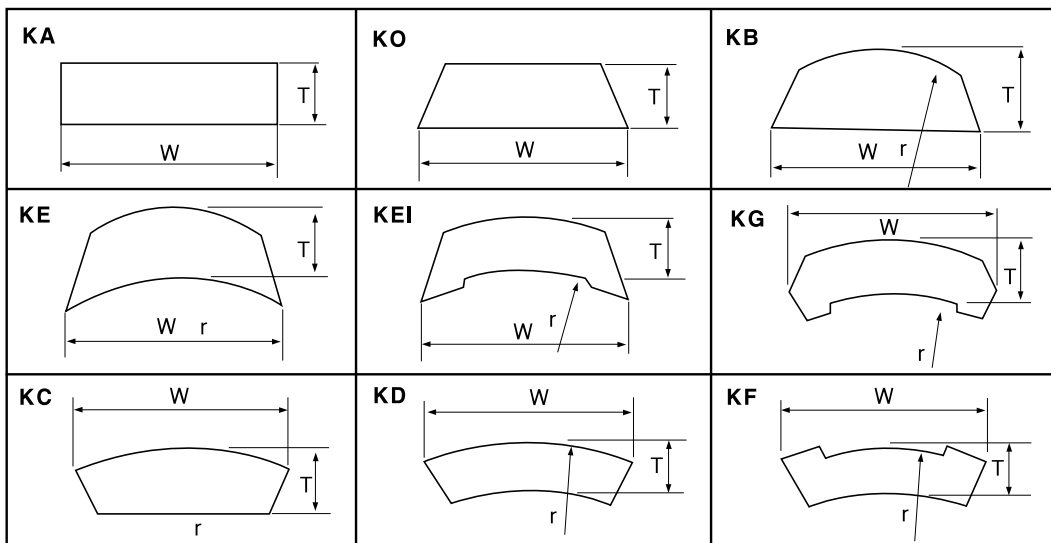
■ Specification guide

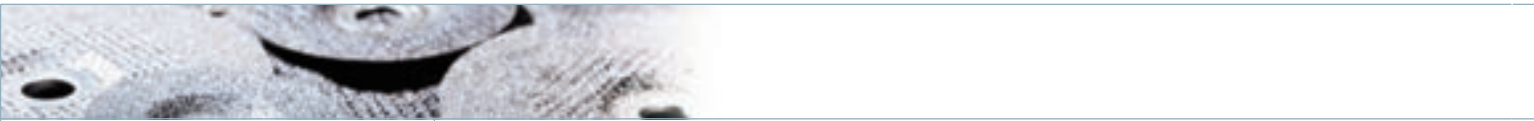


Material to be ground	Specification
Steel – unhardened steel, – (broad contact) hardened steel – (narrow contact) hardened steel – tool and high speed	19A36I 32A36G WA46H SA46H
Die steel	WA36H
Stainless steel	SA46G
Cast Iron	C24H, C30I
Bronze, Brass, Ceramic	C46J

■ General shapes

W = width T = thickness



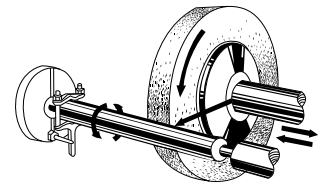


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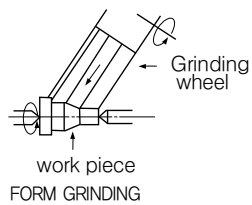
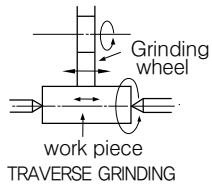
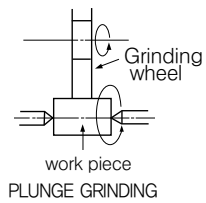
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CYLINDRICAL GRINDING WHEELS

In this type of grinding the work is revolved of its axis between centers. K-PRIX cylindrical grinding wheels work to a very high degree of accuracy and finish. K-PRIX cylindrical grinding wheels are used extensively throughout the automotive engine, turbine, bearing, shipbuilding, aircraft and metal working industries as well as production shops and tool rooms.



■ Type of grinding



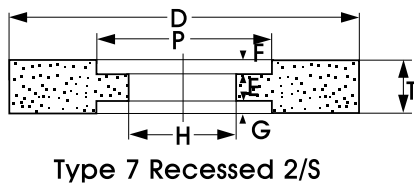
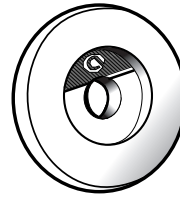
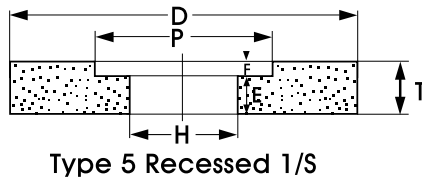
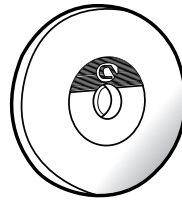
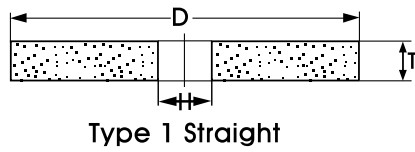
■ Specification guide

Material to be ground	Specification	
	D < 18" (455mm)	D ≥ 18" (455mm)
Steel		
-unhardened (soft)	19A46M	19A46L
-castings	A36L	A36K
-hardened,	WA60K	WA54I
-high speed	WA60I	WA60H
-molybden	SA46K	SA46J
-nitrided	GC80I	GC60H
Stainless steel	GC60K	GC54J
-heat treated	57K60K	57A54K
Iron		
-cast	C60K	C54J
-chilled	C60J	C54I
Stellite	23A46M	23A46L
Chrome plating	SA60K	SA54J
Tungsten carbide		
-roughing	GC60J	GC54I
-finishing	GC120H	GC120G
Aluminum, Bronze		
Brass, Copper	C60I	C54H
Plastic, Rubber	C46J	C46I





■ Wheel shapes

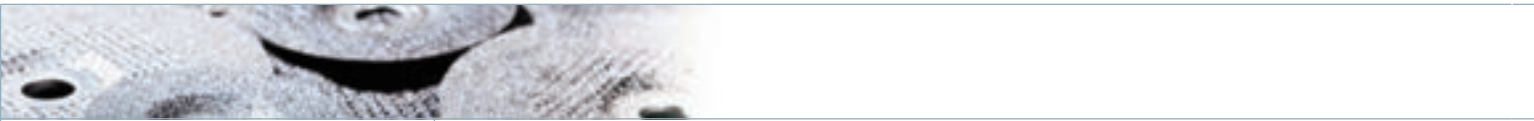


Available wheel size

Wheel size (DxTxH)	
Inch	mm
6 x 1/2 x 1.1/4	150 x 13 x 31.75
10 x (1/2, 3/4, 1) x 3	255 x (13, 19, 25) x 76.2
12 x (1, 1.1/4, 1.1/2, 2) x 5	305 x (25, 32, 38, 50) x 127
14 x (1, 1.1/4, 1.1/2, 2) x 5	355 x (25, 32, 38, 50) x 127
16 x (1, 1.1/2, 2.1/2, 3) x 5	405 x (25, 38, 50, 63, 75) x 127
18 x (2, 2.1/2, 3) x 5	455 x (50, 63, 75) x 127
20 x (2, 2.1/2, 3,4) x 12	510 x (50, 63, 75, 100) x 304.8
24 x (2, 3, 4) x 12	610 x (50, 75, 100) x 304.8
30 x (2, 3, 4) x 12	760 x (50, 75, 100) x 304.8

※ Specific hole sizes are not shown on above, please specify (H) hole size when order.





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TOOL ROOM WHEELS

The selection of correct grinding wheel for tool sharpening is very important to successful job finishing of tools.

K-PRIX tool room grinding wheels cover all tool room jobs such as reconditioning and sharpening of various types of tools and cutters.

Straight wheels, cup wheels, dish wheels, mounted wheels and cut-off wheels are applicable for drills, broaches, taps, milling cutters, metal saws, reamers, gears, dies, hobs and other tools.



TOOL AND CUTTER GRINDING WHEELS

STANDARD SELECTION GUIDE

Abrasve

WA is most conventional for tool & die steels.

RA is suitable for grinding high alloyed steel.

SA is ideal for grinding heat sensitive high alloyed steel and high speed steel.

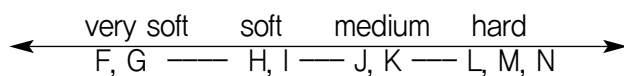
GC is widely used for grinding cemented carbide tools.

CW is the most efficient for tools and cutters.

Grit Size

#36,46,54,60,80,100,120,150,180,220 and finer grits

Grade (Hardness)





Type 1, STRAIGHT WHEELS

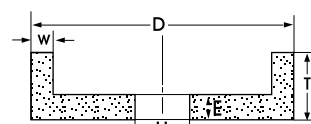
Available wheel size

Size(inch)	Size(mm)	Max. RPM.
4 x 1/4 x H	100 x 6 x H	6,110
4 x 3/8 x H	100 x 10 x H	6,110
4 x 1/2 x H	100 x 13 x H	6,110
4 x 5/8 x H	100 x 16 x H	6,110
4 x 3/4 x H	100 x 19 x H	6,110
4 x 1 x H	100 x 25 x H	6,110
5 x 1/4 x H	125 x 6 x H	5,095
5 x 3/8 x H	125 x 10 x H	5,095
5 x 1/2 x H	125 x 13 x H	5,095
5 x 5/8 x H	125 x 16 x H	5,095
5 x 3/4 x H	125 x 19 x H	5,095
5 x 1 x H	125 x 25 x H	5,095
6 x 1/8 x H	150 x 3 x H	4,136
6 x 5/32 x H	150 x 4 x H	4,136
6 x 1/4 x H	150 x 6 x H	4,136
6 x 3/8 x H	150 x 10 x H	4,136
6 x 1/2 x H	150 x 13 x H	4,136
6 x 5/8 x H	150 x 16 x H	4,136
6 x 3/4 x H	150 x 19 x H	4,136
6 x 1 x H	150 x 25 x H	4,136
7 x 1/8 x H	180 x 3 x H	3,600
7 x 5/32 x H	180 x 4 x H	3,600
7 x 3/16 x H	180 x 5 x H	3,600
7 x 1/4 x H	180 x 6 x H	3,600
7 x 5/16 x H	180 x 8 x H	3,600
7 x 3/8 x H	180 x 10 x H	3,600
7 x 1/2 x H	180 x 13 x H	3,600
7 x 5/8 x H	180 x 16 x H	3,600
7 x 3/4 x H	180 x 19 x H	3,600
7 x 1 x H	180 x 25 x H	3,600
7 x 1.1/4 x H	180 x 32 x H	3,600
8 x 5/16 x H	205 x 8 x H	3,100
8 x 3/8 x H	205 x 10 x H	3,100
8 x 1/2 x H	205 x 13 x H	3,100
8 x 5/8 x H	205 x 16 x H	3,100
8 x 3/4 x H	205 x 19 x H	3,100
8 x 1 x H	205 x 25 x H	3,100
8 x 1.1/4 x H	205 x 32 x H	3,100
9 x 3/4 x H	230 x 19 x H	2,770
9 x 1 x H	230 x 25 x H	2,770
10 x 1/2 x H	255 x 13 x H	2,483
10 x 3/4 x H	255 x 19 x H	2,483
10 x 1 x H	255 x 25 x H	2,483
10 x 1.1/4 x H	255 x 32 x H	2,483
12 x 3/4 x H	305 x 19 x H	2,069
12 x 1 x H	305 x 25 x H	2,069
12 x 1.1/4 x H	305 x 32 x H	2,069
12 x 1.1/2 x H	305 x 38 x H	2,069
12 x 2 x H	305 x 50 x H	2,069
14 x 3/4 x H	355 x 19 x H	1,800
14 x 1 x H	355 x 25 x H	1,800
14 x 1.1/4 x H	355 x 32 x H	1,800
14 x 1.1/2 x H	355 x 38 x H	1,800
14 x 2 x H	355 x 50 x H	1,800
16 x 1.1/4 x H	405 x 32 x H	1,570
16 x 1.1/2 x H	405 x 38 x H	1,570
16 x 2 x H	405 x 50 x H	1,570
18 x 2 x H	455 x 50 x H	1,400
18 x 2.1/2 x H	455 x 63 x H	1,400
20 x 2 x H	508 x 50 x H	1,254
20 x 2.1/2 x H	508 x 63 x H	1,254

TYPE 6, STRAIGHT CUP WHEELS



■ Wheel shape



Type 6 - Straight cup

Available wheel size

Size(inch)	Size(mm)	Max. RPM.
3 x 1.1/2 x H	75 x 40 x H	7,643
4 x 1.1/2 x H	100 x 40 x H	5,733
4 x 2 x H	100 x 50 x H	
4 x 3 x H	100 x 75 x H	
5 x 1.1/2 x H	125 x 38 x H	4,856
5 x 1.3/4 x H	125 x 45 x H	
5 x 2 x H	125 x 50 x H	
5 x 2.1/4 x H	125 x 63 x H	
6 x 2 x H	150 x 50 x H	3,822
6 x 2.1/2 x H	150 x 63 x H	
6 x 3 x H	150 x 75 x H	
7 x 2 x H	180 x 50 x H	3,185
7 x 2.1/2 x H	180 x 63 x H	
7 x 3 x H	180 x 75 x H	

※ Wall(W), Back(E) and Hole(H) size as ordered.



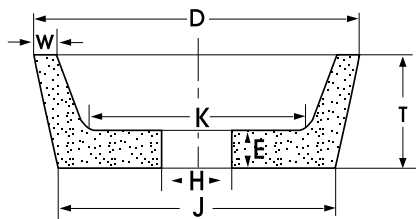
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TYPE 11, FLARING CUP WHEELS



■ Wheel shape



Type 11 – Flaring Cup



Available wheel size

Size(inch)	Size(mm)	Max. RPM.
3 x 1.1/4 x H	75 x 32 x H	7,643
3 x 1.1/2 x H	75 x 38 x H	
3.1/2 x 1.1/4 x H	90 x 32 x H	6,369
3.1/2 x 1.1/2 x H	90 x 38 x H	
4 x 1.1/2 x H	100 x 40 x H	5,733
4 x 2 x H	100 x 50 x H	
5 x 1.1/2 x H	125 x 40 x H	4,856
5 x 1.3/4 x H	125 x 45 x H	
5 x 2 x H	125 x 50 x H	
6 x 1.1/2 x H	150 x 40 x H	3,822
6 x 1.3/4 x H	150 x 45 x H	
6 x 2 x H	150 x 50 x H	
6 x 2.1/2 x H	150 x 63 x H	
6 x 3 x H	150 x 75 x H	
7 x 2 x H	180 x 50 x H	
7 x 2.1/2 x H	180 x 63 x H	
7 x 3 x H	180 x 75 x H	

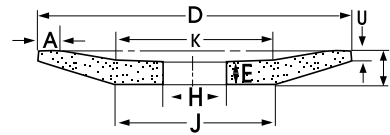
※ Arbor Hole(H) size as ordered.
Specify W,E,J,K sizes when order.



TYPE 12, DISH WHEELS



■ Wheel shape



Type 12-Dish

Available wheel size

size(inch)	size(mm)	Max. RPM
3 x 1/2 x H	75 x 13 x H	8,439
3.1/2 x 1/2 x H	90 x 13 x H	7,077
4 x 1/2 x H	100 x 13 x H	6,369
5 x 1/2 x H	125 x 13 x H	5,095
5 x 5/8 x H	125 x 16 x H	
6 x 1/2 x H	150 x 13 x H	
6 x 5/8 x H	150 x 16 x H	4,246
6 x 3/4 x H	150 x 19 x H	
7 x 5/8 x H	180 x 16 x H	3,539
7 x 3/4 x H	180 x 19 x H	

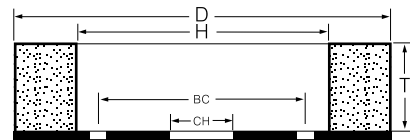
※ Arbor Hole(H) size as ordered.
Specify E, J, K, U, A sizes when order.

TYPE 50, PLATE MOUNTED WHEELS

GC(Green Silicon carbide) grain is widely used for grinding cemented carbide tools.



■ Wheel shape



Type 50-Plate mounted

Available wheel size

size(inch)	size(mm)	Max. rpm.
6 x 1 x 4	150 x 25 x 100	3,501
6 x 1.1/2 x 4	150 x 38 x 100	3,501
7 x 1 x 5	180 x 25 x 127	3,001
7 x 1.1/2 x 5	180 x 38 x 127	3,001

※ Specify (CH) center hole diameter (BC) bolt circle diameter, No. and diameter of holes.



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MOUNTED POINT WHEELS



MOUNTED POINTS FOR DEBURRING, SHARPENING AND INTERNAL GRINDING

Specification guide

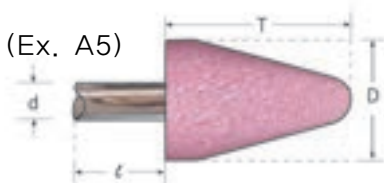
ABRASIVE	A	Regular Alumium Oxide—soft steel & cast iron
	WA	White Aluminium Oxide—hard steel, GENERAL PURPOSE
	PA	Pink Aluminium Oxide—cool cutting works for hardened steel
	SA	Single Crystal Aluminium Oxide—superior forming & long life
	C	Dark Silicon Carbide—cast iron, non-ferrous, non-metal
	GC	Green Silicon Carbide—cemented carbide
GRIT	16,24,36,46,60,80,100,120,150,180,220,240,320	
GRADE	H, I, J,K, L, M, N, O, P, Q, R, S, T	
BOND	V(Vitrified), B(Resinoid), R(Rubber)	

When ordering, please specify :
Specification(marking)

- * Shape No by catalogue, if listed.
- * Diameter(D) & length(l) of projected (unless otherwise specified, standard shaft dimension will be delivered).
- * Kind of material to be ground.

Marking of Mounted Point's Dimension

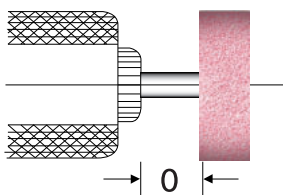
(Ex. A5)



D : Diameter of Abrasive
T : Thickness of Abrasive
d : Diameter of Projected Mandrel
l : Length of Projected Mandrel

(Ex. A5) : 3/4 " x 1.1/8 " -1/4 " x 1.1/2 "
(20 x 28 - 6.4 x 38)
D x T- d x l

MAXIMUM OPERATION SPEED



"O"(Overhang or distance between grinder chuck and the abrasive on the spindle).

The larger the overhang("O"), the lower the speed. The maximum operating speeds on this catalogue are indicated in dependence on a maximum open shaft length "O"=12mm



GROUP "A" STANDARD SHAPE (A1 – A39)

K-PRIX mounted point is offering of high quality, fast stock removal and a full range of standard shapes.



Available wheel size

Shape No.	Dimension—mm(inch) Dia X Thick (DXT)	Mandrel Diameter mm(Inch)	Max.RPM O = 12mm	Shape No.	Dimension—mm(inch) Dia X Thick (DXT)	Mandrel Diameter mm(Inch)	Max.RPM O = 12mm
A 1	20 X 63 (3/4 x 2.1/2)	6 (1/4)	19,800	A 23	20 X 25 (3/4 X 1)	6 (1/4)	39,370
A 2	25 X 32 (1 X 1.1/4)	6 (1/4)	38,000	A 24	6 X 20 (1/4 X 3/4)	6 (1/4)	76,500
A 3	25 X 70 (1 X 2.3/4)	6 (1/4)	16,100	A 25	∅25 (1)	6 (1/4)	35,620
A 4	32 X 32 (1.1/4 X 1.1/4)	6 (1/4)	30,560	A 26	∅16 (5/8)	6 (1/4)	61,120
A 5	20 X 28 (3/4 X 1.1/8)	6 (1/4)	45,000	A 31	35 X 25 (1.3/8 X 1)	6 (1/4)	27,780
A 6	20 X 28 (3/4 X 1.1/8)	6 (1/4)	39,000	A 32	25 X 16 (1 X 5/8)	6 (1/4)	38,200
A 11	22 X 50 (7/8 X 2)	6 (1/4)	19,860	A 33	25 X 13(1 X 1/2)	6(1/4)	38,200
A 12	18 X 32 (11/16 X 1.1/4)	6 (1/4)	48,000	A 34	38 X 10 (1.1/2 X 3/8)	6 (1/4)	25,470
A 13	28 X 28 (1.1/8 X 1.1/8)	6 (1/4)	33,950	A 35	25 X 10 (1 X 3/8)	6 (1/4)	38,200
A 14	18 X 22 (11/16 X 7/8)	6 (1/4)	55,560	A 36	41 X 10 (1.5/8 X 3/8)	6 (1/4)	23,520
A 15	6 X 27 ((1/4 X 1.1/16)	6 (1/4)	72,750	A 37	32 X 6 (1.1/4 X 1/4)	6 (1/4)	30,560
A 21	25 X 25 (1 X 1)	6 (1/4)	34,500	A 38	25 X 25 (1 X 1)	6 (1/4)	34,500
A 22	19 X 16 (3/4 X 5/8)	6 (1/4)	50,930	A 39	20 X 20 (3/4 X 3/4)	6 (1/4)	47,250





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GROUP "B" STANDARD SHAPE (B41 – B135)

K-PRIX mounted point is offering of high quality, fast stock removal, and a full range of standard shapes.

Available wheel size

Shape No.	Dimension—mm(inch) Dia X Thick (DXT)	Mandrel Diameter mm(Inch)	Max.RPM O = 12mm
B 41	16 X 16 (5/8 X 5/8)	3 , 6 (1/8,1/4)	33,750
B 42	13 X 20 (1/2 X 3/4)	3 , 6 (1/8,1/4)	33,750
B 43	6 X 8 (1/4 X 5/16)	3 (1/8)	81,370
B 44	6 X 10 (7/32 X 3/8)	3 (1/8)	68,400
B 45	5 X 8 (3/16X 5/16)	3 (1/8)	104,250
B 46	3 X 8 (1/8 X 5/16)	3 (1/8)	105,000
B 51	11 X 20 (7/16 X 3/4)	3 , 6 (1/8,1/4)	45,370
B 52	10 X 20 (3/8 X 3/4)	3 , 6 (1/8,1/4)	45,370
B 53	6 X 16 (1/4 X 5/8)	3 (1/8)	60,000
B 54	6 X 13 (1/4 X 1/2)	3 (1/8)	60,000
B 55	3 X 6 (1/8 X 1/4)	3 (1/8)	105,000
B 61	20 X 8 (3/4 X 5/16)	3 , 6 (1/8,1/4)	38,250
B 62	13 X 10 (1/2 X 3/8)	3 , 6 (1/8,1/4)	41,020
B 63	6 X 5 (1/4 X 3/16)	3 (1/8)	92,400
B 64	6 X 2 (1/4 X 1/16)	3 (1/8)	105,000
B 65	3 X 3 (1/8 X 1/8)	3 (1/8)	105,000
B 69	8 X 2 (5/16 X 1/10)	3 (1/8)	105,000
B 70	20 X 3 (3/4 X 1/8)	3 (1/8)	50,930
B 71	16 X 3 (5/8 X 1/8)	3 (1/8)	61,120
B 72	13 X 3(1/2 X 1/8)	3 (1/8)	73,500
B 73	13 X 3 (1/2 X 1/8)	3 (1/8)	73,500
B 81	20 X 8 (3/4 X 5/16)	3 (1/8)	50,930
B 82	13 X 6 (1/2 X 1/4)	3 (1/8)	76,390
B 83	10 X 5 (3/8 X 3/16)	3 (1/8)	87,600
B 84	8 X 5 (5/16 X 3/16)	3 (1/8)	105,000

Shape No.	Dimension—mm(inch) Dia X Thick (DXT)	Mandrel Diameter mm(Inch)	Max.RPM O = 12mm
B 91	13 X 16 (1/2 X 5/8)	3 , 6 (1/8,1/4)	34,500
B 92	6 X 6 (1/4 X 1/4)	3 (1/8)	81,370
B 95	3 X 5 (1/8 X 3/16)	3 (1/8)	105,000
B 96	3 X 6 (1/8 X 1/4)	3 (1/8)	105,000
B 97	3 X 10 (1/8 X 3/8)	3 (1/8)	105,000
B 98	2 X 6 (3/32 X 1/4)	3 (1/8)	105,000
B 101	16 X 18 (5/8 X 11/16)	3 , 6 (1/8,1/4)	33,750
B 102	16 X 13 (5/8 X 1/2)	3 (1/8)	45,370
B 103	16 X 5 (5/8 X 3/16)	3 , 6 (1/8,1/4)	61,120
B 104	8 X 10 (5/16 X 3/8)	3 (1/8)	68,400
B 105	6 X 6 (1/4 X 1/4)	3 (1/8)	104,250
B 106	3 X 3 (1/8 X 1/8)	3 (1/8)	105,000
B 111	11 X 18 (7/16 X 11/16)	3 , 6 (1/8,1/4)	33,750
B 112	10 X 13 (3/8 X 1/2)	3 (1/8)	45,370
B 114	6 X 10 (7/32 X 3/8)	3 (1/8)	68,400
B 115	2 X 3 (3/32 X 1/8)	3 (1/8)	105,000
B 121	∅13 (1/2)	3 , 6 (1/8,1/4)	45,370
B 122	∅10 (3/8)	3 (1/8)	61,650
B 123	∅5 (3/16)	3 (1/8)	104,250
B 124	∅3 (1/8)	3 (1/8)	105,000
B 125	∅6 (1/4)	3 (1/8)	125,000
B 131	13 X 13 (1/2 X 1/2)	3 , 6 (1/8,1/4)	34,500
B 132	10 X 13 (3/8 X 1/2)	3 , 6 (1/8,1/4)	45,370
B 133	10 X 10 (3/8 X 3/8)	3 , 6 (1/8,1/4)	54,000
B 135	6 X 13 (1/4 X 1/2)	3 , 6 (1/8,1/4)	60,000





**GROUP "W" STANDARD SHAPE
(W142 – W242)**



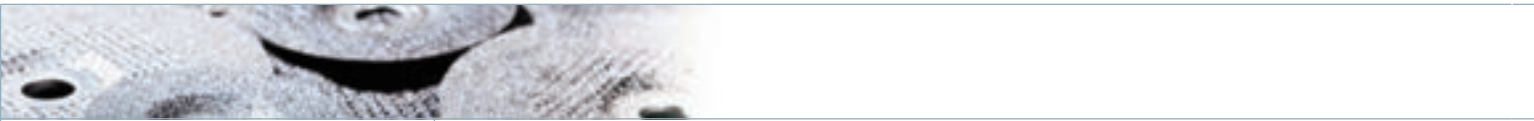
K-PRIX mounted point is offering of high quality, fast stock removal, and a full range of standard shapes.



Available wheel size

Shape No.	Dimension--mm(inch) Dia X Thick (DXT)	Mandrel Diameter mm(Inch)	Max.RPM O = 12mm
W142	2.5 X 6 (3/32 X 1/4)	3 (1/8)	105,000
W143	3 X 3 (1/8 X 1/8)	3 (1/8)	105,000
W144	3 X 6 (1/8 X 1/4)	3 (1/8)	105,000
W145	3 X 10 (1/8 X 3/8)	3 (1/8)	105,000
W146	3 X 13 (1/8 X 1/2)	3 (1/8)	105,000
W149	4 X 6 (5/32 X 1/4)	3 (1/8)	105,000
W152	5 X 6 (3/16 X 1/4)	3 (1/8)	105,000
W153	5 X 10 (3/16 X 3/8)	3 (1/8)	80,850
W154	5 X 13 (3/16 X 1/2)	3 (1/8)	70,500
W158	6 X 3 (1/4 X 1/8)	3 (1/8)	105,000
W160	6 X 6 (1/4 X 1/4)	3 (1/8)	81,370
W162	6 X 10 (1/4 X 3/8)	3 (1/8)	68,400
W163	6 X 13 (1/4 X 1/2)	3 (1/8)	60,000
W164	6 X 20 (1/4 X 3/4)	3, 6 (1/8,1/4)	45,900
W167	8 X 6 (5/11 X 1/4)	3 (1/8)	75,000
W170	8 X 13 (5/16 X 1/2)	3 (1/8)	52,500
W173	10 X 3 (3/8 X 1/8)	3 (1/8)	87,600
W174	10 X 6 (3/8 X 1/4)	3 (1/8)	69,000
W175	10 X 10 (3/8 X 3/8)	3, 6 (1/8,1/4)	54,000
W176	10 X 13 (3/8 X 1/2)	3, 6 (1/8,1/4)	45,370
W177	10 X 20 (3/8 X 3/4)	3, 6 (1/8,1/4)	33,750
W178	10 X 25 (3/8 X 1)	3, 6 (1/8,1/4)	26,250
W179	10 X 32 (3/8 X 1.1/4)	3, 6 (1/8,1/4)	45,750
W182	13 X 3 (1/2 X 1/8)	3, 6 (1/8,1/4)	73,500
W183	13 X 6 (1/2 X 1/4)	3, 6 (1/8,1/4)	51,750
W184	13 X 10 (1/2 X 3/8)	3, 6 (1/8,1/4)	41,020
W185	13 X 13 (1/2 X 1/2)	3, 6 (1/8,1/4)	34,500
W186	13 X 20 (1/2 X 3/4)	3, 6 (1/8,1/4)	26,250
W187	13 X 25 (1/2 X 1)	3, 6 (1/8,1/4)	20,620
W188	13 X 40 (1/2 X 1.1/2)	3, 6 (1/8,1/4)	30,370
W189	13 X 50 (1/2 X 2)	3, 6 (1/8,1/4)	24,000
W191	16 X 3 (5/8 X 1/8)	3 (1/8)	58,870
W194	16 X 13 (5/8 X 1/2)	3, 6 (1/8,1/4)	29,400
W195	16 X 20 (5/8 X 3/4)	3, 6 (1/8,1/4)	17,620
W196	16 X 25 (5/8 X 1)	3, 6 (1/8,1/4)	35,250
W197	16 X 50 (5/8 X 2)	3, 6 (1/8,1/4)	21,000
W200	20 X 3 (3/4 X 1/8)	3, 6 (1/8,1/4)	50,930
W201	20 X 6 (3/4 X 1/4)	3, 6 (1/8,1/4)	38,250
W202	20 X 10 (3/4 X 3/8)	3, 6 (1/8,1/4)	30,600
W203	20 X 13 (3/4 X 1/2)	3, 6 (1/8,1/4)	25,500
W204	20 X 20 (3/4 X 3/4)	3, 6 (1/8,1/4)	18,900
W205	20 X 25 (3/4 X 1)	6 (1/4)	34,500
W207	20 X 38 (3/4 X 1.1/2)	6 (1/4)	24,000
W208	20 X 50 (3/4 X 2)	6 (1/4)	18,750
W215	25 X 3 (1 X 1/8)	3, 6 (1/8,1/4)	38,200
W216	25 X 6 (1 X 1/4)	3, 6 (1/8,1/4)	30,520
W217	25 X 10 (1 X 3/8)	3, 6 (1/8,1/4)	38,200
W218	25 X 13 (1 X 1/2)	6 (1/4)	38,200
W220	25 X 25 (1 X 1)	6 (1/4)	25,500
W221	25 X 38 (1 X 1.1/2)	6 (1/4)	19,120
W222	25 X 50 (1 X 2)	6 (1/4)	15,900
W225	32 X 6 (1.1/4 X 1/4)	3, 6 (1/8,1/4)	30,560
W226	32 X 10 (1.1/4 X 3/8)	6 (1/4)	30,560
W227	32 X 13 (1.1/4 X 1/2)	6 (1/4)	30,560
W228	32 X 20 (1.1/4 X 3/4)	6 (1/4)	30,520
W230	32 X 32 (1.1/4 X 1.1/4)	6 (1/4)	20,400
W232	32 X 50 (1.1/4 X 2)	6 (1/4)	14,250
W235	38 X 6 (1.1/2 X 1/4)	6 (1/4)	25,470
W236	38 X 13 (1.1/2 X 1/2)	6 (1/4)	25,470
W237	38 X 25 (1.1/2 X 1)	6 (1/4)	22,500
W238	38 X 38 (1.1/2 X 1.1/2)	6 (1/4)	15,600
W242	50 X 25 (2 X 1)	6 (1/4)	19,100





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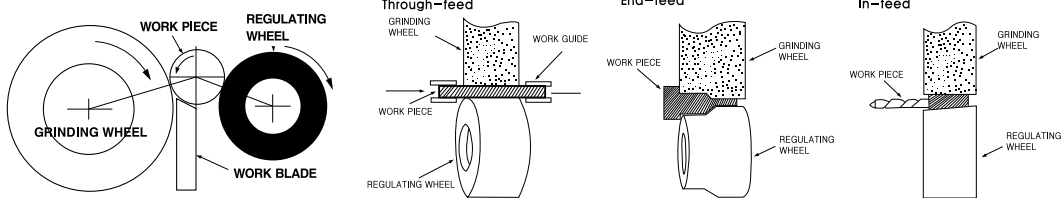
K-PRIX means the combination of quality, cost and service...

CENTERLESS GRINDING WHEELS

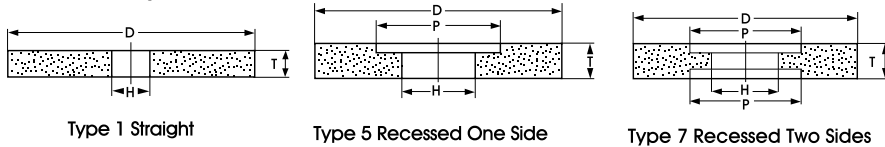
For mass-production of straight cylindrical and tapered shapes to precise tolerance of sizes, shapes along with finish quickly and easily, K-PRIX centerless grinding wheels and rubber regulating wheel(the drive mechanism for the workpiece) are used for Through-Feed, In-Feed, End-Feed grinding throughout the automotive, machine tool producer, bearing, accurate pin manufacturer, aircraft, steel mill, turbine blades, fastener manufacturing and even in finishing rod producer as well as general shops.



■ Type of grinding



■ Wheel shapes



Specification Guide

Material to be ground	Starting specification
General purpose steel	19A60L / 23A60M
Unhardened(soft) steel	A60M
Hardened steel	FA60K
High speed steel	WA60L / 23A60L
Bars	FA60M / C46Q
Heat treated Stainless steel	GC54K / SA46L / FA60L
Tungsten carbide	GC60J
Cast Iron	C36L
Aluminum, Brass, Copper, Bronze	C46K
Porcelain, Ceramics	GC60K



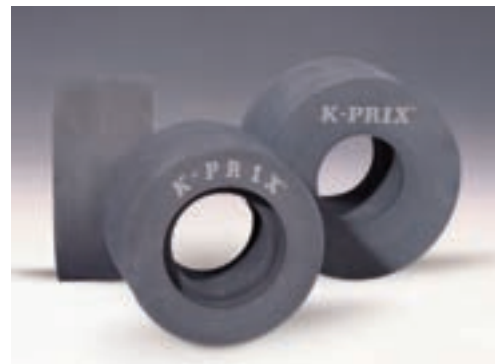


Available wheel size

Diameter (Inch)	Thickness(inch)																MAX. RPM
	2	3	4	5	6	7	8	9	10	11	12	13	14	16	18	20	
10																	2,500
12																	2,000
14																	1,800
15																	1,650
16																	1,550
18																	1,400
20																	1,250
24																	1,050
26																	950

RUBBER REGULATING WHEELS

The regulating wheels for centerless grinding wheels are rubber bonded, and are with 7"(180mm) to 18"(455mm) in diameter and the same thickness as the centerless grinding wheel.



Specification Guide

Application	Specification
For General Purpose	A80RR1 / A120RR1
For Tough Grinding	A60RR2 / A80RR2

Available wheel size

Diameter (Inch)	Thickness(inch)										MAX. RPM	
	2	3	4	5	6	7	8	9	10	12		
7												1,200
8												1,100
9												1,000
10												900
11												800
12												750
13												700
14												650
16												560
18												500





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CRANKSHAFT GRINDING WHEELS

Crankshaft grinding wheels are one of special class of K-PRIX production program.

K-PRIX offers special thickness dimension(8500SFPM-43M/SEC) and higher speed machines to the automotive, truck, diesel, aircraft, and also to many engine rebuilding shops for dimensional accuracy, corner radii and surface finish as well as large stock removal.

Most of crankshaft wheels are type 1,5,7,8,10 and 21 ranging from 18"(455mm) up to 48"(1220mm) in diameter and 1/2"(12.7mm) to 2 1/2" (63.5mm) thickness.



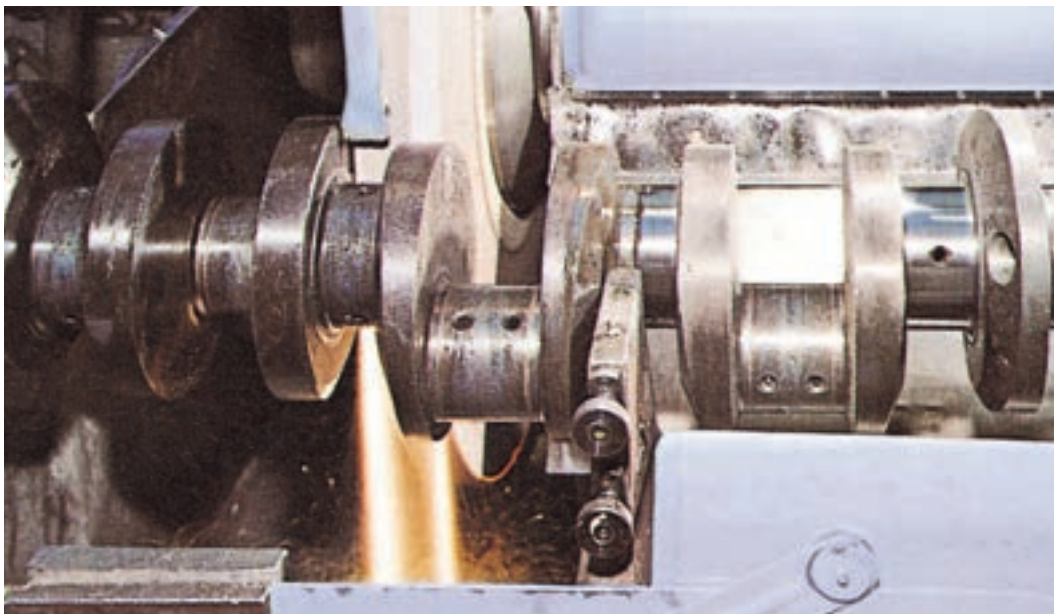
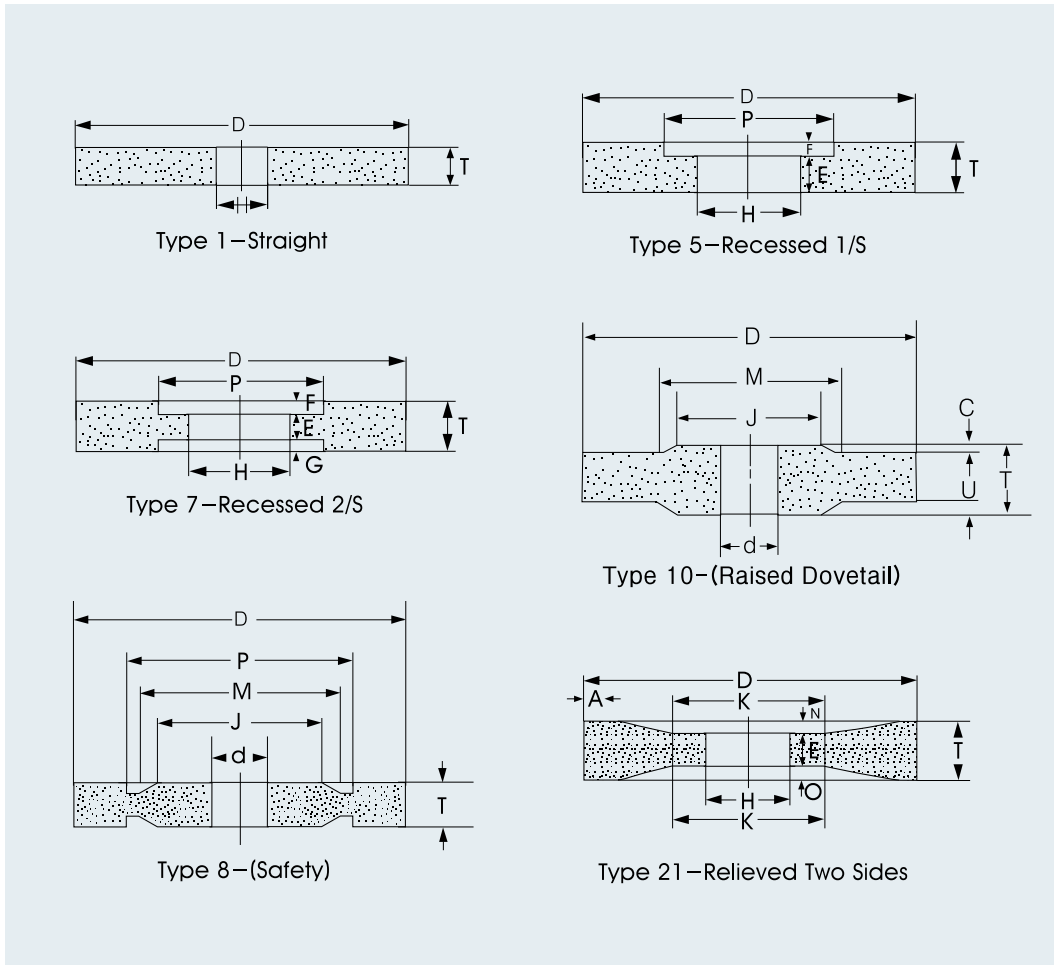
Specification guide

Application		Specification
Production grinding	Automobile(passenger car)	rough
	crankshaft, pin & bearing	finish
	Automobile pin	forged steel
		spheriodic graphite iron
	Truck & tractor (diesel engine)	before nitriding
	crankshaft	after nitriding
	Multi-wheels equipped	
	Cast iron	rough
Re-grinding		finish
	Hardened steel	pin
		bearing
	Nitrided steel	pin
		bearing
	Auto mobile crankshaft truck & Tractor crankshaft	Automobile crankshaft
		Truck & tractor crankshaft





Wheel shapes





CAM SHAFT GRINDING WHEELS

Cam shaft grinding is another special line of K-PRIX grinding applications. Cam grinding wheels are used in the manufacturing of gasoline and diesel engines, and are normally custom-built to the machine and the part to be ground. K-PRIX provides close dimension tolerance wheels for production cam grinding in the automobile, truck, ship building, locomotive, farm equipment and engine industry as well as cam grinding in engine rebuilding shops. Vitrified & resin bonded type 1 straight wheels ranging from 16"(405mm) to 28"(710mm) diameters with thickness from 1/2"(12.7mm) to 2"(50mm) are most popular.



Specification guide.

Application		Starting specification
Automobile(passenger car) cam - cast alloys & forgings	rough finish	FA54N A80M / WA80L
Automobile cam - hardened steel	rough finish	19A60M A80L / WA80K
Truck & tractors - forgings	rough finish	19A60L / FA54L 19A80M / FA80M
Cast Iron	rough finish	FA54L FA80M
Chilled Iron	rough finish	FA54L FA80M





GEAR GRINDING WHEEL

- Saving the cost of grinding field with developing for high precision profile gear grinding wheel.
- Archive to the profile consistency , reduce grinding resistance, Saving grinding time with applying for the CS abrasive grain which is excellent self-sharpening and developing the special Vitrified bonding agent.
- APPLICATION AREA : Module : 0.5 ~ 8.0 / No. of Start : 1 ~ 8 Start

Specifications of Each Manufacturer

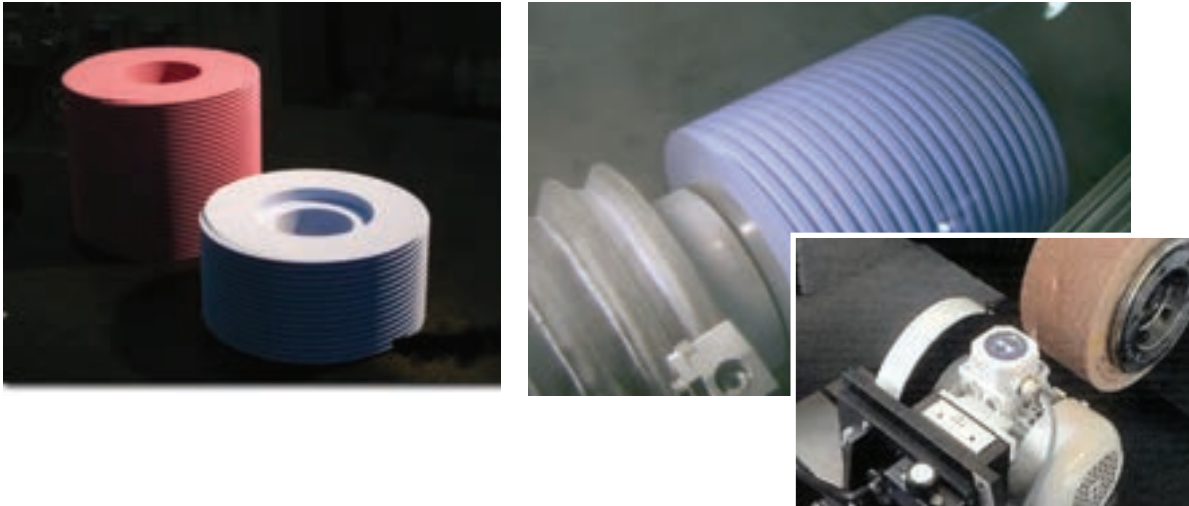


Diameter (mm)	Thickness (mm)	Inner Hole (mm)	Machine Type
275	125	160	Reishauer RZ 150
300	125	160	Reishauer RZ 400
350	84, 104	160	Reishauer RZ 362A
350	84, 104	160	Reishauer RZ 301S, 301A, 361S
350	62, 84	160	Reishauer RZ 300E, NZA, OZA, NZA-F
350	62, 84, 104	160	Reishauer AZA, AZO, AZA360, AZA-K
400	84, 104	160	Reishauer ZB, ZB770
400	84, 104	160	Reishauer RZ 701, 770, 801
400	84, 104	160	Reishauer RZ 820
400/500	63, 84, 104	203	Csepel
220	180	76.2	Gleason 245 TWG
350	84, 104	160	Gleason-Hurth ZWS 380
350	84, 104	160	Gleason TAG 400
180	125	100	Kapp KX 150P
320	125	100	Kapp KX 300P
195	200	90	Liebherr LCS 200 und LCS 300
350	84, 104	160	Okamoto SHG 400NC
350	84, 104	160	Okamoto SHG 360NC und NCS
350	84, 104	160	Pfauter-CIMA, Mikron 300
220	62, 84, 104	76.2	Samputensili S400 GT





GEAR GRINDING WHEEL



STANDARD SELECTION OF GRIT NO. & HARDNESS BY GEAR MODULE

(It may different with end-user' s grinding condition.)

GEAR MOD	GRIT NO.	HARDNESS	STRUCTURE
0.5~0.7	#180	K	8
0.7~1.0	#150	J	8
1.0~2.0	#120	I	9
2.0~3.5	#100	H	9
3.5~6.0	#80	G/H	10

STANDARD SELECTION OF ABRASIVE GRAIN BY THE KIND OF GEAR

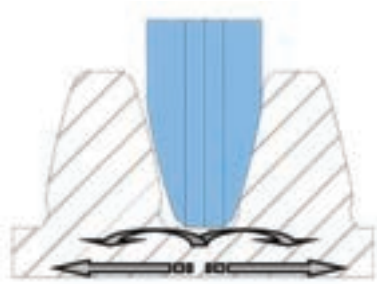
ABRASIVE GRAIN	GEAR	KIND OF GEAR	HARDNESS OF WORK - PIECE
WA	SPUR GEAR / HELICAL GEAR	GENERAL REDUCER AND VESSEL GEAR	Less than HRc60
32A	"	GENERAL REDUCER AND VESSEL GEAR	Less than HRc60
PA / RA	"	AUTOMOBILE MISSION GEAR	Over than HRc60
CS3W / CS5W	"	AUTOMOBILE MISSION GEAR	Over than HRc60





GEAR GRINDING WHEEL

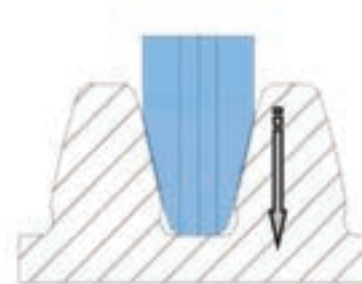
Single Flank Grinding



Double Flank Grinding



Form Grinding



STANDARD SELECTION GRIT NO. & HARDNESS BY GEAR MODULE

(It may different with end-user' s grinding condition)

GEAR MOD	GRIT NO	HARDNESS	STRUCTURE
1.0~3.0	#120	I ~ J	9
3.0~8.0	#80	I ~ J	9
8.0~25	#60	G ~ H	10

STANDARD SELECTION OF ABRASIVE GRAIN BY THE KIND OF GEAR

ABRASIVE GRAIN	GEAR	KIND OF GEAR	HARDNESS OF WORK - PIECE
WA	SPUR GEAR / HELICAL GEAR	GENERAL REDUCER AND VESSEL GEAR	Less than HRc60
32A	"	GENERAL REDUCER AND VESSEL GEAR	Less than HRc60
PA / RA	"	AUTOMOBILE MISSION GEAR	Over than HRc60
CS3W / CS5W	"	AUTOMOBILE MISSION GEAR	Over than HRc60



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RESIN BONDED SNAGGING WHEELS



K-PRIX snagging wheels are manufactured for a wide use of heavy stock removal in foundries, welding shops, metal fabricators, steel mills, shipyards, etc., and offers a complete line of engineered snagging wheels of high performance and many types such as straight wheels, flaring cups, cones & plugs and mounted points.

PORTABLE SNAGGING WHEEL

- ▷ Straight type Snagging Wheel is for used on straight grinders.
- ▷ Cup Type Snagging Wheel is for used on angle grinders.
- ▷ Cone & Plug Wheels are for used on straight grinders
- ▷ Mounted Point Wheels are for used on straight grinders or pointer grinders.

Specification guide.

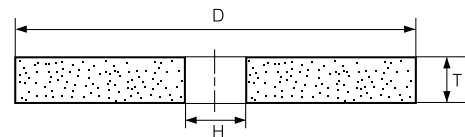
- ▶ Metal/Steel : A16P,A16Q,A16R,A24P,A24Q,A24R
- ▶ Cast Iron : AC16, AC20, AC24
- ▶ Concrete/Masonry : C16R,C20R,C24R

Available wheel size

WHEEL SIZE(DXTXH)		MAX.RPM
inch	mm	
2 X 1/2 X H	50 X 13 X H	18,300
2 X 3/4 X H	50 X 20 X H	18,300
2 1/2 X 1 1/2 X H	65 X 13 X H	14,500
2 1/2 X 3/4 X H	65 X 20 X H	14,500
3 X 1/2 X H	80 X 13 X H	11,500
3 X 3/4 X H	80 X 20 X H	11,500
4 X 1/2 X H	100 X 13 X H	9,100
4 X 3/4 X H	100 X 20 X H	9,100
4 X 1 X H	100 X 25 X H	9,100
5 X 3/4 X H	125 X 20 X H	7,300
5 X 1 X H	125 X 25 X H	7,300
6 X 1 X H	150 X 25 X H	6,050
8 X 1 X H	205 X 25 X H	4,530
10 X 1 X H	255 X 25 X H	3,740
10 X 1 1/4 X H	255 X 32 X H	3,740
10 X 1 1/2 X H	255 X 40 X H	3,740
12 X 1 1/4 X H	305 X 32 X H	3,130
12 X 1 1/2 X H	305 X 40 X H	3,130
12 X 2 X H	305 X 50 X H	3,130
14 X 1 1/2 X H	355 X 40 X H	2,690
14 X 2 X H	355 X 50 X H	2,690
16 X 1 1/2 X H	405 X 40 X H	2,350
16 X 2 X H	405 X 50 X H	2,350

* Please specify arbor hole(H) size when order.

Wheel shape



Type 1 - Straight

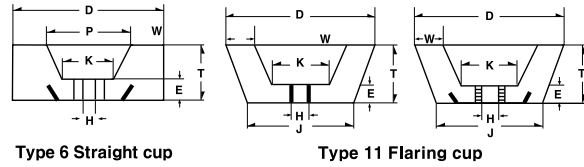




CUP WHEELS



Wheel shapes



Type 6 Straight cup

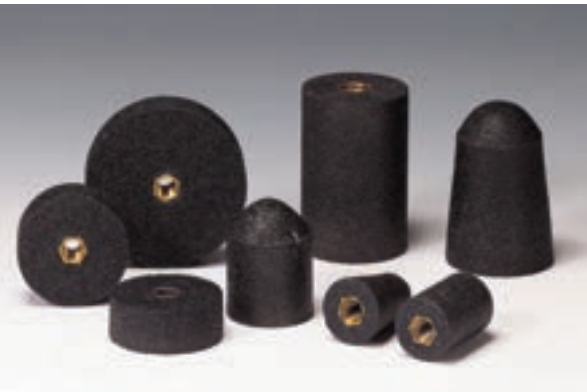
Type 11 Flaring cup

Available wheel size

WHEEL SIZE(DXTXH)		MAX.RPM
inch	mm	
4 x 2 x H rim: 3/4, back: 3/4	100/75 X 50 X H rim: 20, back : 20	9,070
4 1/2 x 2 x H rim: 3/4, back: 3/4	115/95 X 50 X H rim: 20, back : 20	8,060
5 x 2 x H rim: 1", back: 3/4	125/108 X 50 X H rim: 25, back : 20	7,250
6 x 2 x H rim: 1 1/2, back: 3/4	150/113 X 50 X H rim: 40, back : 20	6,040

* Please specify arbor hole(H) size when order.
Arbor hole(H) 7/8"(22.23mm), 5/8"-11, M14 available upon request.

CONE & PLUGS



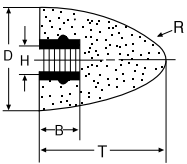
Available wheel size

Wheel Type	WHEEL SIZE(DXTXH)		MAX.RPM
	inch	mm	
Type 16	1.1/4 x 3 x H	32 x 75 x H	27500
	1.1/2 x 1.1/2 x H	38 X 40 X H	24000
	1.1/2 x 2 x H	38 X 50 X H	24000
	1.1/2 x 2 x H	38 X 50 X H	24000
	1.1/2 x 2.1/2 x H	38 X 63 X H	24000
	2 x 3 x H	50 X 75 X H	18000
Type 17	1 x 1.3/8 x H	25 X 35 X H	35000
	1 x 2 x H	25 X 50 X H	35000
	1.1/2 x 1.1/2 x H	38 X 40 X H	24000
Type 18 & Type 18R	1.1/2 x 2 x H	38 X 50 X H	24000
	1.1/2 x 2.1/2 x H	38 X 63 X H	24000
	1 x 1.1/2 x H	25 X 40 X H	35000
	1 x 2 x H	25 X 50 X H	35000
	1 x 3 x H	25 X 75 X H	35000
	1.1/2 x 1.1/2 x H	38 X 38 X H	24000
	1.1/2 x 2 x H	38 X 50 X H	24000
	1.1/2 x 2.1/2 x H	38 X 63 X H	24000
	1.1/2 x 3 x H	38 X 75 X H	24000
	1.3/4 x 3 x H	44 X 75 X H	20000
	2 x 2 x H	50 X 50 X H	18000
	2 x 2.1/2 x H	50 X 63 X H	18000
	2 x 3 x H	50 X 75 X H	18000
	2 x 4 x H	50 X 100 X H	18000
3 x 3 x H	75 X 75 X H	11800	
3 x 4 x H	75 X 100 X H	11800	
	** Available only with Type 18R		

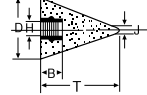
* Please specify arbor hole(H) 3/8"-16, 3/8"-24, 5/8"-11 when order.
Other shapes and sizes are available upon request.

Wheel shapes

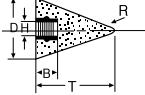
Type 16-cone



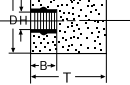
Type 17-cone



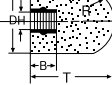
Type 17R



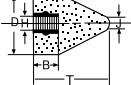
Type 18-cone



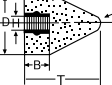
Type 18R



Type 19-cone



Type 19R





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RESIN BONDED MOUNTED POINT WHEELS



Available wheel size

Wheel Type	Size(DXTXd)	MAX.RPM	Wheel Type	Size(DXTXd)	MAX.RPM
CS	13 X 32 X 6	30,370	CK	19 X 38 X 6	45,000
	19 X 38 X 6	24,000		25 X 38 X 6	34,500
	25 X 25 X 6	25,500	CSU	19 X 38 X 6	45,000
	38 X 25 X 6	22,500		25 X 35 X 6	34,500
	45 X 22 X 6	23,520		25 X 50 X 6	34,500
	38 X 13 X 6	25,470	CT	38 X 6 X 6	25,470
50 X 13 X 6	19,100	50 X 6 X 6		19,100	

CS TYPE	CK TYPE	CJ TYPE	CSU TYPE	CT TYPE





HEAVY DUTY SNAGGING WHEELS



PERIPHERAL REVOLUTION SPEED

Reinforced Wheels for high speed at 3800mpm(63m/sec)

Non-reinforced Wheels for low speed at 2880mpm(48m/sec)

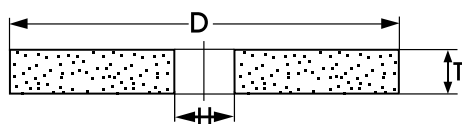
Specification guide.

Material to be ground	PEDESTAL GRINDER	SWING FRAME GRINDER
Mild Steel, Carbon Steel	A162QB, A162RB, A24QB, A24RB	AZ14SB, AZ16QB
Alloyed Steel	A24PB	A16QB
Tool Steel, HS Steel	A24PB,	A300B
Stainless Steel	ST24N, ST36O	AZ16Q, AZ20QB
Chilled Iron,	A16PB, A24OB	AZ16QB, A16PB
Brass, Bronze	C202PB, C302NB	AC16PB

Available wheel size

WHEEL SIZE(DXTXH)	
inch	mm
12 x 1 x H	305 x 25 x H
12 x 1.1/4 x H	305 x 32 x H
12 x 1.1/2 x H	305 x 38 x H
12 x 2 x H	305 x 50 x H
14 x 1 x H	355 x 25 x H
14 x 1.1/4 x H	355 x 32 x H
14 x 1.1/2 x H	355 x 38 x H
14 x 2 x H	355 x 50 x H
14 x 2.1/2 x H	355 x 63 x H
16 x 1.1/2 x H	405 x 38 x H
16 x 2 x H	405 x 50 x H
16 x 2.1/2 x H	405 x 63 x H
16 x 3 x H	405 x 75 x H
18 x 1.1/2 x H	455 x 38 x H
18 x 2 x H	455 x 50 x H
18 x 2.1/2 x H	455 x 63 x H
18 x 3 x H	455 x 75 x H
20 x 2 x H	508 x 50 x H
20 x 2.1/2 x H	508 x 63 x H
20 x 3 x H	508 x 75 x H
24 x 2 x H	610 x 50 x H
24 x 2.1/2 x H	610 x 63 x H
24 x 3 x H	610 x 75 x H
30 x 2 x H	760 x 50 x H
30 x 2.1/2 x H	760 x 64 x H
30 x 3 x H	760 x 75 x H

■ Wheel shape



Type 1 Straight

※ Specify Max. operating speed(r.p.m.)

※ Specify arbor hole size when order



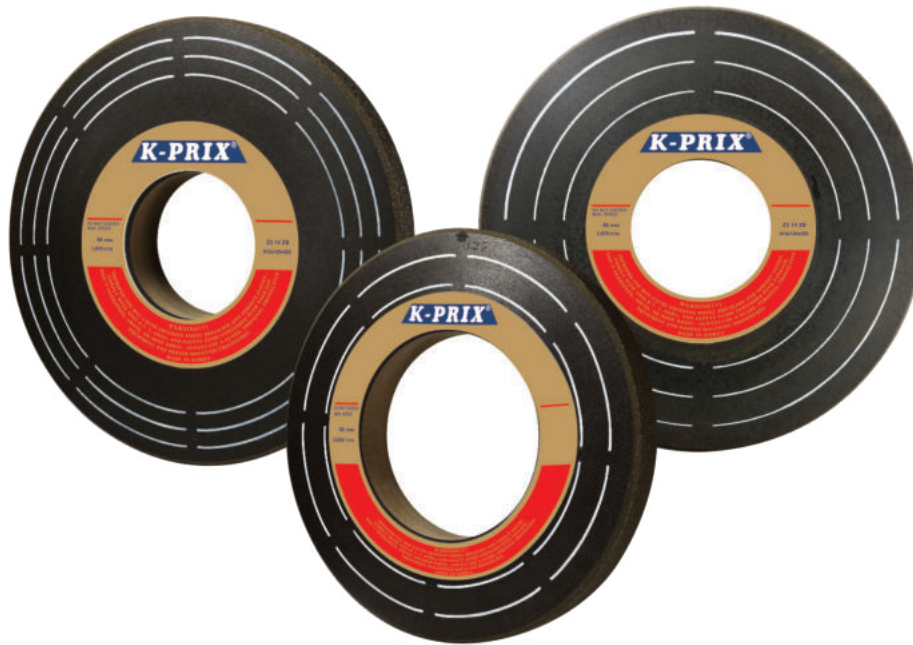


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RESINOID BONDED SLAB - BILLET GRINDING WHEELS

K-PRIX resinoid bonded Slab-Billet grinding wheels is hot pressed ones compacted under elevated temperatures and by high pressure. They are used to remove defects from the surface of slab & billets prior to rolling during the steel production process and they can be used with High-speed, high-powered grinding machines.



Applications

- High-Pressure grinding of Carbon Steel & Stainless Steel Slab & Billets

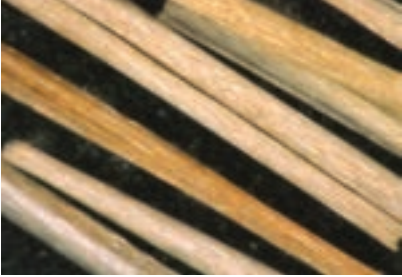
Standard Specification & Sizes

Specification	Sizes (mm)	Type	Max. Speed (M/S)	Application
Z3 20 Z B	760 X 75 X 203.2	1A	80 M/S	Stainless Steel
Z3 20 Z B	915 X 150 X 304.8	1A	80 M/S	Stainless Steel
AZ 10 Z B	610 X 75 X 203.2	1A	80 M/S	Carbon Steel
AZ 10 Z B	610 X 75 X 304.8	1A	80 M/S	Carbon Steel
AZ 10 Z B	915 X 125 X 304.8	1A	80 M/S	Carbon Steel
A 24 YB	406 X 51 X 152.4	1A	80 M/S	Carbon Steel

※ Please specify arbor hole(H) size when order.



Available Raw & Other related materials



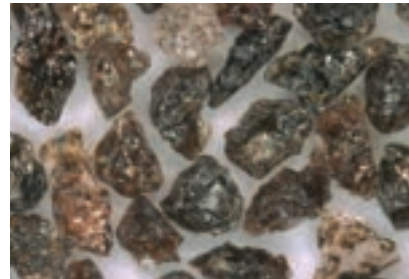
Glass Chop



Alumina Zirconia



Sintered Alumina Oxide

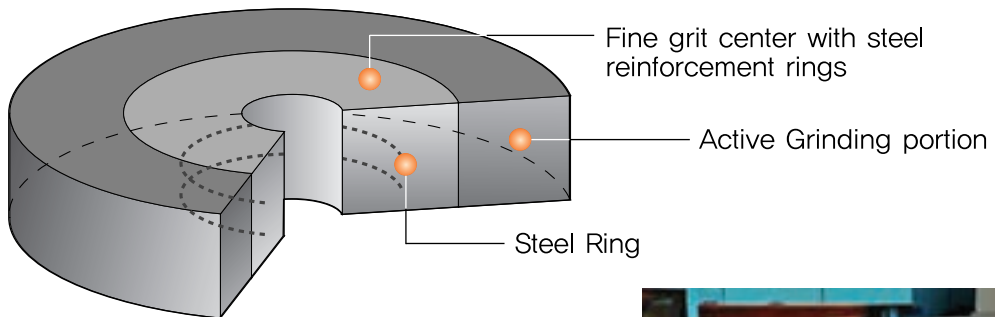


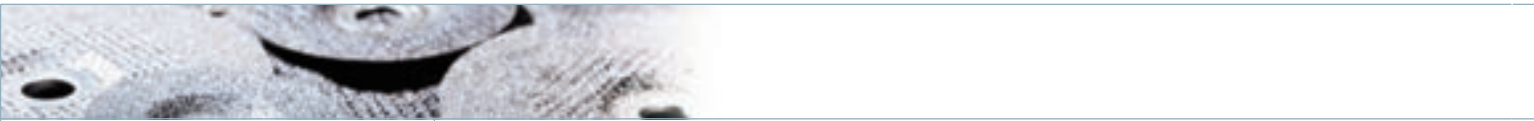
Alumina Oxide

Users Benefits

- Reduce the cost by High Productivity
- Customized Specification Solutions
- High Pressure & High Speed Grinding

Product Cross Section





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ROLL GRINDING WHEELS



Roll Grinding is a specialized form of cylindrical grinding and precision grinding of various kind of rolls. Roll grinding wheels are used in the re-grinding and production grinding of rolls for the Steel, Brass, Copper, Aluminium, Printing paper and textile industries.

Most roll grinding wheels are type 1, 5 or 7 ranging from 14" (355mm) to 42"(1065mm) diameter and 1.1/2(38mm) to 6"(150mm) thickness.

Also, the bonding material is normally Resinoid Bonded but some times Vitrified Bonded wheel is used.

The general hardness is from "F" to "N" and most common grit size is from #24 to #120 but it depends on the grinding conditions.

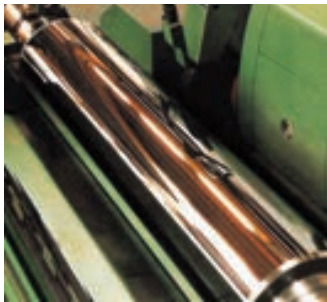
Technical tips

The grade of the wheel depends on the horsepower of the machine and the material being ground.

In general, duel wheel grinders require softer grades than single wheel grinders.

A soft grade wheel requires hard materials than soft materials.

Specification guide



Roll	Raw Material of Roll	Hardness	Usage	Specification
Hot mill work Roll	Chilled Iron Granite Cast Iron(FCD)	Hs 60-80	Rough Grinding Finish Grinding	GC36K7B GC80J7B
	Cast steel Adamite Steel	Hs 35-50	Rough Grinding Finish Grinding	WA30L6B WA60K7B
Hot mill Back-up Roll	Cast Steel	Hs 40-50	Rough Grinding Finish Grinding	WA30K7B WA60J7B
Cold mill Work Roll	Hardened steel	Hs 90-100	Rough Grinding Semi-finish grinding Finish Grinding Finish grinding	WA36J7B WA60J7B WA120J7B WA240I7B
Cold mill Back-up Roll	Hardened steel Cast steel	Hs 55-70	Rough Grinding Finish Grinding	WA30J7B WA80J7B
Sendzimir Mill Roll	Alloy Tool Steel	HRc 60-64	Rough Grinding Finish Grinding Finish Grinding Super-finish grinding	GC46H7B GC120H8B GC220F8B GC600F8B
Aluminum Foil Roll	High hardened steel	Hs. 90-100	Rough Grinding Finish Grinding Super-finish Grinding	WA60J7B WA240I7B GC320G8B
Paper Mill Roll	Chilled Iron`	Hs 60-80	Rough Grinding Finish Grinding	GC36J7B GC60J7B
	Granite, Brass, Rubber		Rough Grinding Finish Grinding	GC36J7B GC30H10B
Stainless Steel Roll	Soft stainless steel	300 series	Rough & Finish Grinding	GC46J8B
	Hard stainless steel	400 series	Rough & Finish Grinding	WA46J7B

Available wheel size

Common Wheel Sizes (DxTxH)	
inch	mm
30 x 2 x H	760 x 50 x H
30 x 3 x H	760 x 76 x H
36 x 4 x H	915 x 100 x H
36 x 5 x H	915 x 125 x H
36 x 6 x H	915 x 150 x H
42 x 4 x H	1065 x 100 x H
42 x 5 x H	1065 x 125 x H

※ Please specify arbor hole(H) size when order.





RESIN BONDED WHEELS / DISCS

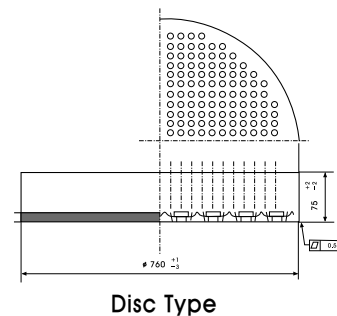
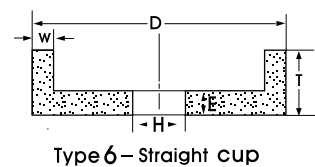
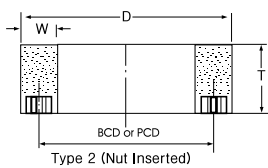
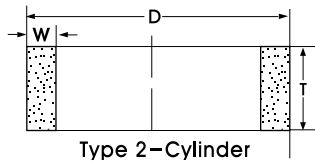
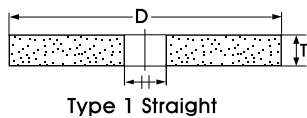
K-PRIX provides Magnesia(MgO) & Epoxy(E) Bonded grinding wheels in various sizes, shapes, and specifications for cool, fast, finish grinding application at the factory for producing hand tools, scissors, knives, springs, automobile parts, and surface finishing of stainless steel.

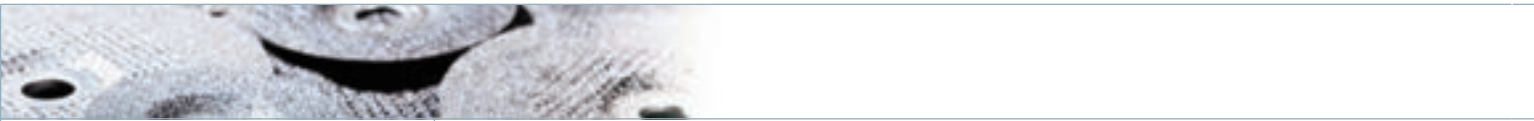


Application

Hand Tools, Scissors, Knives,
Springs, Stainless steel finishing.
Stones

Wheel shape



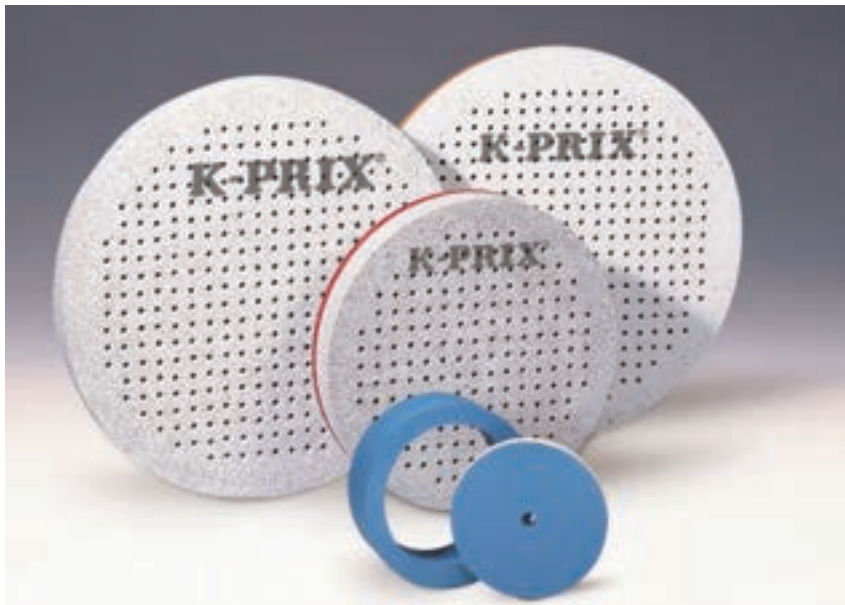


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MGO WHEELS / DISCS

MgO grinding wheels are produced using magnesia as binder. As having specific character of low heat generation and superior efficiency of heat dispersion, they are not only widely used at grinding cutlery, knives, scissors, shanks under wet condition but also various kind of industrial springs under dry condition.



Available specification & wheel size

	Material to be ground	shape	wheel selection	
			specification	size(DxTxH)
WET	house hold knives, scissors industrial knives, scissors farming knives	Flat	WA150H/J	255X25X25.4 305X25X25.4 355X25~40X25.4
		Cylindrical	19A100~320H/M	255X120X155 255X120X185 255X128X197 255X127X215 355X125X276 355X125X290
	steel shanks	Flat	WA150H	610X130X150.2
DRY	heat teated springs automobile spring vessel spring sheet spring electronic spring toy & bed spring	Nut inserted Disc	WA90H	1065X132X552
			19A46N	330X60X0
			19A46N	355X60X0
			WA46M	455X70X0
			WA24N~P	610X75X0
			19A30/36M	660X75X0
			19A24M	660X75X280
			19A30/36M	760X80X0
19A20/24M	915X80X0			

* Please provide us a detailed drawings when inquire nut inserted Discs.





EPOXY DISCS

Epoxy discs are newly developed grinding discs made with epoxy resin as binder. This is widely used at the manufacturing plants where requires mass production and productivity because of its possibility of reducing heat generation.



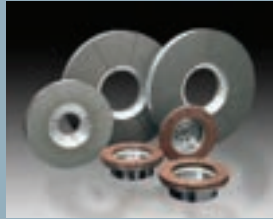
Application

Machine parts, Scissors, Knives, Springs, Stainless steel finishing.

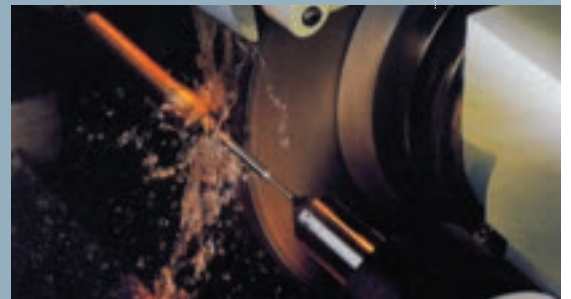
Specification Guide

MATERIAL	ROUGHNESS	CHARACTER	SPECIFICATION	WHEEL DIA.
con-rod	rough grinding	cast iron	88A46JE	Φ760
	finishing		88A120JE	Φ760
bearing housing	rough grinding	melliable steel cast iron	WA46ME	Φ585
				Φ760
valve plate	rough grinding	cold rolled iron plate hot rolled iron plate	19A46KE	Φ585
				Φ760
	finishing	cold rolled iron plate hot rolled iron plate	19A120KE	Φ585
				Φ760
piston ring	rough grinding		WA60ME	Φ585
	finishing		WA100ME	Φ585





Diamond & CBN Grinding Wheels





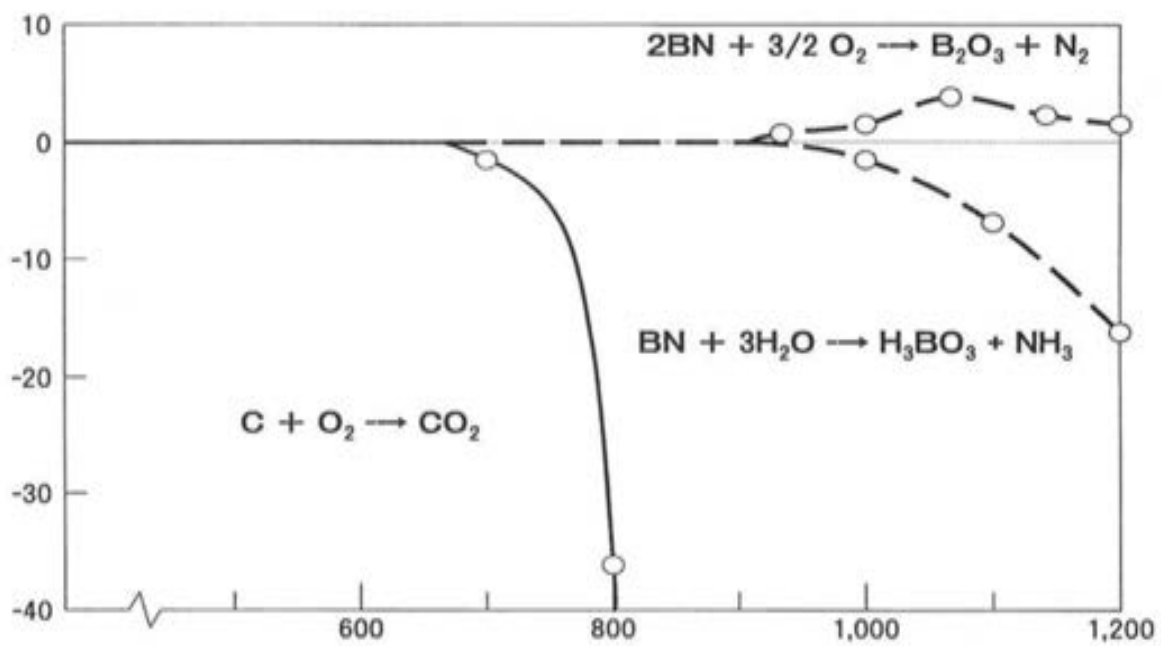
CBN & Diamond : Characteristics

Chemical and Physical Properties

Classification	Density g/cm ³	Hardness Knoop	Compression Strength(Gpa)	Thermal Expansion Coefficient mm/mm/x10 ⁻⁶
Diamond	3.52	7,000	10	4.8
CBN	3.48	4,500	7	5.6
SiC	3.22	2,700	4.6	3.1
Al ₂ O ₃	3.96	2,100	3	4.5

Classification	General Properties of CBN & Diamond
Diamond	Carbon cubic crystal, very hard and found in nature
CBN	Cubic crystal of BN Hardness next to diamond

CBN / DIA Temperature Resistance



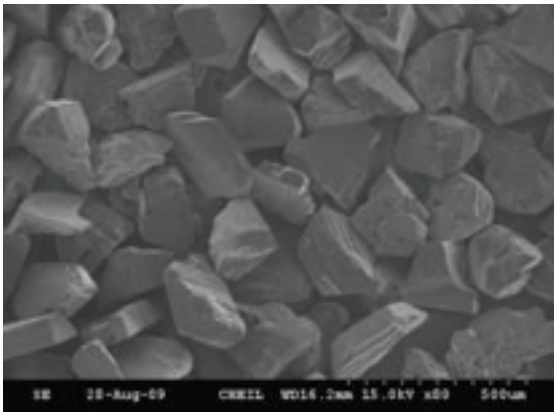


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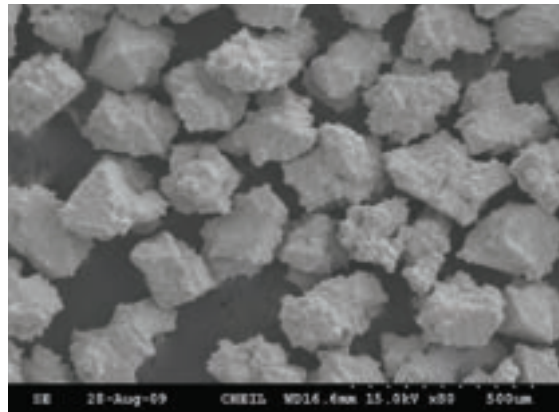
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CBN & Diamond : Cocentration

CBN

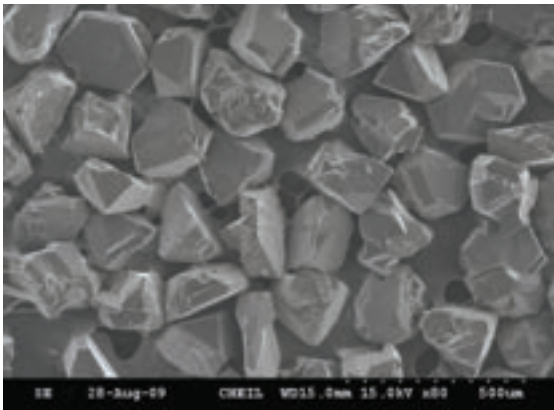


Vitrified Bond

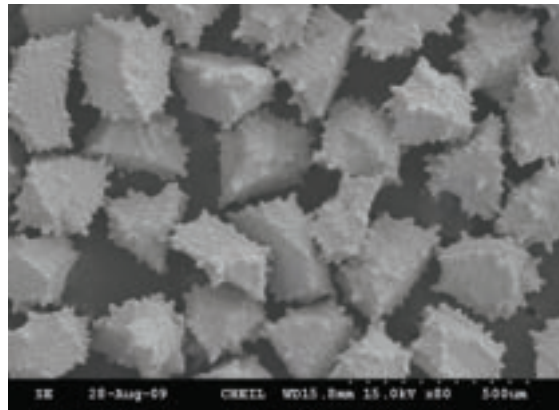


Resin Bond (Metal Coating)

DIAMOND



Vitrified Bond



Resin Bond (Metal Coating)

Concentration

Concentration	Amount of Particles(ct/cm ²)	STRUCTURE
200	8.8	50.00
175	7.7	43.75
150	6.6	37.50
125	5.5	31.75
100	4.4	25.00
75	3.3	18.75
50	2.2	12.50





CBN & Diamond Wheels Specification Method

	SD	200	N	100	B	N	-3.0
Abrasive type	Grit Size	Grade	Concentration	Bond Type	Auxiliary Symbol	Abrasive Depth(mm)	
D : Nature. diamond	16 mesh	H J (Soft) L	25 Low	B : Resin	Bond	1.5mm	
SD : Synth. diamond			50 ↑				
SDC : Metal coated synth. diamond	↓	N (Middle)	75	M : Metal	charac teristics or Maker's symbol or number displayed.	2.0mm	
CBN : Cubic BN			100				
CBNC : Metal coated CBN			125 ↓				
	3,000 mesh	P R (Hard) T	150 High	P : Electro Plated		3.0mm	

Characteristics of the CBN/DIA Bond type

Bond Type	Characteristics
Vitrified Bond	Used inorganic bonds. Strong and less grinding resistance. Excellent for grinding and easy dressing are possible to high precision grinding
Resinoid Bond	Used synthetic resin bonds. Elastic and tensile excellence. Smooth surface possible and easy to make G/wheel with a long lifetime





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CBN & Diamond Wheels : Application



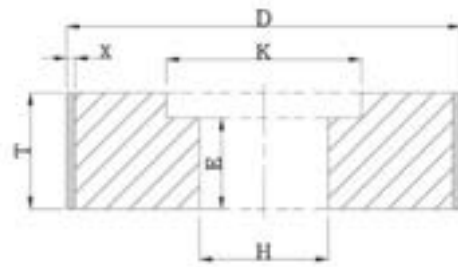
Concentration

Abrasive Type	Applied Materials							
CBN	Alloy Tool	Stainless Steel	Heat resistant Steel	Alloy Tool Steel	Case Hardened Steel	Ainico	Carbon Tool Steel	Inconel
Dia	Carbide and Steel	Crystal, Gem Stone	Ferrite (Magnets)	Embrittlemment	Concrete	Anti-abrasion metal	Plastics	Tiles, Roofing Tile



CBN & Diamond Wheels

CBN Centerless Grinding Wheel



Wheel Size

D	T	X
Ø405		
Ø451	*	3~5
Ø455		

CBN Centerless G/Wheel's Characteristics

- Vitrified body used to achieve high precision grinding
- Reduces the cycle time and stabilize the product quality

CBN & DIA DISC G/Wheel's Specs and Condition for Use

Bond Type	Condition	Hardness	Spec
Compressor Shaft	GCD550	HB170~230	CBN 140 L 200 V
WC drill	Tungsten Carbide	HRc70	SDC 80 L 100 B

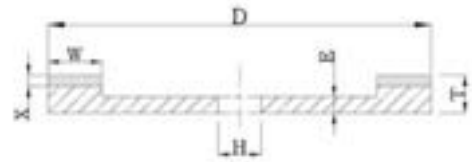
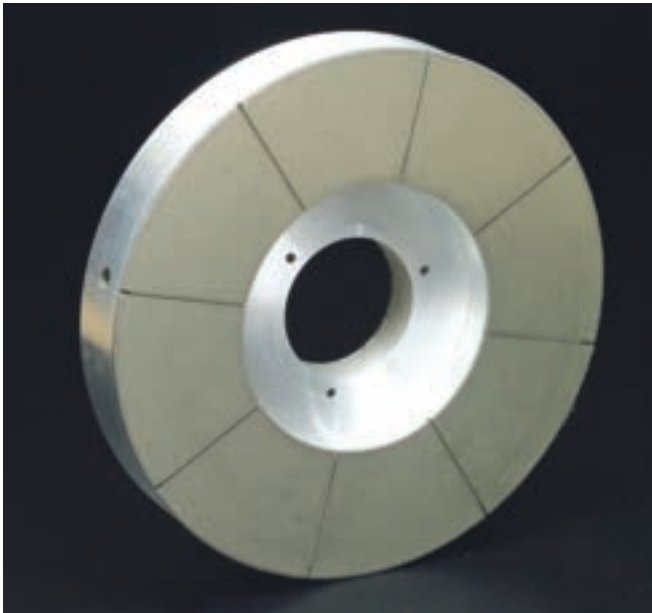


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K-PRIX means the combination of quality, cost and service...

CBN & Diamond Wheels

CBN & DIA DISC grinding wheel



Wheel Size

D	T	X
Ø405	*	3~6
Ø451		
Ø455		
Ø585		

CBN & DIA G/Wheel's Characteristics

- Excellent reliability and result
- Excellent surface condition achieved by using highly sophisticated resinoid bond

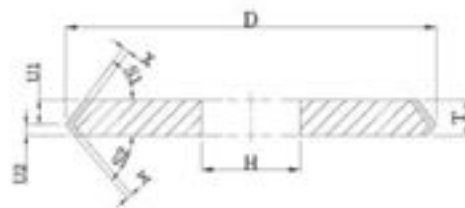
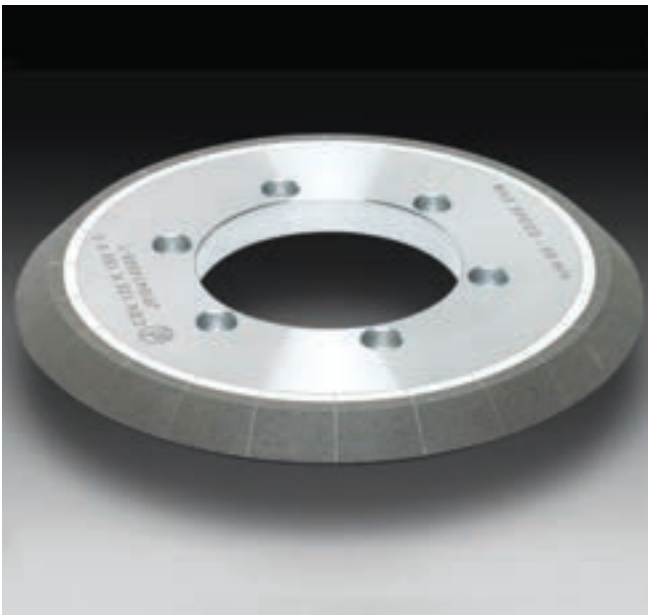
CBN & DIA DISC G/Wheel's Specs and Condition for Use

Work Piece	Condition	Hardness	Spec
Compressor Roller	FC25	HB170~200	CBNC 325 N 75 B
Compressor Cylinder	FC20		CBNC 140 N 75 B
Gear Oil Pump	SCM415	HRc60	CBNC 325 V 75 B
Inner Bearing Wheel	SUJ2	HRc60~61	CBNC 140 N 75 B
Race Starter	Cast alloy	HRc60~65	
Snap Ring	SK5	HRc60	



CBN & Diamond Wheels

CBN Angular Grinding wheel



Wheel Size

D	T	X
Ø300	*	3~5
Ø360		
Ø450		
Ø550		

CBN & DIA G/Wheel's Characteristics

- Experienced with various shape of angular G/wheel makes to achieve high quality and stability
- Long lifetime and high precision grinding

CBN & DIA DISC G/Wheel's Specs and Condition for Use

Work Piece	Condition	Hardness	Spec
Crankshaft journal	SCM440H	HRC52~58	CBN 120 M 200 V
		HB285~341	CBN 100 M 180 V
S40MS1V	CBN 100 M 150 V		
	Crankshaft Front		
Speed Gear	SCM318H1	HRC60	CBN 170 K 175 V

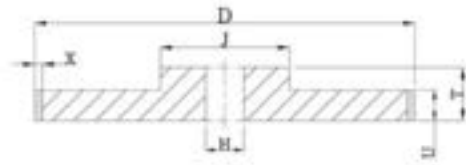


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CBN & Diamond Wheels

CBN Crank Shaft Grinding wheel



Wheel Size

D	T	X
Ø550	*	3~5
Ø560		
Ø650		
Ø652		
Ø750		

CBN Crank Shaft G/Wheel's Characteristics

- High precision and excellent grinding
- Competitive G/Wheel with stable quality and low prices

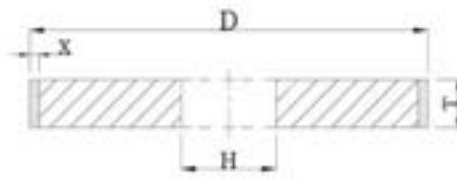
CBN Crank Shaft G/Wheel's Specs and Conditions Use

Work Piece	Condition	Hardness	Spec
Crankshaft Journal	FCD70C	Hv269~328	CBN 140 M 180 V
	SCM440H		CBN 140 M 180 V
			CBN 120 M 200 V
			CBN 120 M 180 V
	FCD70C		CBN 100 M 180 V
Crankshaft Pin	FCD70C	Hv229~255	CBN 120 M 180 V
	SCM440H		CBN 120 M 180 V
	FCD70C	Hv269~328	CBN 140 M 180 V



CBN & Diamond Wheels

CBN CAM Shaft Grinding wheel



Wheel Size

D	T	X
Ø254	*	3~5
Ø305		
Ø350		
Ø354		
Ø400		
Ø450		

CBN CAM Shaft G/Wheel's Characteristics

- High precision processing for excellent quality of the G/wheel
 - Available to manufacture high speed G/wheel (160m/sec.)
- High precision and excellent grinding

CBN CAM Shaft G/Wheel's Specs and Condition for Use

Work Piece	Condition	Hardness	Spec
CAM shaft	FC25	HB201~262	CBN 80 M 200 V
	FCD	HRc54~63	
Fuel injection CAM	SCM415	HRc54~63	CBN 100 H 100 V
			CBN 120 I 150 V
MX CAM shaft	FC20	HB350~500	CBN 80 M 200 V
			CBN 80 K 175 V



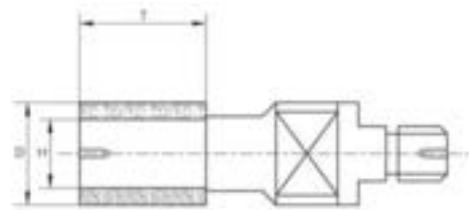


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CBN & Diamond Wheels

CBN & DIA : Internal Grinding Wheel and other products



Wheel Size

D	T	X
Ø60 or less	*	*

Internal G/Wheel's Characteristics

- High precision and excellent grinding

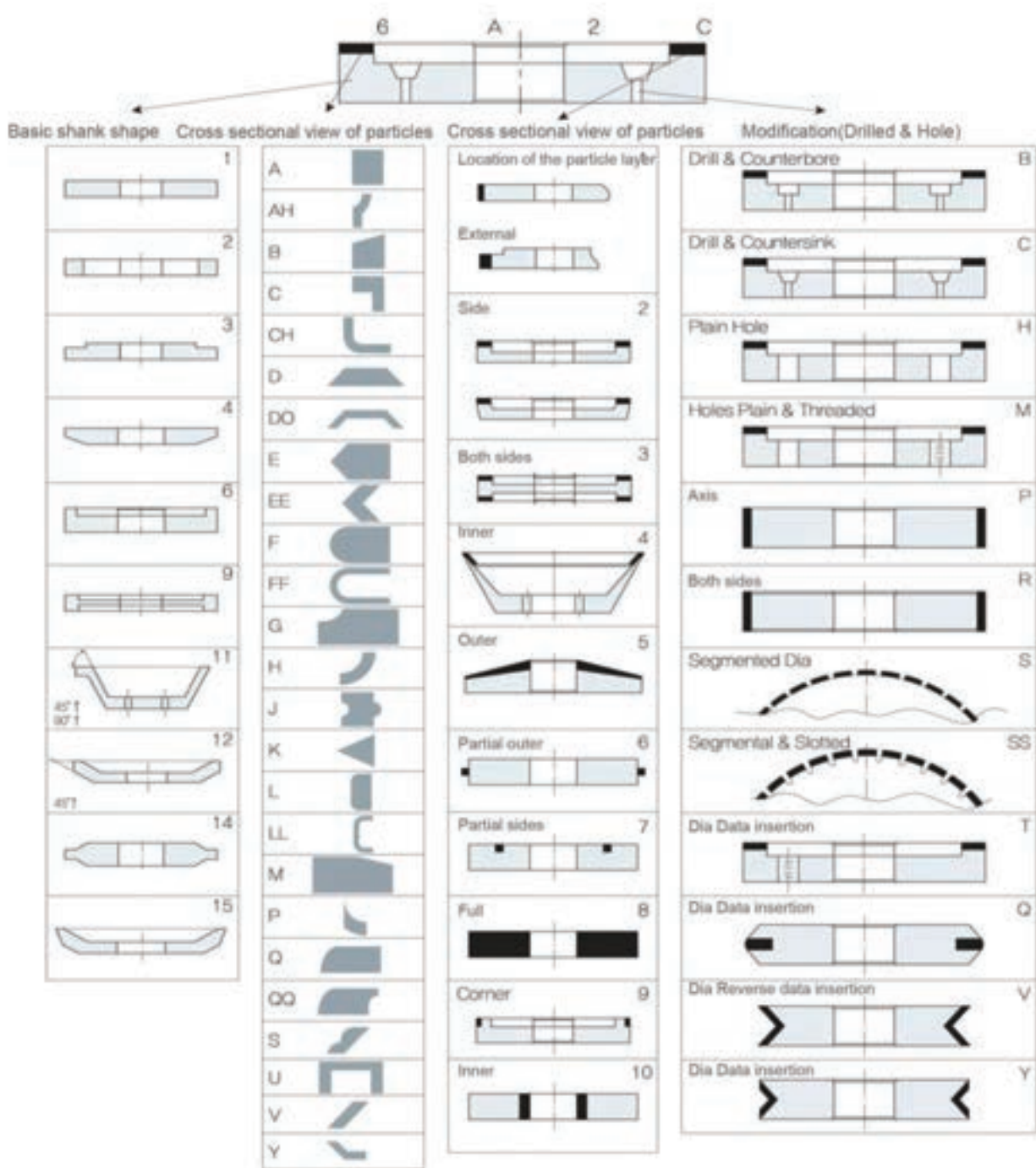
Internal G/Wheel's Specs and Conditions for Use

Work Piece	Condition	Hardness	Spec
Compressor Cylinder	FC20	HB170~200	CBN 230 P 150 V
	GC250	HRB65~85	CBN 200 N 200 V
Compressor Flange	GC250	HRB65~85	CBN 230 P 150 V
Annulus Gear	SCr420L1H1	HRC 59	CBN 120 F 150 V
Inner bearing wheel	SUJ2 (Carburizing thermal processing)	HRC 60~62	CBN 230 R 200 V





CBN & Diamond Wheels Shape Specification Methods





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Selection of Coolants

Grinding wheel	Coolants	Remarks
Diamond Grinding wheel	Water soluble coolant(chemical solution type KS3) Faucet water can available	In case of rapping and difficult to coolant injection are not applied
CBN grinding wheel	Non water soluble liquid	Optimal for the CBN grinding wheel Especially good for fine particle grinding wheel
	For heavy grinding coolant soluble liquid (Emulsion type KS 1)	Please use it to get a better result than water soluble liquid
	Water soluble coolant (soluble type KS W2)	Generally used Dilution level of 20 to 50 which is less than the general grinding wheel to extend the lifetime of it

Truing / Dressing Tools

Classification		Tool name	Grinding wheel	Spec
Vitrified bond grinding wheel	Truing and dressing	Single dresser (point dresser)	CBN	Used for a small amount of inner area grinding Can perform truing on the grinding stone with concentration of less than 75. Feed: 0.005mm or less Conveyance: 0.1mm/rev
		Multi dresser	CBN	Concentration: 75 or less Feed: 0.003 to 0.005mm Conveyance: 0.3 to 0.6mm/rev
		Rotary dresser	CBN(Dia)	Used for a large G/wheel with high precision Concentration: more than 100 Select #80 to #140 according to the particle size Feed: 0.003 to 0.005mm Conveyance: 0.1mm/rev
		Block dresser	CBN	Select #80 to #140 according to the particle size Feed: 0.005 to 0.01mm Conveyance: 70 to 300mm/rev
		Control(driving) truing device	CBN(Dia)	Truing with the general magnets GC60HV and GC80HV (must be a wet type)
Resinoid bond grinding wheel	Truing	Bond dresser	CBN(Dia)	Truing with the general magnets GC60HV and GC80HV (must be a wet type) Select #60 to #140 according to the particle size Feed: 0.01 or less Conveyance: 100 to 200mm/rev
		Rotary dresser Block dresser	CBN(Dia) CBN(Dia)	Same as the vitrified bond grinding wheel
		Control(driving) truing device	CBN(Dia)	Truing with the general magnets GC60HV and GC80HV (must be a wet type) Better truing effects can be obtained maximize the cutting depth while considering the shapes. Post dressing is required
	Dressing	GC stick WA stick	CBN(Dia) CBN	Select two level lower than the grinding stone. Combination : F to H
		Soft steel material	CBN(Dia)	S45C and SS41 material used Can obtain a larger chip pocket than a stick. But it takes too much time. Truing and dressing at the same time
		Glass particle	CBN(Dia)	Mostly for a cup type grinding stone Select two or three levels lower than the grinding stone





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