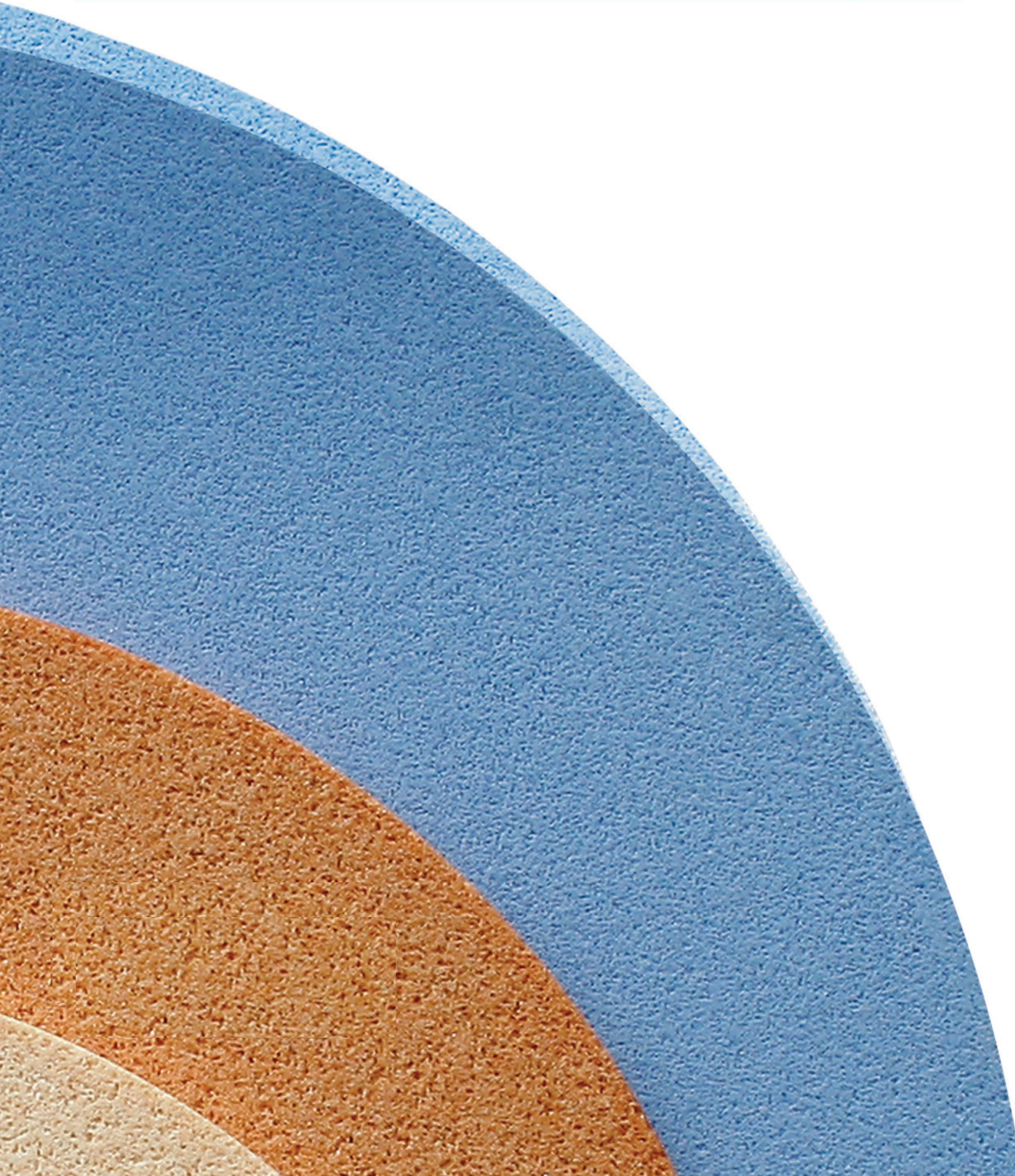


ABRASIVE TOOLS

HANS SUPERHARD MATERIALS CO.,LTD



High-grade Ceramic and Resin Abrasive Tools

© Abrasive Grains Code, Character and the Application

Type	Code	Color	Application
Brown Aluminium Oxide	A	brown	It is use for ordinary grinding ,cutting and freedom grinding of carbon steel, alloy steel, malleable cast iron, hard bronze.
White Aluminium Oxide	WA	white	It is used for the grinding of high hardness and strength workpieces such as chilled steel, high carbon steel, ordinary high speed steel ,alloy steel, and so on. It is mainly suitable for ordinary grinding, cutter sharpening, ultra precision honing, gear grinding, threads grinding,profiling grinding,etc.
Pink Aluminium Oxide	PA	pink	It is suitable for grinding alloy steel, tool steel, chilled steel, gears, profiling and instrument rack.
Single Crystal Aluminium Oxide	SA	grey	It is suitable for grinding high vanadium high speed steel, Austenitic stainless steel, high speed steel, titanium alloy and high hardness and strength materials.
Microcrystalline Aluminium Oxide	MA	brown	It is suitable for heavy loading grinding, mirror grinding and high-rate grinding of all kinds of quenched hard steel, stainless steel and special ductile iron.
Zirconia Aluminium Oxide	ZA	taupe	It is suitable for grinding stainless steel, titanium alloy, and high-rate griding of rail steel, alloy casting.
Semi-friable Aluminium Oxide	FA	brown	It is suitable for grinding ordinary steel, bearing steel, stainless steel, tools steel, special alloy steel, cast iron, nonferrous metals.
Microcrystalline Ceramic Abrasive Grains	SG	white	It is suitable for the profiling large stock removal grinding of aerospace alloy, high nickel alloy steel, vanadium tool steel, cobalt alloy steel.
Silicon Carbide	C	black	It is suitable for grinding, cutting off and honing cast iron, nonferrous metals, non-metallic metal.
Green Silicon Carbide	GC	green	It is suitable for grinding, cutting and supergrinding hard alloy, glass, gem and stone.

Artificial Diamond	RVD, MBD	kelly	It is suitable for grinding, cutting and electrolysis grinding hard alloy, optical glass, gem, semiconductor material.
Cubic Boron Nitride	CBN	amber or black	It is suitable for grinding heat-resisting alloy, high vanadium, high molybdenum, high cobalt, high speed steel, and titanium alloy.

© Grit

Grit means the geometric dimensions of the abrasive grain size.

The grit directly influences surface roughness and grinding efficiency of the workpieces.

Generally speaking, coarse grits have high grinding efficiency, but surface roughness is bad. Fine grits have good surface roughness, but grinding efficiency is low. In short, under the condition of meeting the surface roughness requirements, coarse grits should be selected first, so that it can insure high grinding efficiency.

Grit	Application
F4 F5 F6 F7 F8 F10 F14 F16 F20 F22 F24 F30	For rough grinding and cutting, etc.
F36 F40 F46 F54	For semi-precision grinding of general requirements.
F60 F70 F80 F90 F100	For precision grinding of general requirements.
F120 F150 F180 F220 F230 F240 F280 F320 F360 F400	For lapping and thread grinding, etc.
F500 F600 F800 F1000 F1200	For mirror grinding , fine polishing.

© Hardness

The hardness of abrasive tools means the difficulty of abrasive grains falling off the surface of the abrasive tools under the effect of outside force.

1. Generally, the grinding wheels with soft hardness are used for grinding harder workpieces, and the grinding wheels with higher hardness are used for grinding softer workpieces.
2. In the process of grinding, when the contact surface between workpiece and grinding wheel is big or feed amount is big, grinding wheels with softer hardness should be selected. For form grinding, in order to ensure the workpiece geometrical shape precision, grinding wheels hardness should be enhanced suitably.
3. When grinding the workpieces with bad heat-conducting property and sharpening cutters, in order to avoid burning and annealing, soft hardness should be selected.
4. When grinding at high speed, soft hardness should be selected. Hardness in dry grinding should be softer than in wet grinding.

Hardness Grade	Extrasoft	Softer	Soft	Medium	Hard	Harder	Extrahard
Code	A B C D	E F G	H J K	L M N	P Q R S	T	Y

◎ STRUCTRE NO.

Structure No. means the volume percentage of abrasive grains in abrasive tools. The greater of abrasive grains proportion is, the more compact the structure is. On the contrary, the structure is porous. The geometrical shape of compact structure abrasive tools can be kept better. The surface roughness and machining accuracy of the workpieces grinded by compact structure grinding wheels are better. The loose structure abrasive tools have the characters of more holes between grains and easy chips removal, good heat dissipation, and not burning workpieces.

Structure No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Percentage of Abrasive Grains	62	60	58	56	54	52	50	48	46	44	42	40	38	36	34

◎ The Max. Operating Speed of Abrasive Tools

The speed marked on abrasive tools is the max. operating linear speed. The unit is m/s. The conversion formulate between linear speed and grinding wheel speed is as follows.

$$V = \frac{\pi \times D \times n}{60 \times 1000} \quad (\text{m/s})$$

V: grinding wheel linear speed
n: grinding wheel speed (r/min)

D: grinding wheel diameter (mm)
 π : 3.1416

30m/s 35m/s 40m/s 45m/s

50m/s 60m/s 80m/s



ordinary grinding wheel



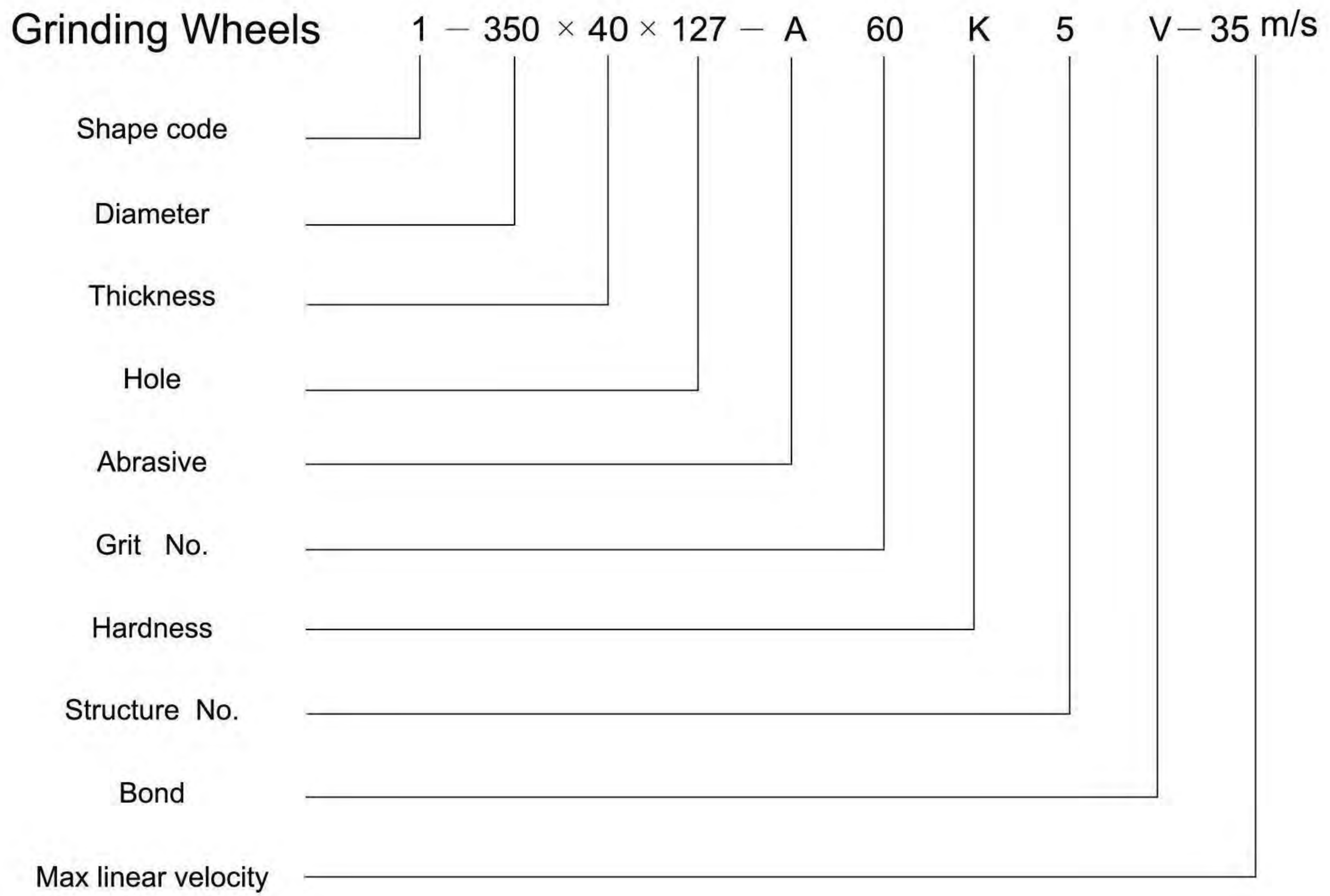
high speed grinding wheel

- ※ The grinding wheel linear speed should be verified before used. Don't use at overspeed.
- ※ The air pressure of the air tool need to keep stable, otherwise it is easy to cause grinding wheels overspeed and broken.
- ※ The speed of adjustable-speed machine tool need to verify before working.

The Sign of Bonded Abrasives Characteristics

The symbols of abrasive tools are arranged in the following sequence: shape,size,abrasives,grit no,hardness,structure no,bond,linear velocity.

For example



Excircle Grinding Wheel, Surface Grinding Wheel and Grinding Segments

Excircle grinding and surface grinding are the most common grinding ways, which are used on excircle and surface grinder. The outer circle surface or the end surfaces of grinding wheels is the working face. Users can select bond, abrasive grains, grit, hardness and structure number of the grinding wheels for their needs according to the property, surface quality and geometric accuracy requirements of the workpieces.

◎ Straight Grinding Wheel (Shape code 1)



Main Size

mm

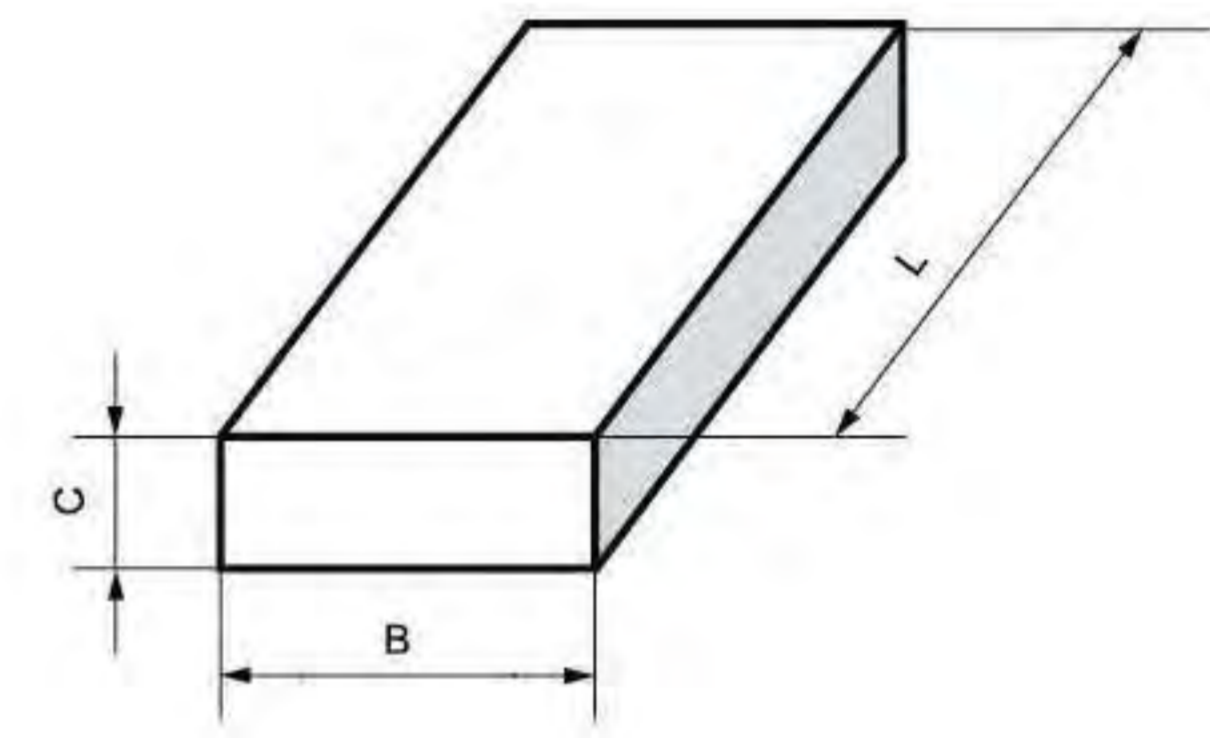
D	T	H
100	20 25 32 40 50 63 75 100	20
125	20 25 32 40 50 63 75 100 120	25 32
150	20 25 32 40 50 63 75 100 120	32
175	25 32 40 50 63 75 100 120 150	32
200	20 25 32 40 50 63 75 100 120 150	32
250	25 32	32
300	25 32 40 50 75	75 127
350	32 40 50 125	75 127 203
400	32 40 50 63 75 150	127 203 160
450	32 40 50 63 75 150 200	
500	32 40 50 63 75 100 150 200	203 254 205
600	32 40 50 63 75 100 125 150 200	
750	32 40 50 63 75 100 125 150 200	305
900	32 40 50 63 75 100 125 150	

◎ Grinding Segments



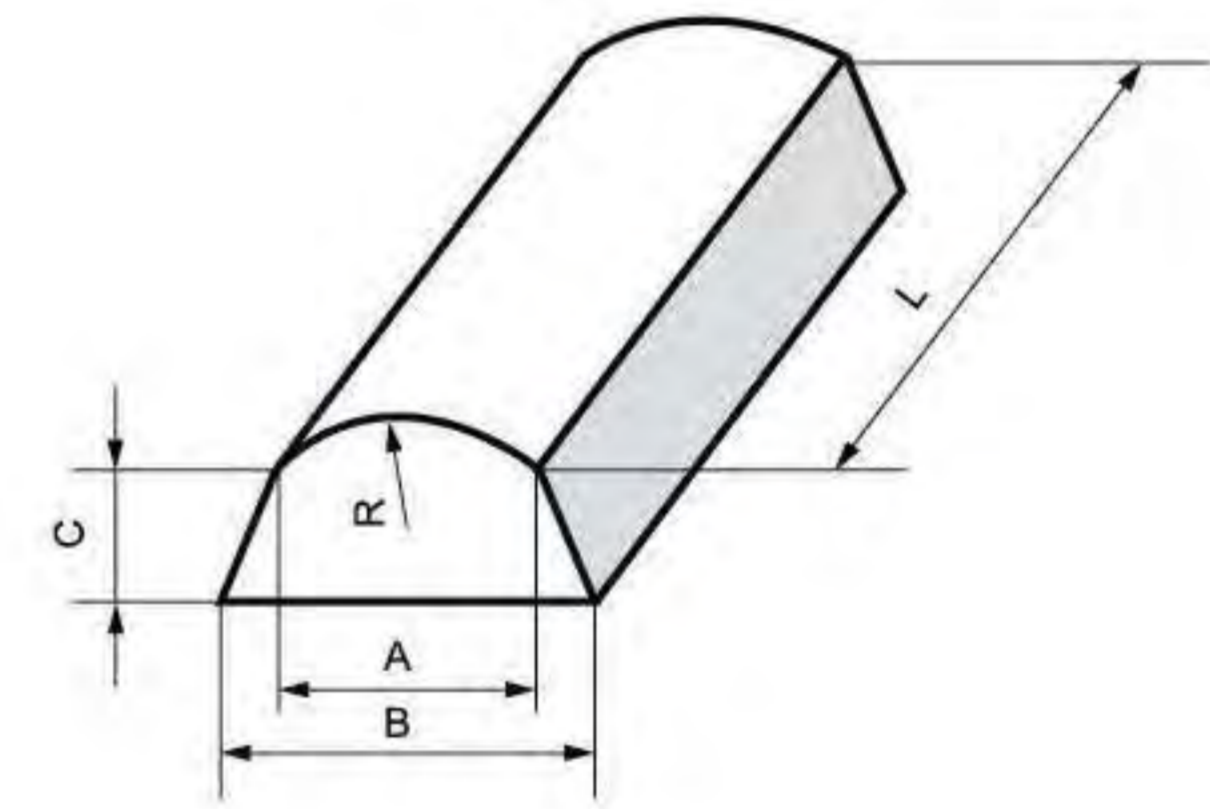
Straight Grinding Segments (Shape Code 3101)

Main Size			mm
B	C	L	
50	25	150	
80	25	150	
90	35	150	
80	50	200	



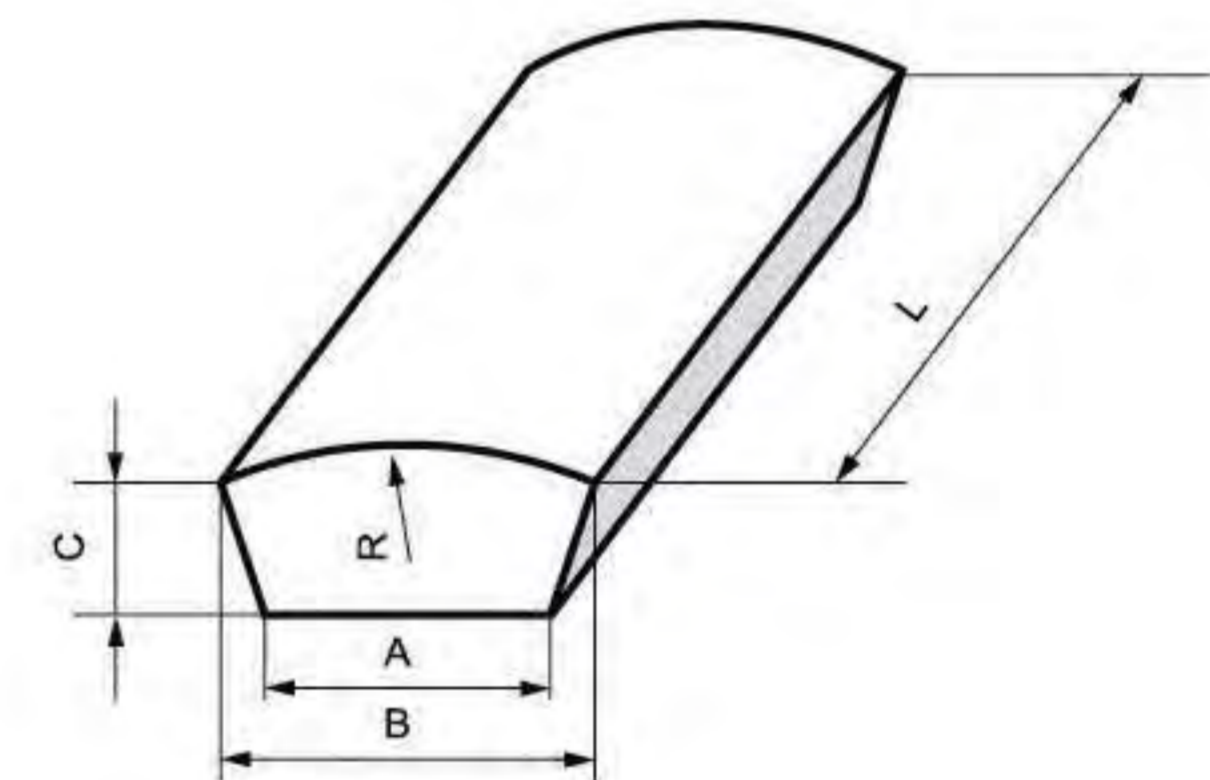
Straight-convex Grinding Segments (Shape Code 3102)

Main Size					mm
B	A	C	R	L	
100	85	38	230	150	



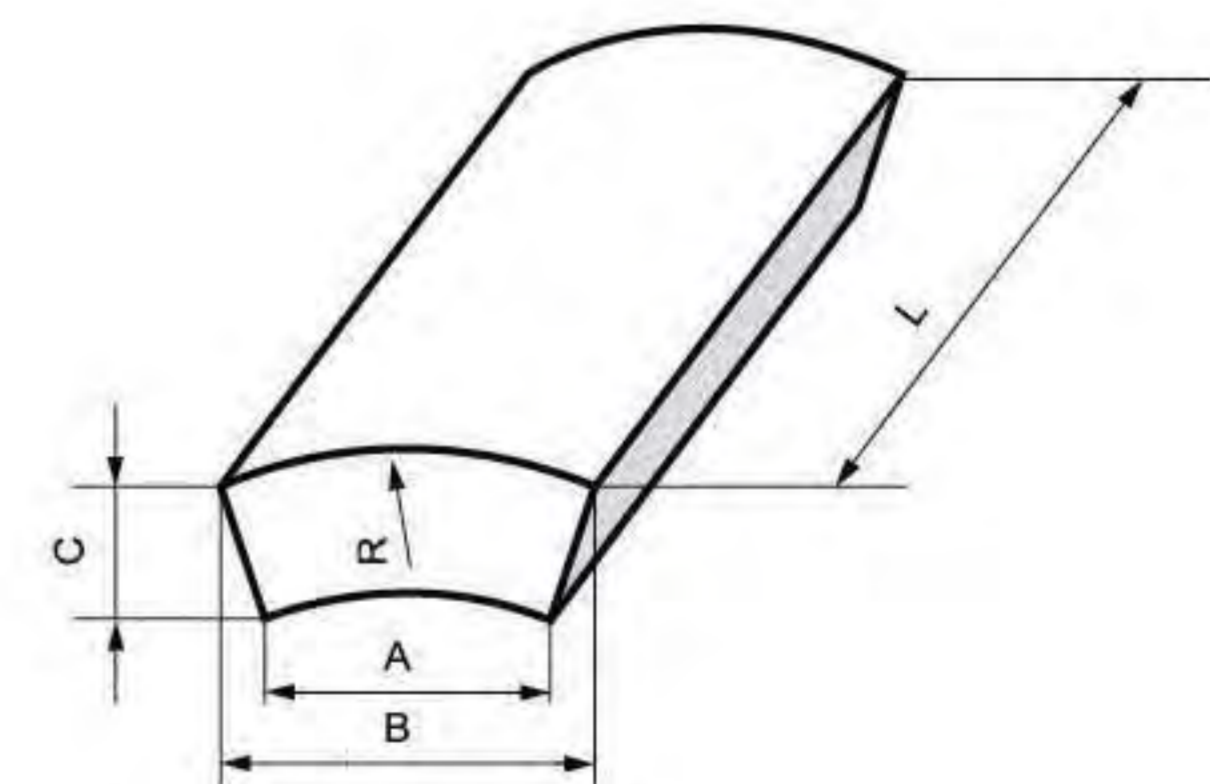
Convex-straight Segments (Shape Code 3103)

Main Size					mm
B	A	C	R	L	
115	80	45	250	150	



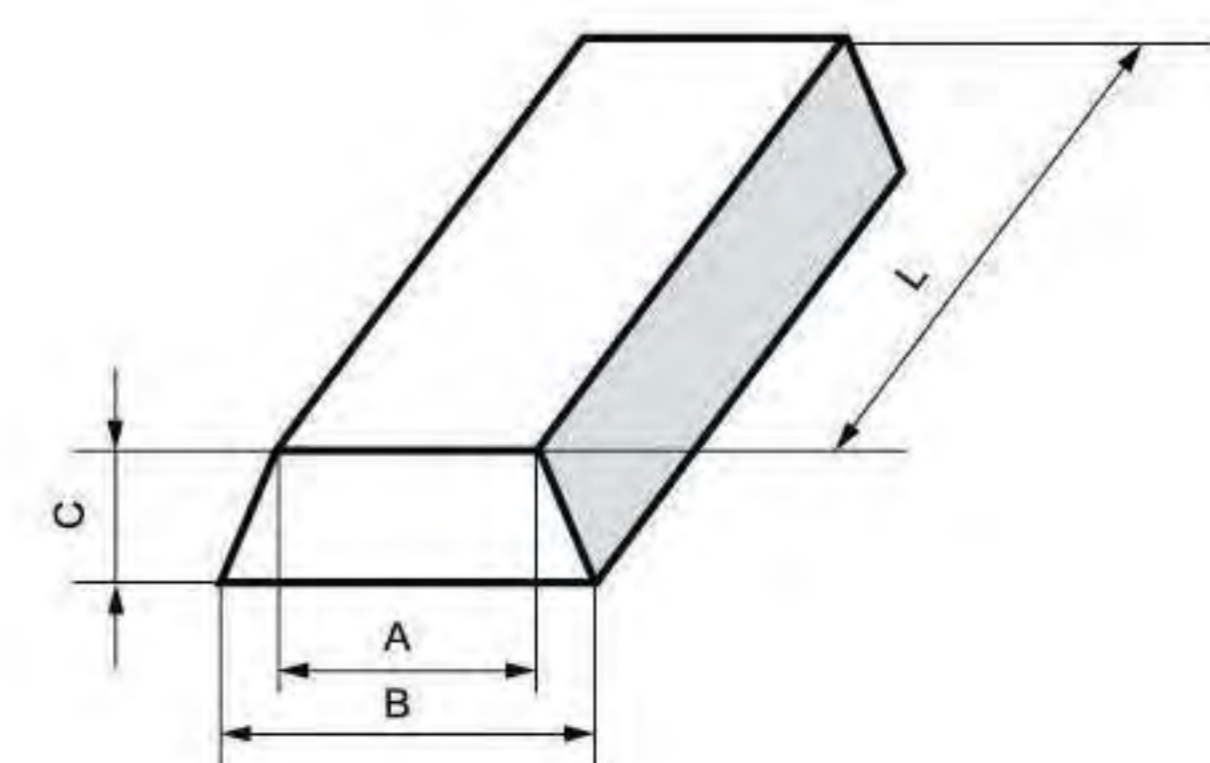
Fan-shaped Grinding Segments (Shape Code 3104)

Main Size					mm
B	A	R	C	L	
60	40	85	25	75	
125	85	225	35	125	



Trapezoid Grinding Segments (Shape Code 3109)

Main Size				mm
B	A	C	L	
60	50	15	125	
100	85	35	150	



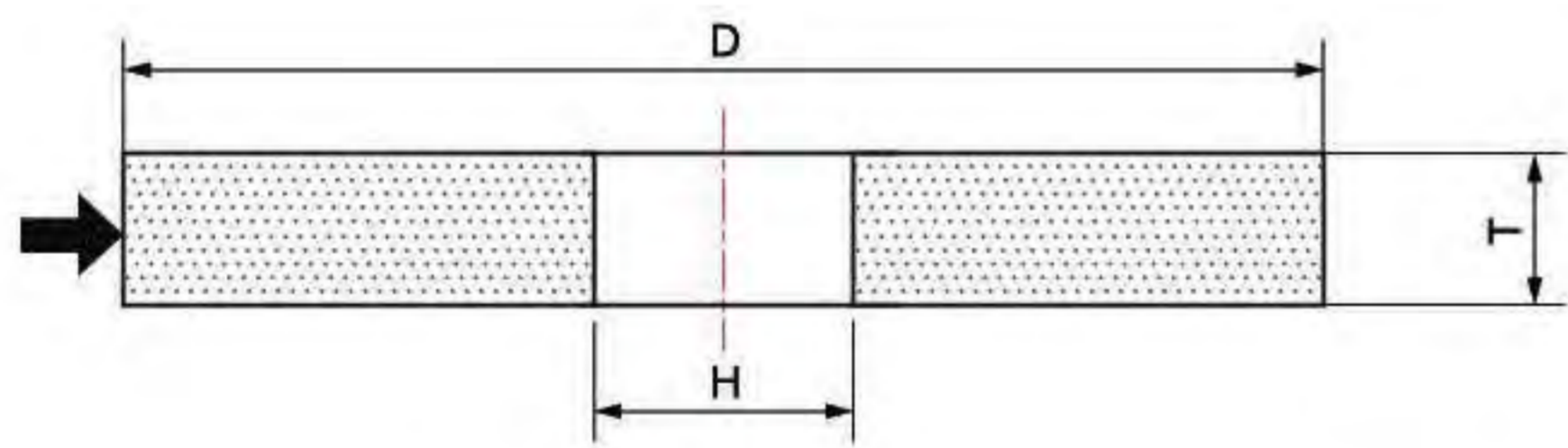
Tool Grinding Wheel

Our Tool Grinding Wheels have the characters of reasonable and homogeneous structure, strong cutting performance, and not burning workpieces. They are mainly used for sharpening milling cutter, reamers, hole dilating drills, broaches, paper cutters, tobacco cutters, dish-shaped lathe tools, slotting cutters, drills, hobbing cutters, sawteeth, etc.



◎ Straight Grinding Wheel (Shape Code 1)

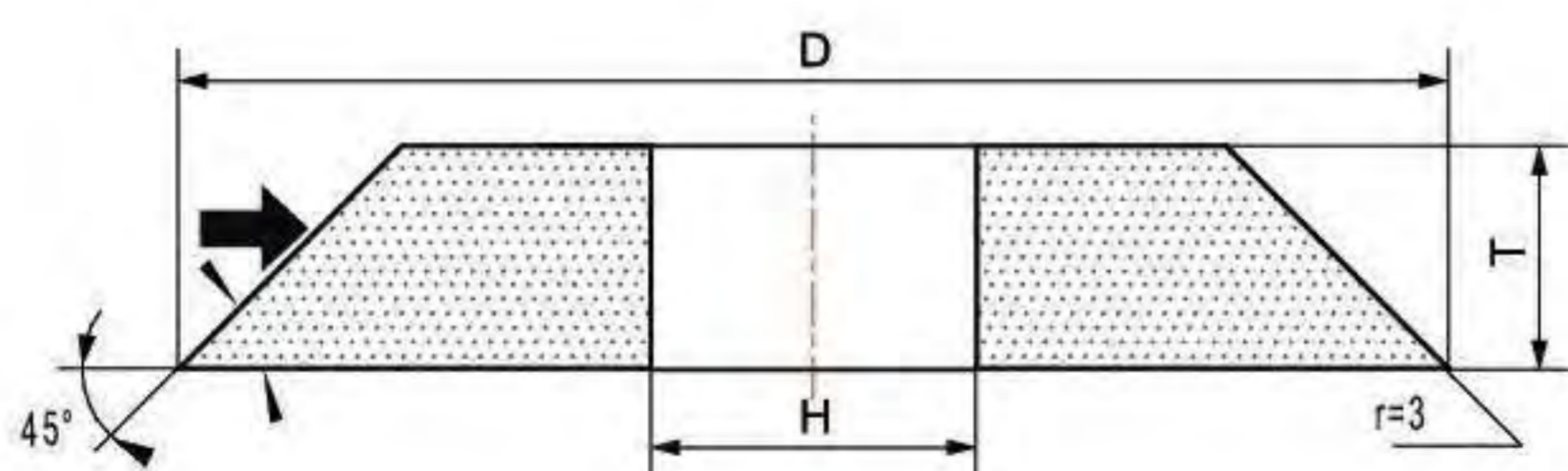
Main Size		mm	
D	T	H	
50	6 10 13	13	
100	10 13 20	16 20	
125	13 16 20 25	20 32	
150	6 10 13 16 20 25	20 25 32	
175	10 13 16 20 25 32	20 32	
200	6 10 13 16 20 25 32	20 25 32 51	
250	13 20 25	32	
300	20 25 32	32 75 127	
350	20 25 32 40 50	32 75 127	



◎ Straight C-type Grinding Wheel (Shape Code 1-C)

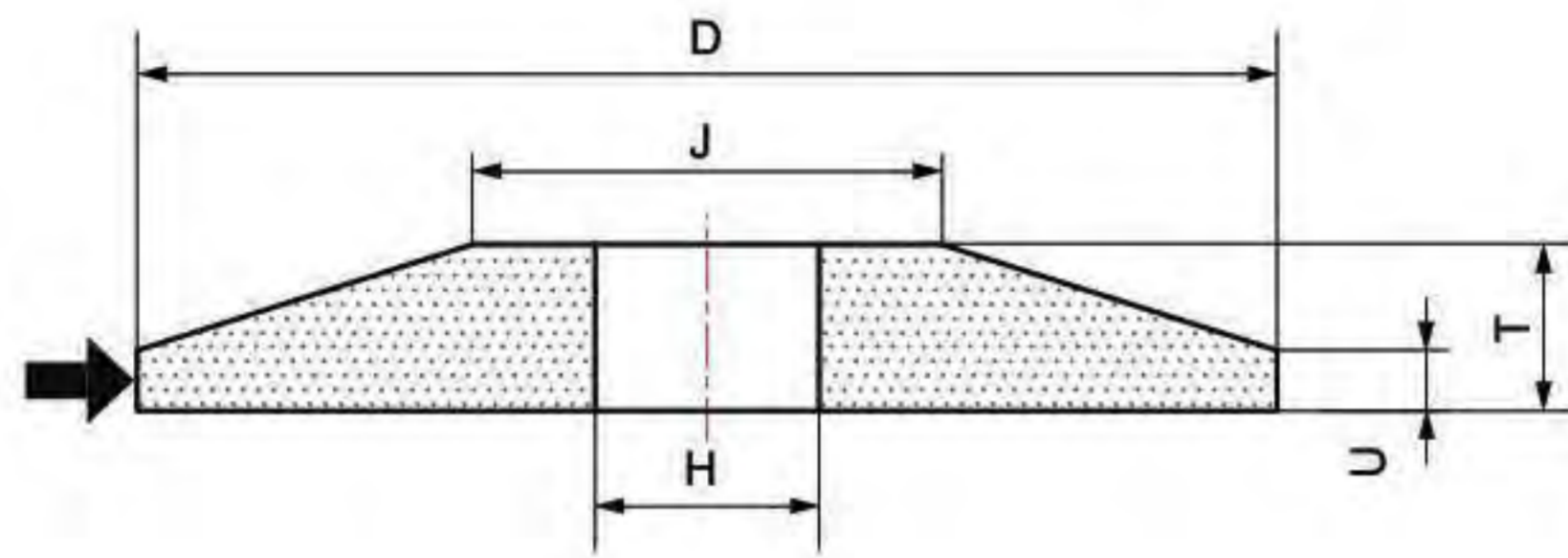
The wheels are mainly used for repairing and grinding gears and sawteeth.

Main Size		mm	
D	T	H	
175	8 10	32	
200	10 13 16		
250	10 13 16		
300	16	32	
350	13	75	
	13 16	127	
	25	127	



◎ Single Bevel Edge Grinding Wheel (Shape Code 3)

The wheels are mainly used for sharpening lathe tools, milling cutters, reamers, drills, broaching tools, hobbing cutters and slotting cutters.



Main Size

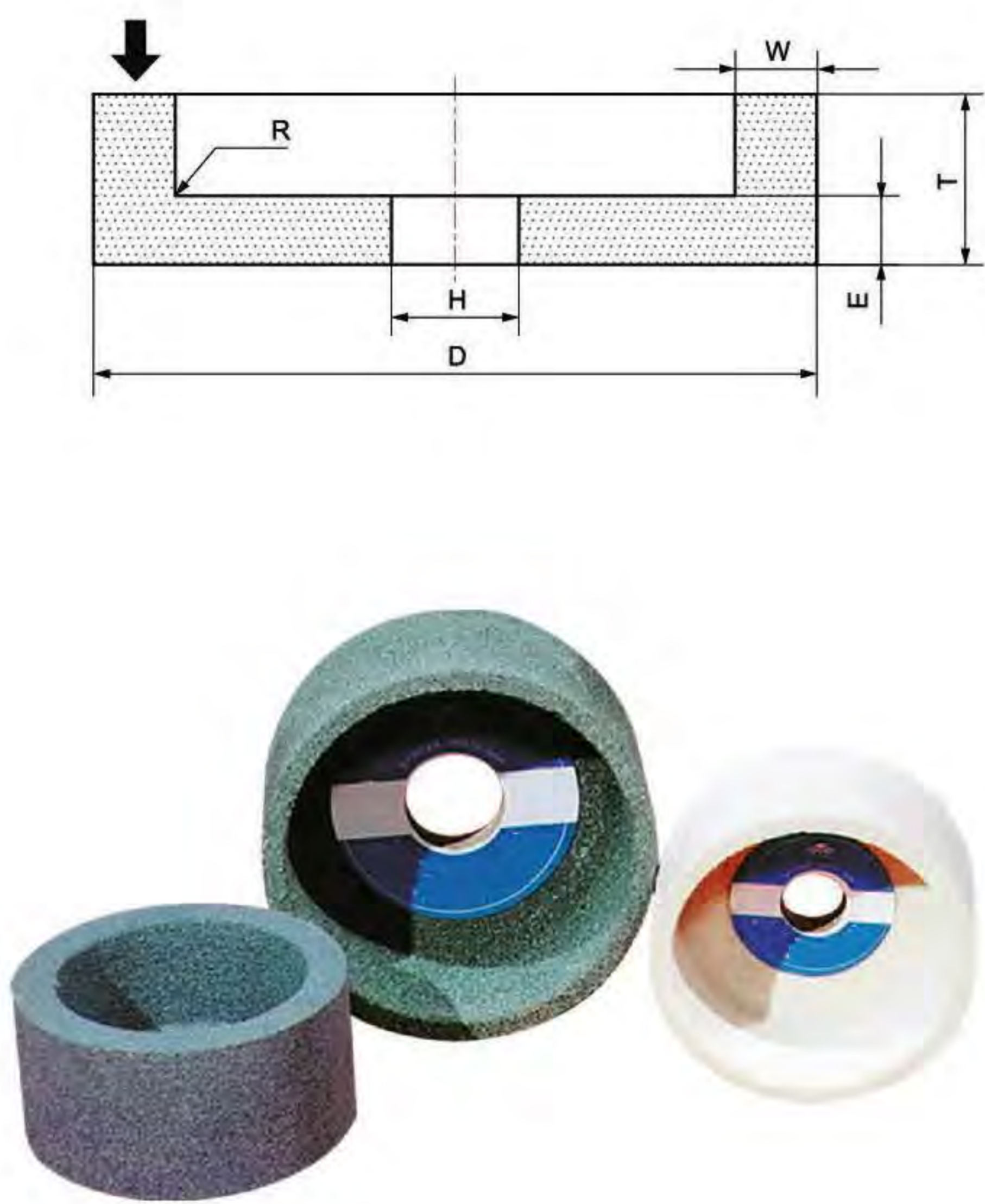
mm

D	T	H	J	U
75	6	13	30	2
80	13	20	45	3
100	6.8	20	55	2
125	8	32	57	2
	10		65	
150	10		59	
	13		68	
175	6		141	
	8		118	
	10		123	
200	10		127	
	13		87	
	16		103	
250	10	170		
	13	136		
	16	102		
300	10	32 127	248	3
	13		225	
	16		203	
600	25	305	552	5
	40		540	15
750	50		704	10

◎ **Cup Grinding Wheel (Shape Code 6)**

The wheels are usually used for sharpening milling cutters, reamers, hole dilating drills, broaching tools, paper cutters, tobacco cutters, etc. The wheels with diameter 200-250mm can be used for grinding lathe tools.

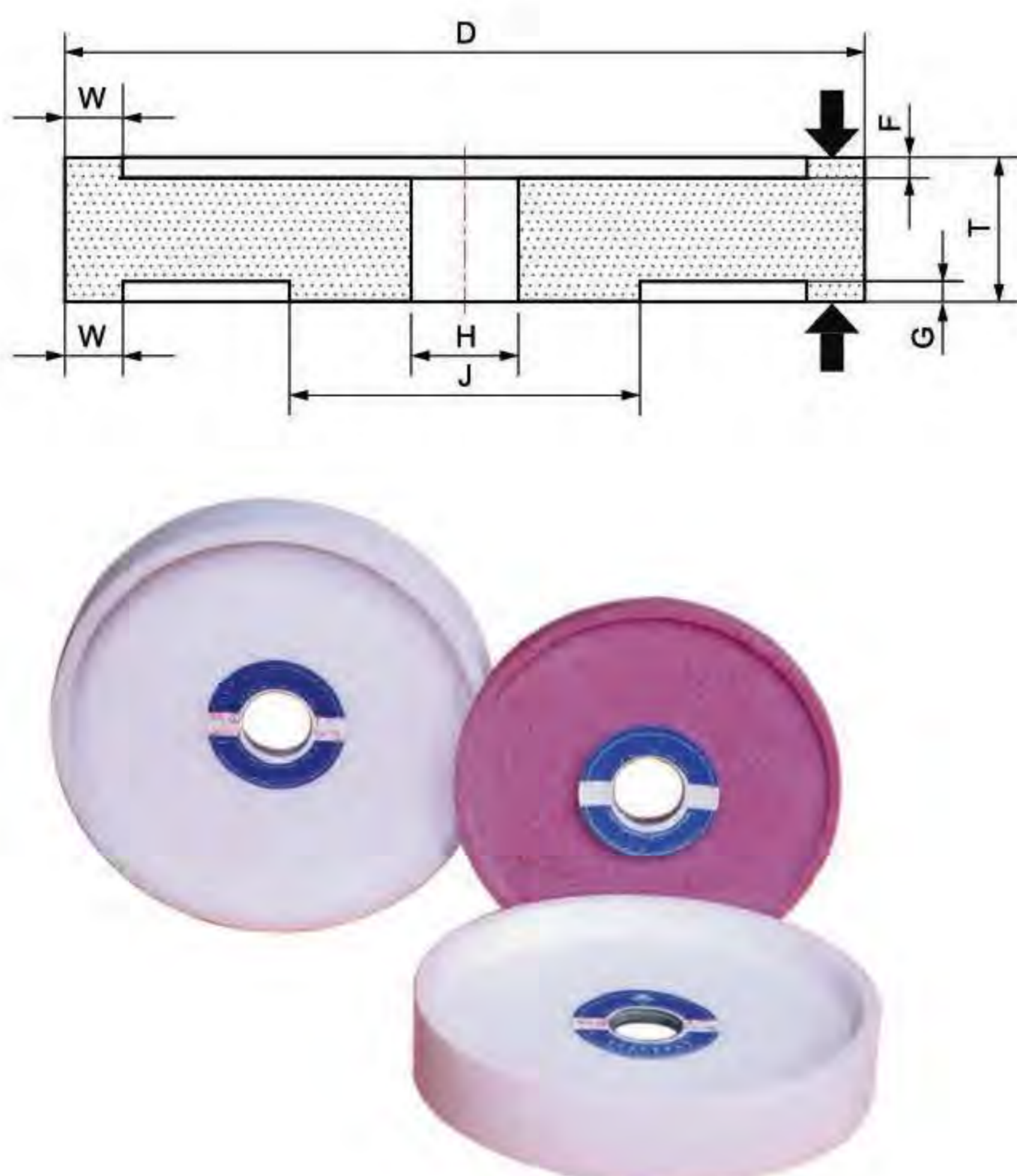
Main Size						mm
D	T	H	W	E	R	
40	25	13	4	5	3	
50	32	13	5	7	3	
60	32	20	5	7	3	
75	40	20	5	8	3	
100	50	20	7.5	10	4	
125	63	32 65	7.5	13	4	
150	63	65	12.5	25	5	
			25	13		
200	63	32 75	12.5	18	5	
			100	100		15
250	100	150	25	25	5	



◎ **Two-side Recessed No.2 Grinding Wheel (Shape Code 8)**

The wheels are mainly used for grinding the two sides measurement end faces of outer diameter gauge and vernier caliper.

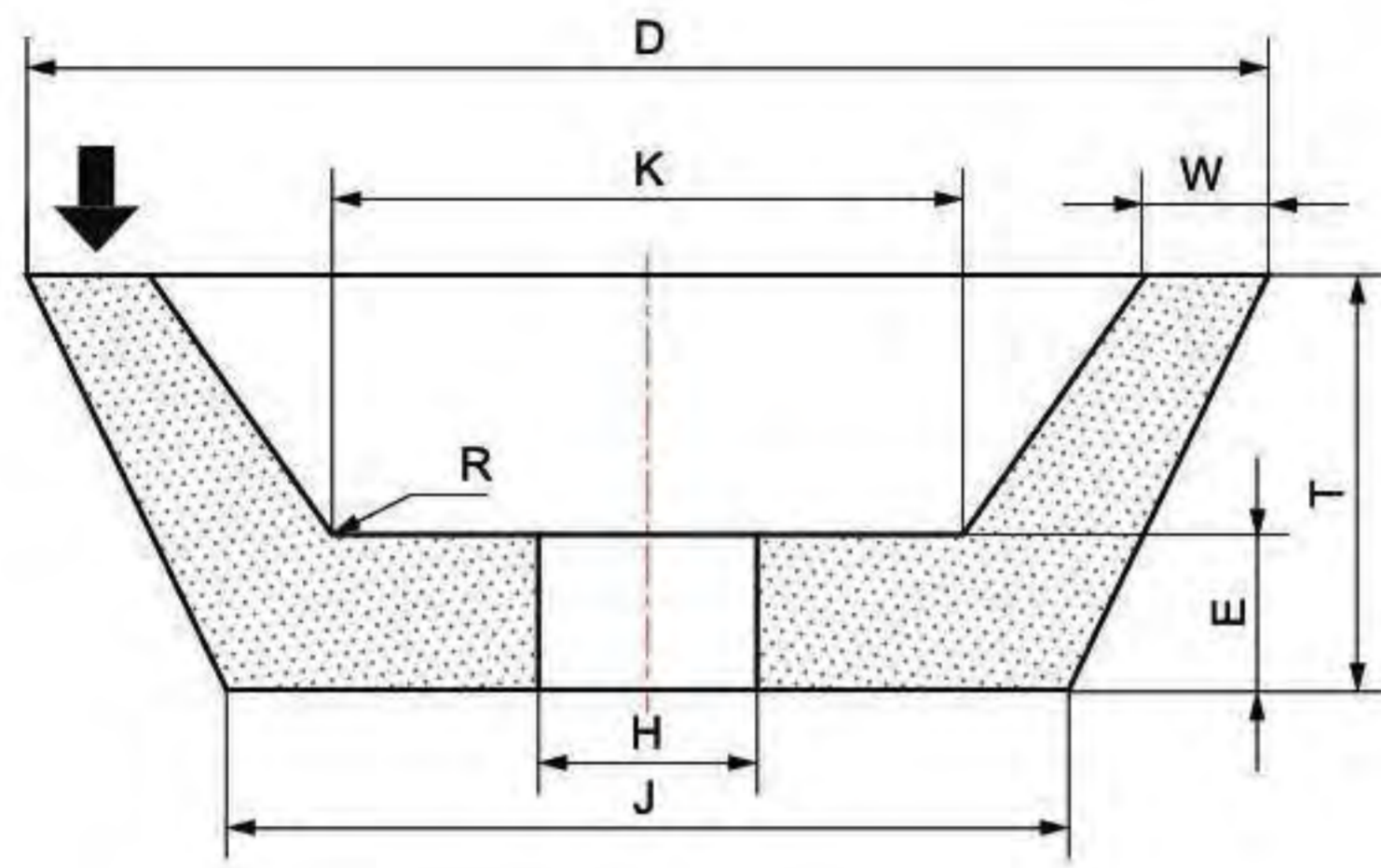
Main Size						mm
D	T	H	W	J	F=G	
150	10	32	6	65	3	
	16	32	6	65	5	
175	16	32	6	65	5	
	25	32	6	—	8	
200	16	32	8	—	5	
	25	32	8	—	8	
	40	32	8	—	16	
250	20	75	8	125	6	
	28	75	12	125	10	



◎ Flaring Cup Grinding Wheel (Shape Code 11)

The wheels are mainly used for sharpening milling cutters, reamers, dish-shaped lathe tools, slotting cutters, hole dilating drills, etc.

Main Size mm

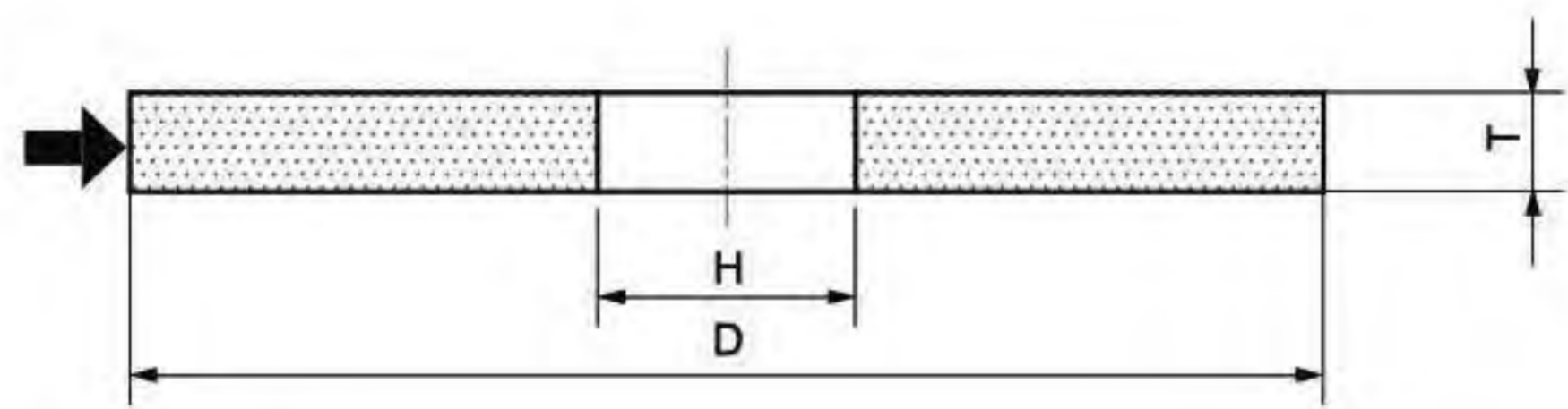


D	T	H	W	E	J	K	R
50	25	13	5	7	32	23	3
75	32	20		10	52	44	
100	30	20	10	10	50	40	4
	35		7.5		75	62	
125	35	32	10	10	66	55	
	45			13	92	75	
150	35	32	12.5	13	91	81	5
	50		10	15	114	97	
175	63	32	22.5	25	102	86	
200	63	32	25	25	127	106	
250	140	100	30	40	201	155	
300	150	140	35	40	247	191	

◎ Thread Grinding Wheel (Shape Code 1 and 4)

The wheels are mainly used for processing high precision and high hardness screw thread surface. The common workpieces are precision lead screw, worm, ball screw, ball nut, all kinds of chasing tool and measuring implement. The wheels have the characters of homogeneous structure, good shape retention, not burning workpieces, high grinding precision , etc.

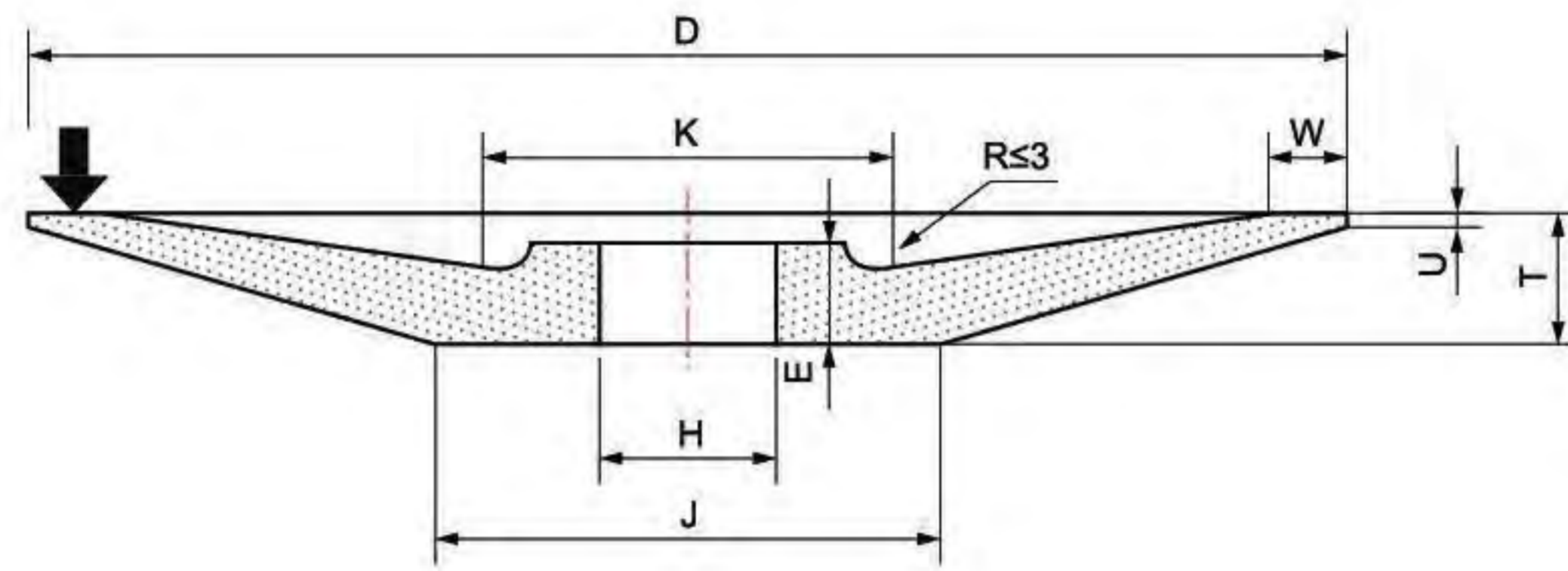
Main Size mm



D	T	H	
350	8	160	Single thread grinding
400	10	203	
500	10 13	305	
400	50	203	Multiple thread grinding

© **Dish No. 1 Grinding Wheel (Shape Code 12a)**

The wheels are mainly used for grinding milling cutters, reamers, slotting cutters, and other cutting tools. The wheels with diameter greater than 200mm are mainly used for grinding slotting cutter.



Main Size

mm

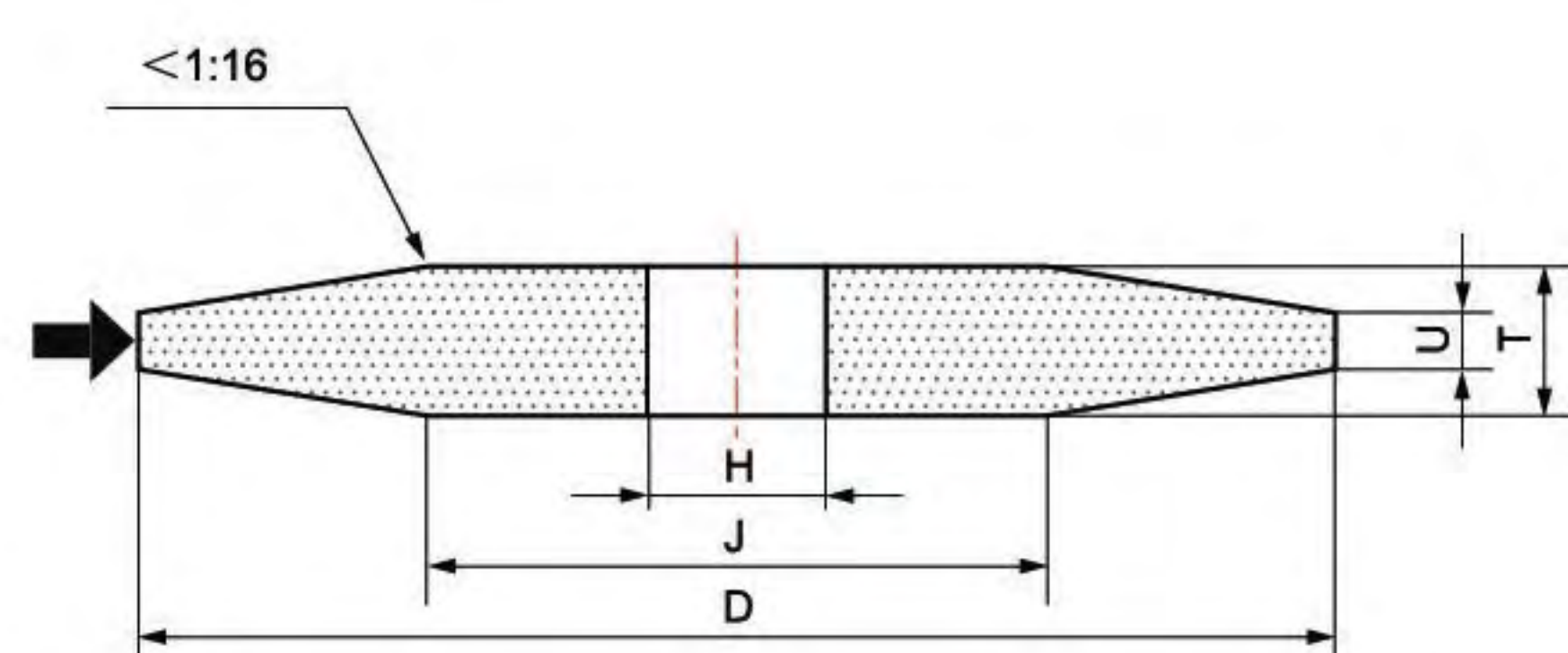
D	T	H	K	J	W	U	E
75	8	13	30	30	4	2	5
100	10	20	40	40	6	2	6
125	13	32	50	50	6	3	8
150	16		60	60	8	4	10
200	20		80	81	10	4	12
250	25		100	103	13	6	15
300	20	127	180	181	15	4	13
350	25	127	180	193	25	4	18
400				243			
500	32	203	255	291	35	4	27
600				406		6	24
762	32	406.4	550	645	17	2	32
800	35	400	500	770	40	3	30

Gear Grinding Wheel

Adopting advanced abrasive tools manufacturing technology, our grinding wheels have the characters of uniform structure, good balance property, good gear tooth shape retention, not burning workpieces, not generating cracks, high grinding efficiency, etc.

◎ Double Bevel Edges Grinding Wheel (Shape Code 4)

The wheels are mainly used for grinding straight teeth of internal gears and external gears. The wheels with diameter 125-300mm are mainly used for grinding sawteeth.



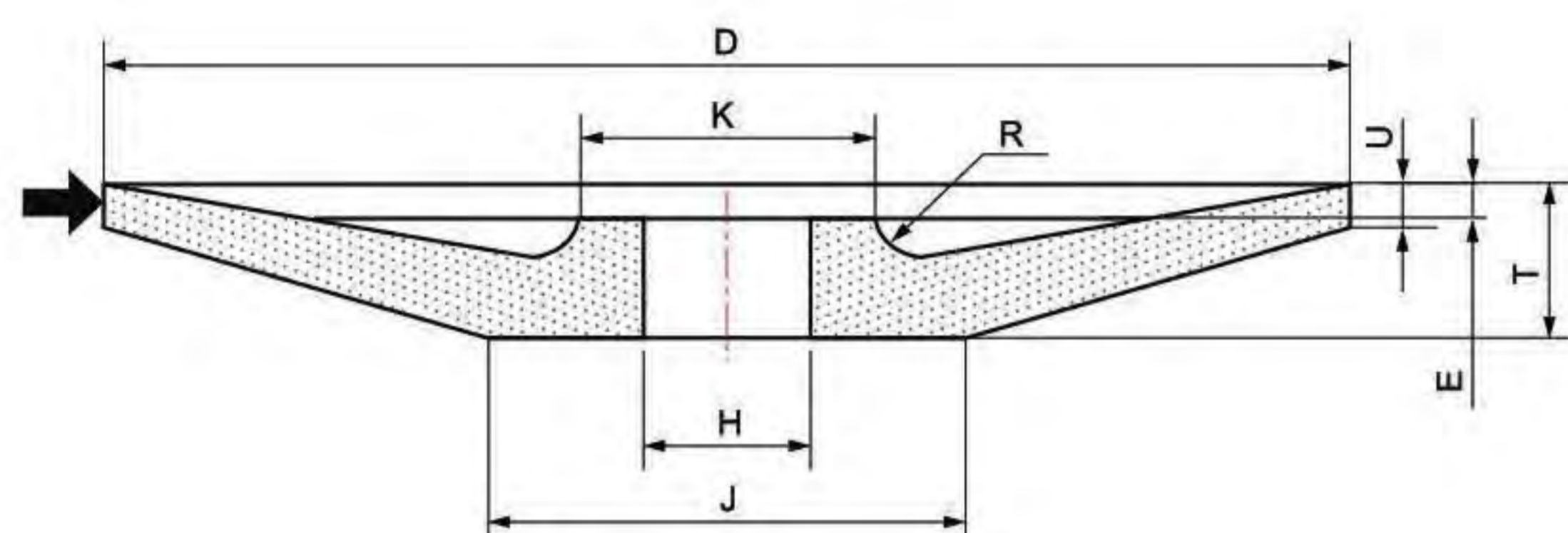
Main Size

mm

D	T	H	U	α
125	13	20	4	40°
	16	20 32		
	20	20	6	
150	16	32	4	
	20		6	
200	13 16	75	4	
250	10 13 16	75	4	
	20 25		6	
300	20 32	75	11	
	25	127	6	
350	25 32	127	3	50°
	33	90	6	40°
400	32 40	127	6	40°
455	32 40 45 63		8 10	40°

◎ Dish No.2 Grinding Wheel (Shape Code 12b)

The wheels have the characters of high processing geometric accuracy, balance performance superior to national standard 30-50%, not burning workpieces when dry grinding, not generating cracks, the processing gears with high precision, etc.



Main Size

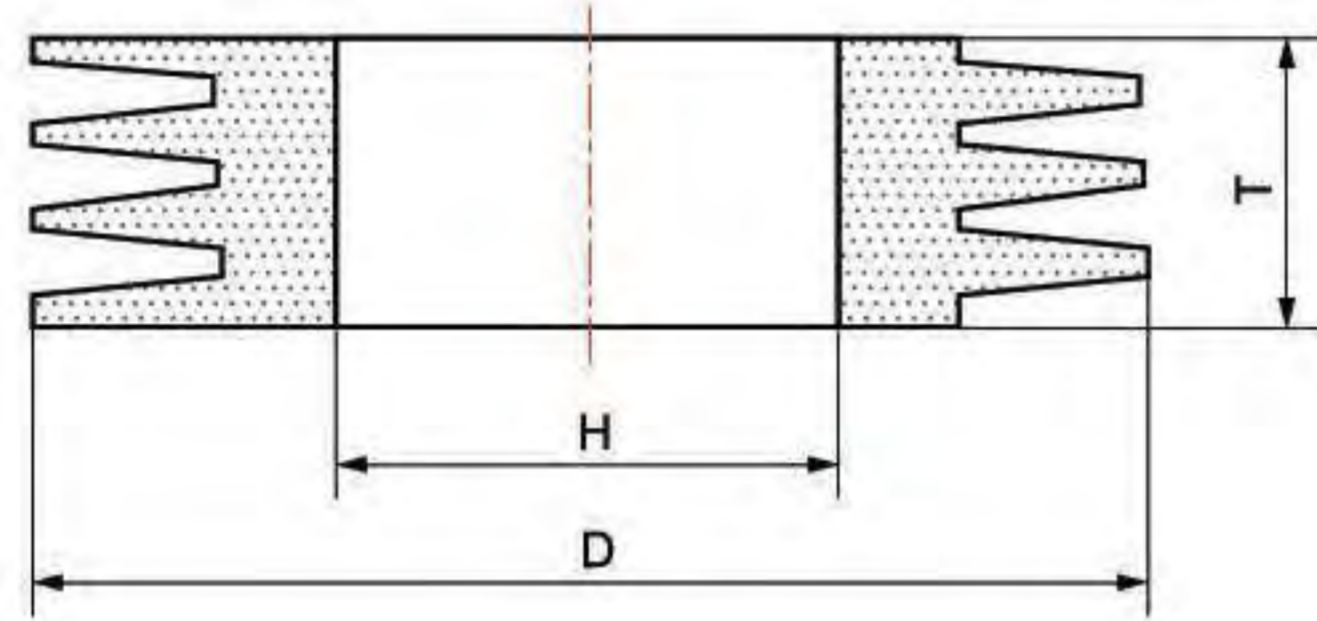
mm

D	T	H	J	K	U	E	R
220	17	40	120	102	2 4 6 8	15	4
	20	90	140	145	2 4 6	11	3
225	18	40	120	105	2 4 6 8	16	8
275	20	40	125	105	2 4 6 8	16	5
	25					21	
280	26	40	120	90	2 4 6 8	17	10
	33	90	145	115	2 4 6 8 10	17	5
340	26.5	55	170	130	4 6 8 10 12	17	8
	29	150	200	180	5 8 10 12	17	15
350	27	55	170	130	5 8 10 12	22	6
450	29	127	285	205	5 8 10 12	22	7
480	29	127	285	205	5 8 10 12	22	15
500	32	203	235	250	8	25	6
	42	160	270	205	10	24	6

◎ Worm Grinding Wheel

The wheels are mainly used for grinding spur gear, helical gear, conical gear, slotting cutter, shaving cutter , etc. The wheels have the characters of good shape retention, high precision, high efficiency, etc.

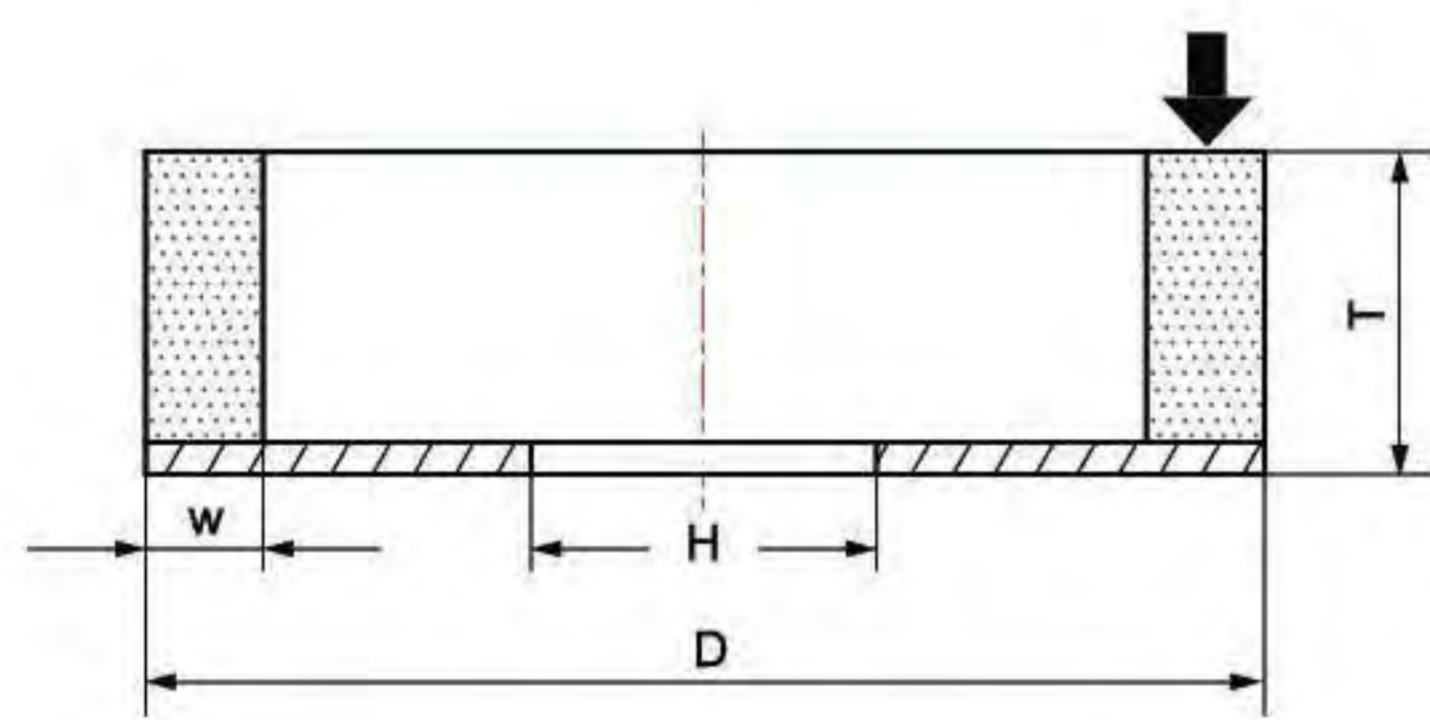
Main Size		mm	
D	T	H	
220	180	76.2	
		90	
240	230	110	
250	50	127	
275	125	160	
300	63 80 100 125 145		
350	63 84 104 125 150	203	
400	84 104		
450	80 100 125	80 100 125	
		84 104	



◎ Arc Tooth Grinding Wheel (Shape Code 2)

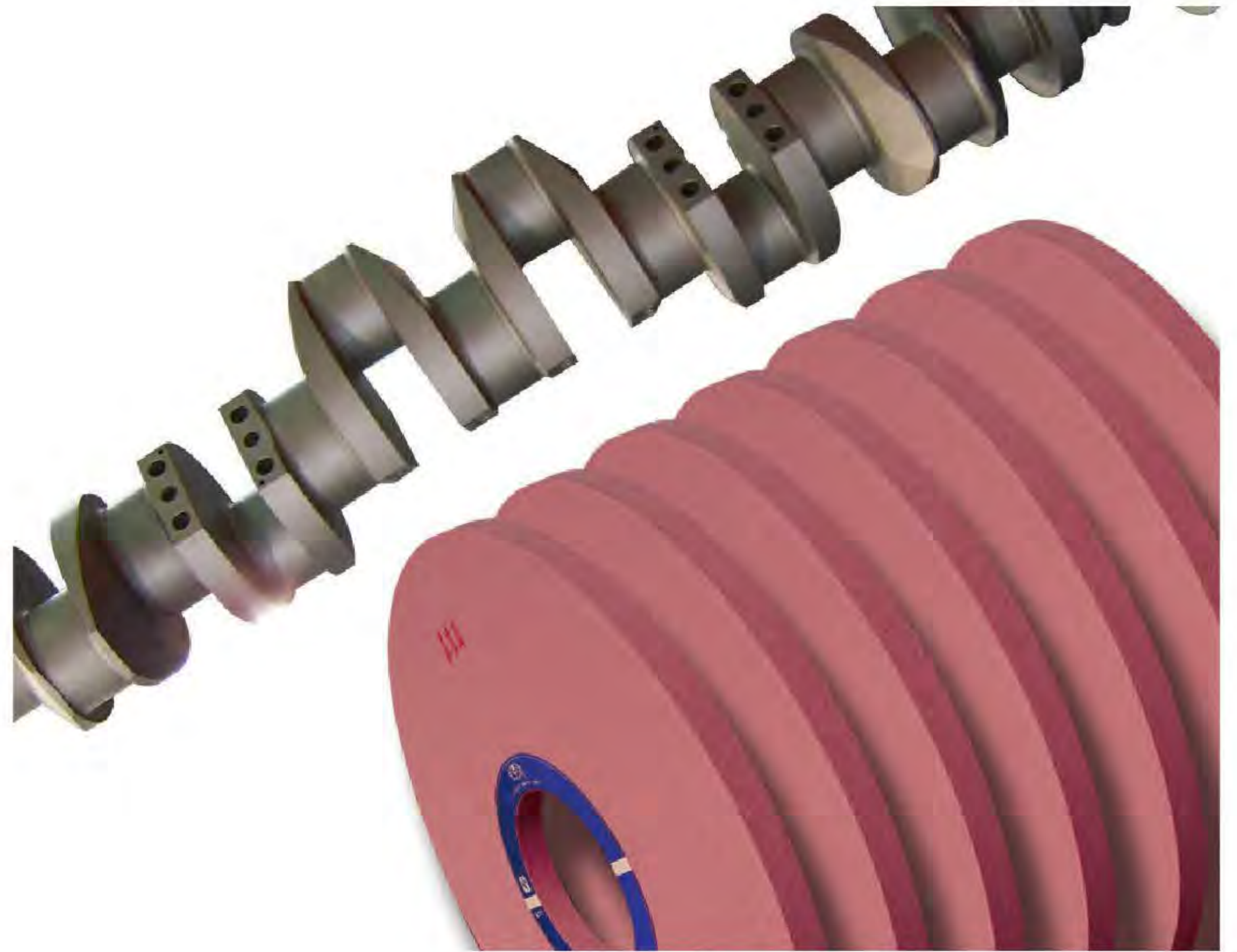
The wheels are mainly used on numerical control arc tooth gear grinding machine which are used for processing high precision gears, such as equal-height tooth, taper tooth, cylindrical gear joint tooth, etc. The precision of the gears can reach 6-2 grade. The products cover war industry, aerospace industry, shipbuilding industry, high-speed rail industry, numerical control machine tool industry, engineering gear reducer industry, and so on.

Main Size		mm		
D	T	H		
223.68	90 95 100	180.34		
254		193.04		
274.32		213.36		
294.64		233.36		
472.44		391.68		
495.3		403.86		
520.7		429.26		
213		95	163	
335			203.2	
389			322	

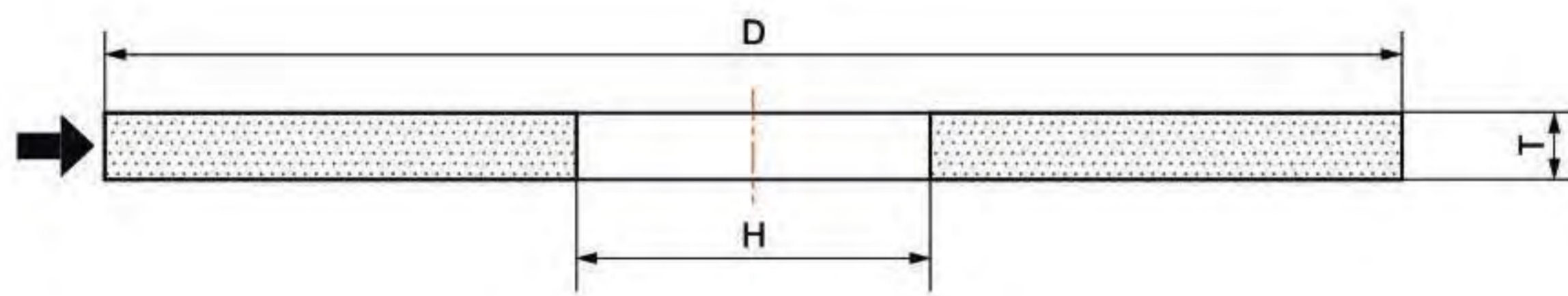


Crankshaft and Camshafts Grinding Wheel

The wheels are mainly used for grinding all kinds of crankshafts and camshafts of auto, tractor, ship engine, as well as transport machinery, etc. The wheels have uniform hardness. Their static balance performance is superior to the national standard specified value 30%-50%. The thickness deviation of a group crankshaft grinding wheels is not more than 0.2mm. The parallelism tolerance of two end faces is not more than 0.1mm. It has reached the international advanced level.



©Crankshafts Straight Ceramic Grinding Wheel (Shape Code 1)

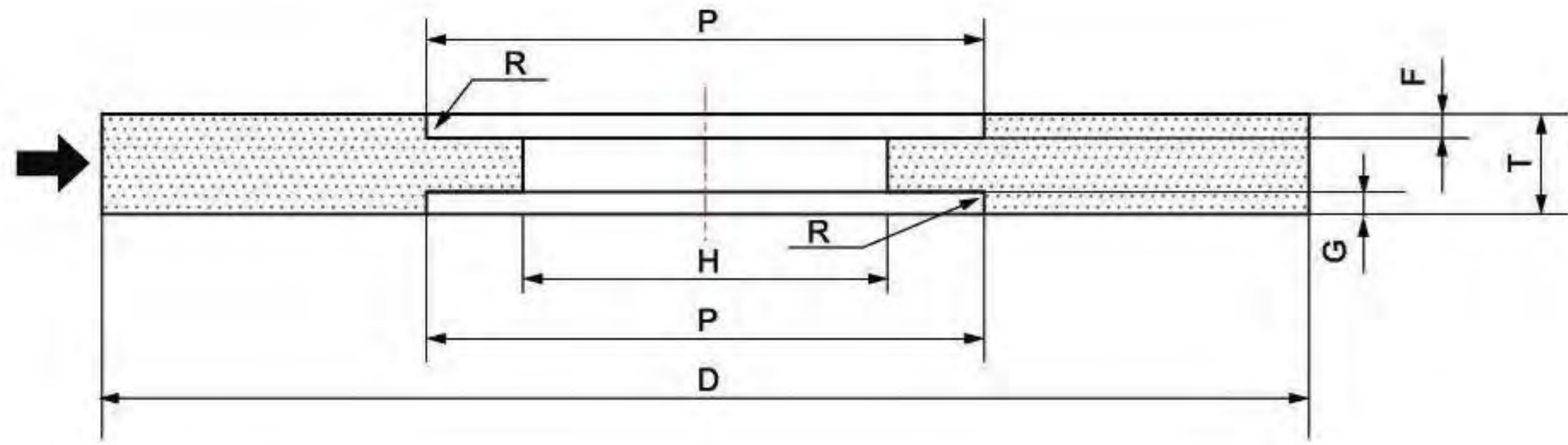


Main Size

mm

D	T	H
650	33 40	
750	22 25 28 33 40 43 58 61 67	305
900	22 25 28 32 33 38 40 42 43 47 52 55 58 61 72 75 78 82 90	305
1065	22 25 32 38 42 47 52 55	304.8
1100	25 32 33 38 40 43 55 58 61 72 75 78 82 86 90	
1200	120 150	304.8
1250	42 75 80	305
1400	80 86 120	508
1600	80 86 120	305 508 900

© Crankshafts and Other Dedicated Grinding Wheel (Shape Code 7)

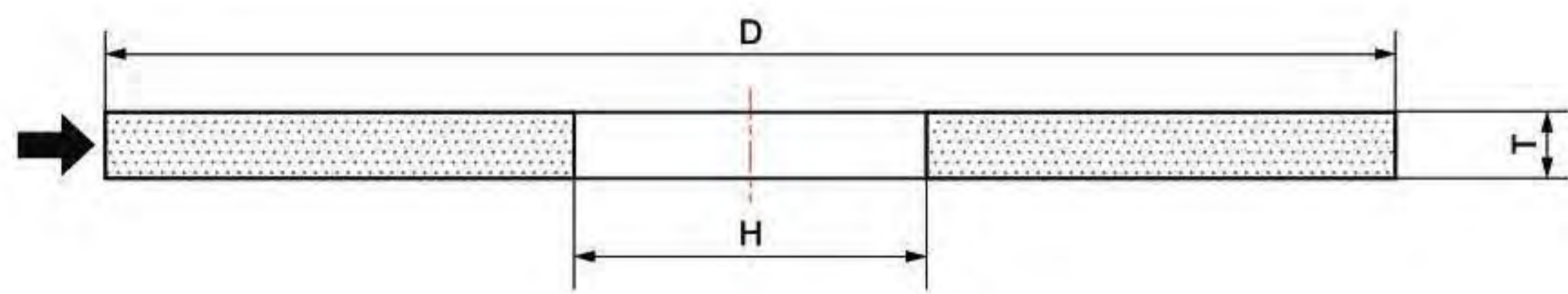


Main Size

mm

D	P	F=G	T	H
500	375	20	58 86	305
600	375	13	78	
		16	86	
		20	86	
750	375	20	82 86	
900	375	25	130	304.8
1200	850	25	110	305
1400	53	16	75	305 450

© Camshafts Straight Ceramic Grinding Wheel (Shape Code 1)



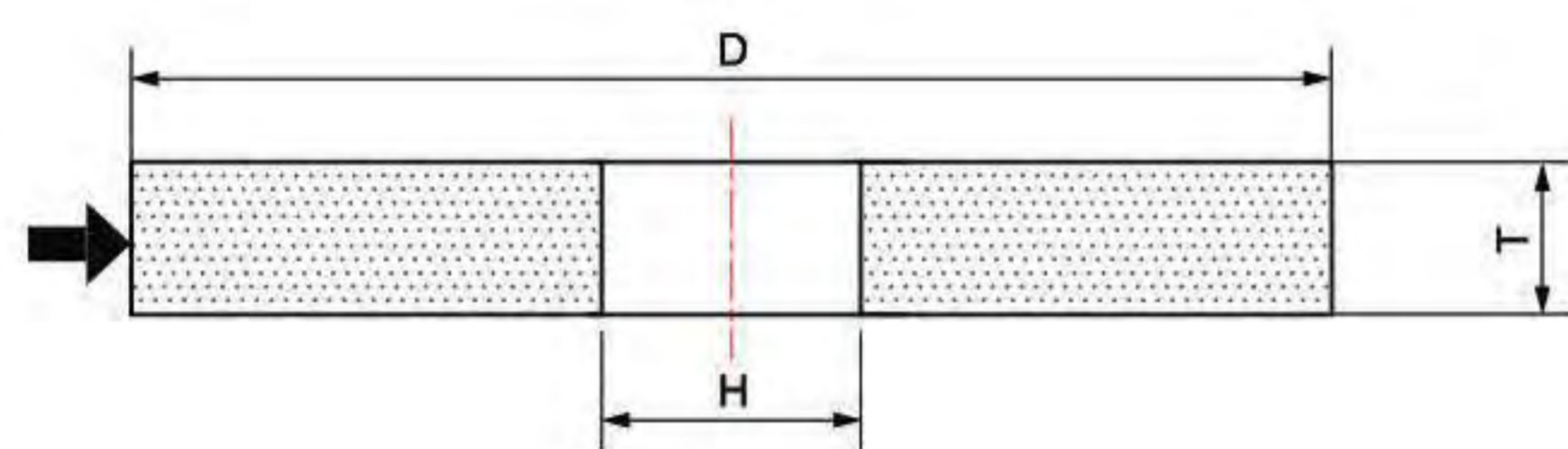
Main Size

mm

D	T	H
600 750	20	305
	22	
	25	
	32	
	40	

Guide Rail Grinding Wheel (Shape Code 1,5,7)

The wheels are mainly used on CNC machine for processing machine tool, supporting plate, etc. Adopting the advanced technology, using high quality abrasive grains with scientific and reasonable recipe, the wheels have the characteristics of big pores, loose structure, uniform hardness, good balance, good grinding guide rail straight line retentivity, high efficiency, etc.



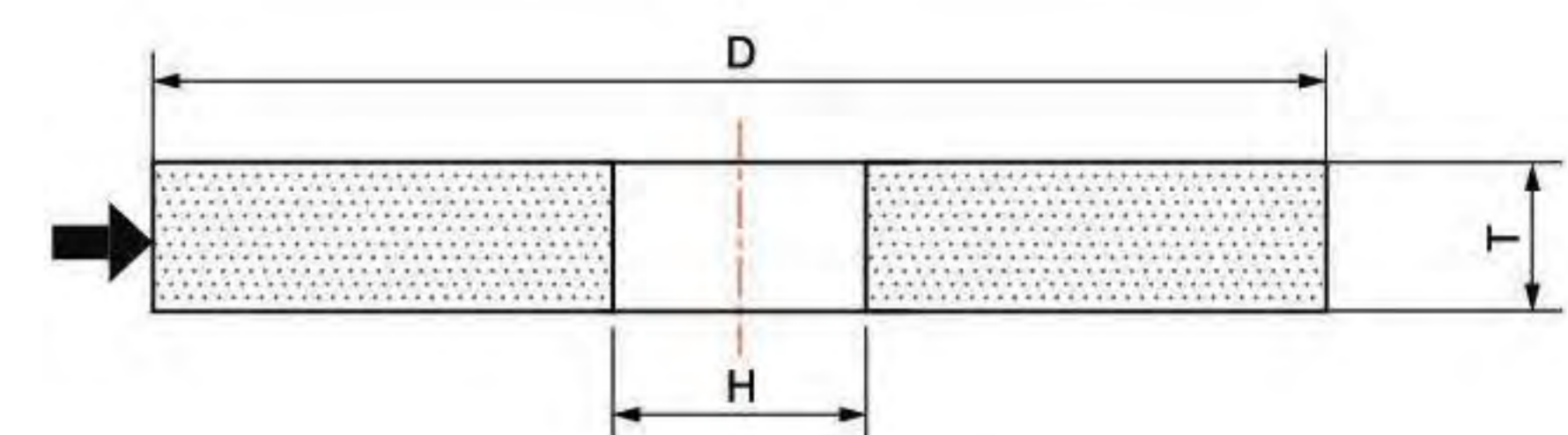
Main Size

D	T	H
500	22~100	203
600	22~100	203 305

mm

Strong Force Grinding Wheel (Shape Code 1)

It means that the wheels grind workpieces in deep creep-feed way. The wheels are usually used for tooth grinding of aero-engine blades and turbine blades, and form grinding of corrugated roller groove. Creep-feed grinding technology requires the grinding wheels with soft and loose structure and strong cutting force. MT brand of this kind product is specially designed for meeting the special requirement of creep-feed strong force grinding. They are made of very sharp Alumina or SiC grains, formulated with extreme loose pore structure, which ensures the wheels are not clogged and burned workpieces are not burned when deep-feed grinding.



Main Size

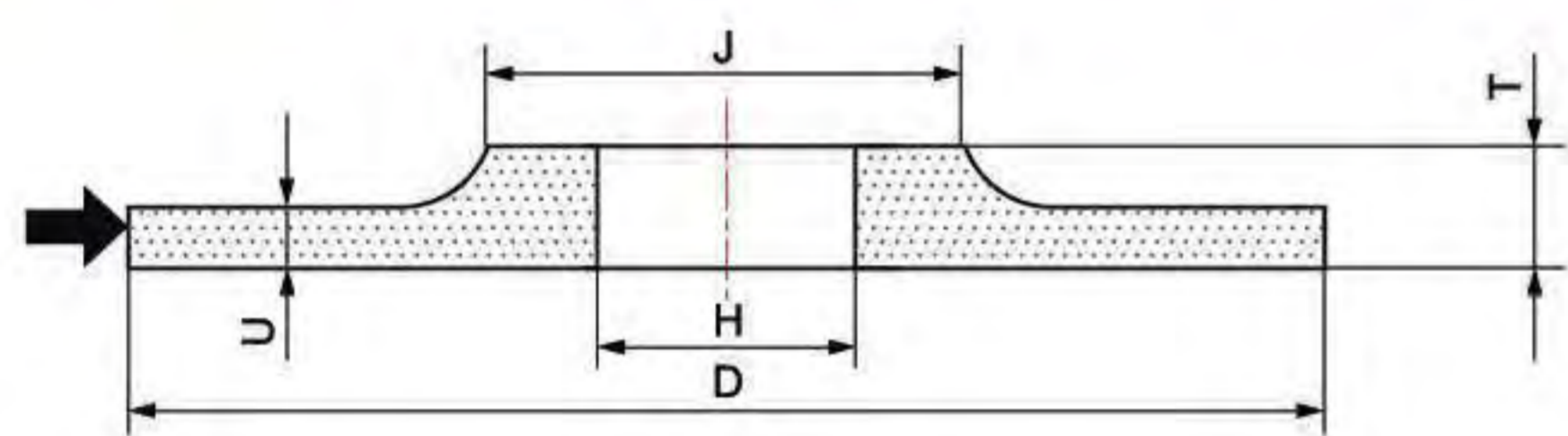
D	T	H
250	25 32	75
400	20 27 32 40	203

mm

Bearing Grinding Wheel

With the rapid development of modern manufacturing industry such as auto, machine tool, etc., the market demands for high property gearing increase constantly. The abrasive tools cover the whole bearing manufacturing process, such as bearing ring and rollers section grinding, centerless grinding, inside and outside circle groove grinding, bearing internal grinding, etc. MT brand abrasive tools bring advanced grinding solutions for the whole bearing processing industry. Whatever from their geometric dimension, working stability, extreme high grinding precision, or their high grinding efficiency, noise, etc., the wheels can meet all the increasing strict manufacturing requirements.

◎ One-side Convex Grinding Wheel (Shape Code 38)



Main Size mm

Main Size	D	T	P	J	H
	500	500	16	6 8	350
600	600	20	10 13	350	305
		25	13 16		

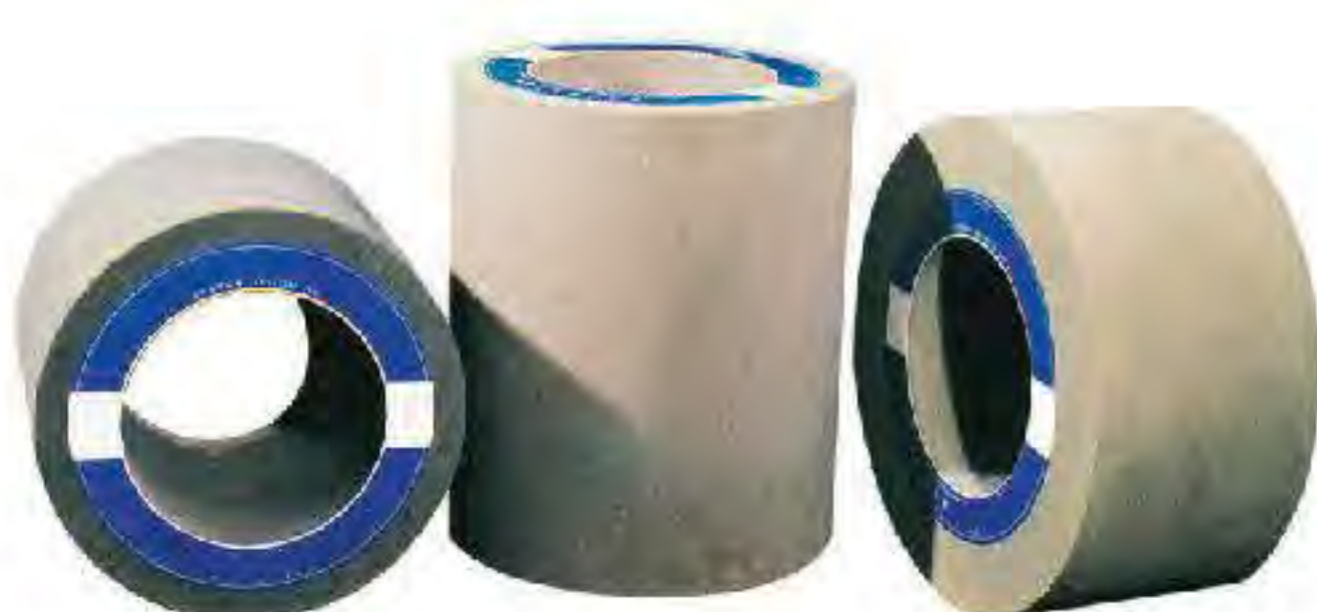
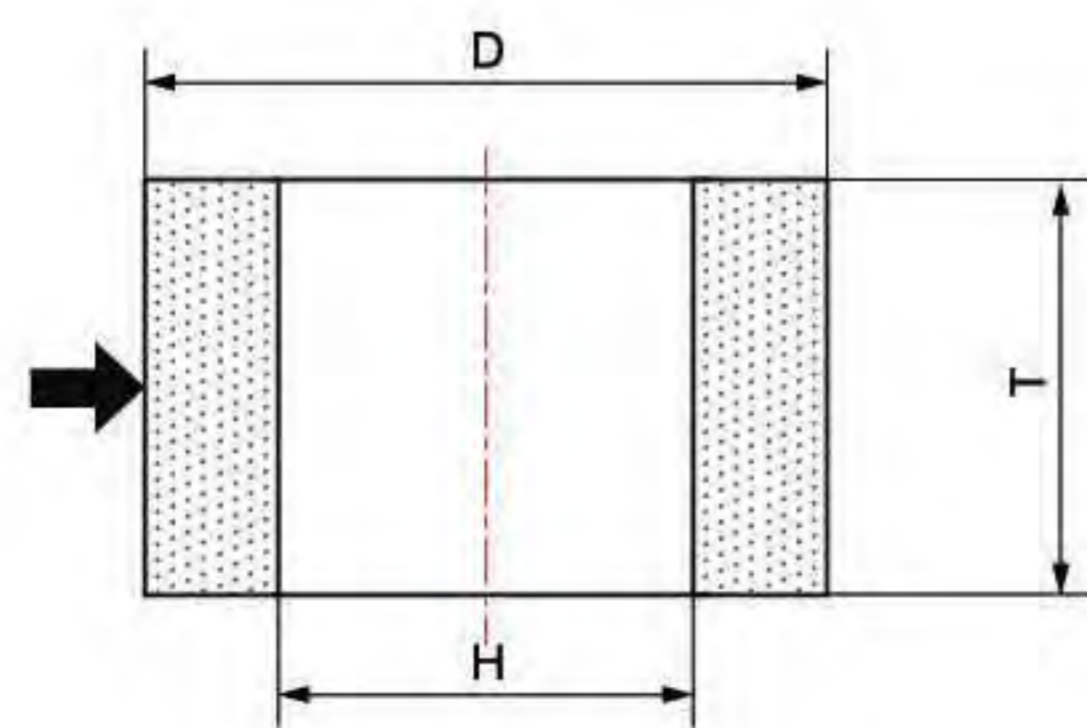


◎ Centerless Grinding Wheel (Shape Code 1 and 7)

The wheels are mainly used for grinding mass slender axles, short axles without center hole, covers, specific taper pins, etc.

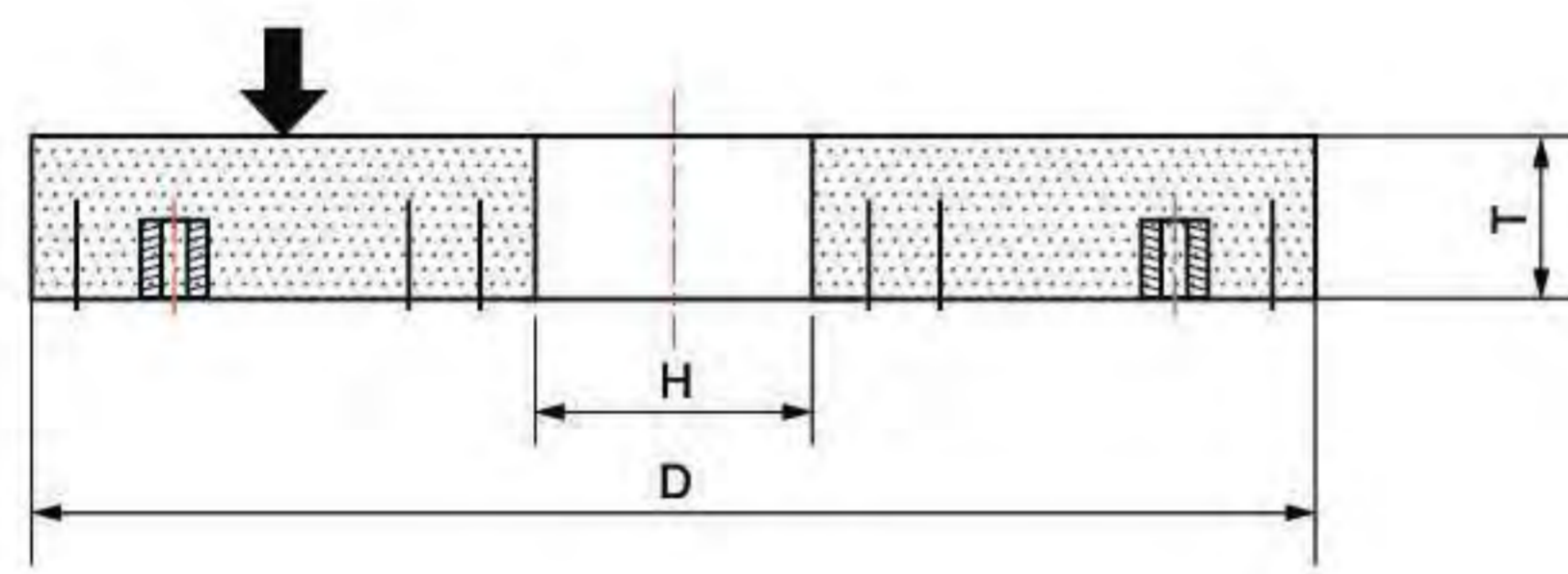
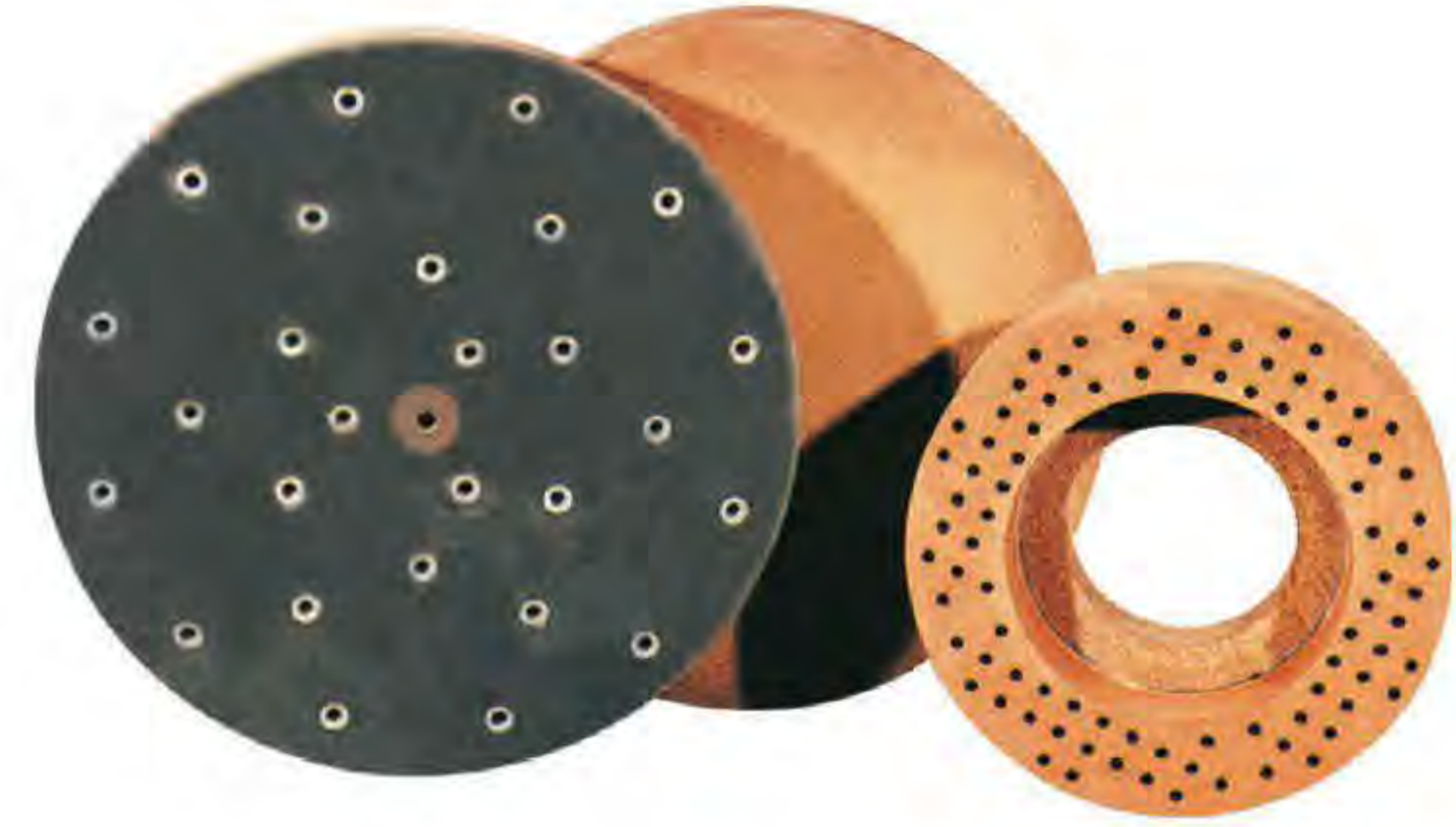
Main Size mm

Main Size	D	T	H	P
	250	250	100	321
300	300	100 125	127	200
350	350	125 150 225	127	200
400	400	100 125 150 200	203	265
450	450	150 200		
500	500	100 125 150 200 250 300 400 500 510 600	305	375
600	600	150 200 250 300 500		375
750	750	250 400 500		435



© **Bolt Fastened Straight Grinding Wheel (Shape Code 36)**

The wheels are mainly used for grinding the flat surface parts, such as bearing clutch pads, piston ring spring, baffle, chain saw blade, magnetic steel, magnet, mould, pipe-line equipment, and so on. For special size grinding wheels, we can produce according to customer's requirements.

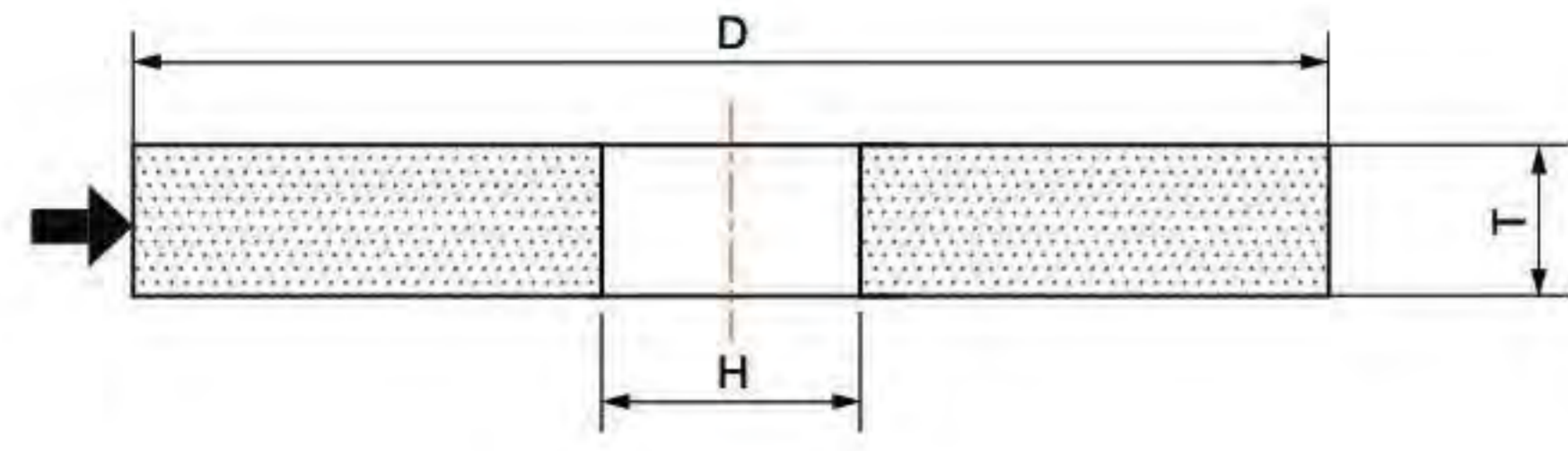


Main Size

mm

D	T	H	Remark	D	T	H	Remark
203	32	115		585	65	203	
350	60	195				280	
355	50	150	with holes			405	
381	65	152				428	
400	40-63	50		600	60	50	
		203		610	70	25	with holes
450	100	355		750	63	30	
455	125	345				50	with holes and grooves
		379				50	
458	129	383				350	
500	60	19				350	with holes
		20	with grooves	600			
	40-50	50		760	80	25	with holes and grooves
	50	50	245		252	with holes and grooves	
	63	305		600			
	75	305		773	75	590	with holes
585	65	19	with holes	900	90	460	with holes
585	65	195					

© Internal Grinding Wheel (Shape Code 1)

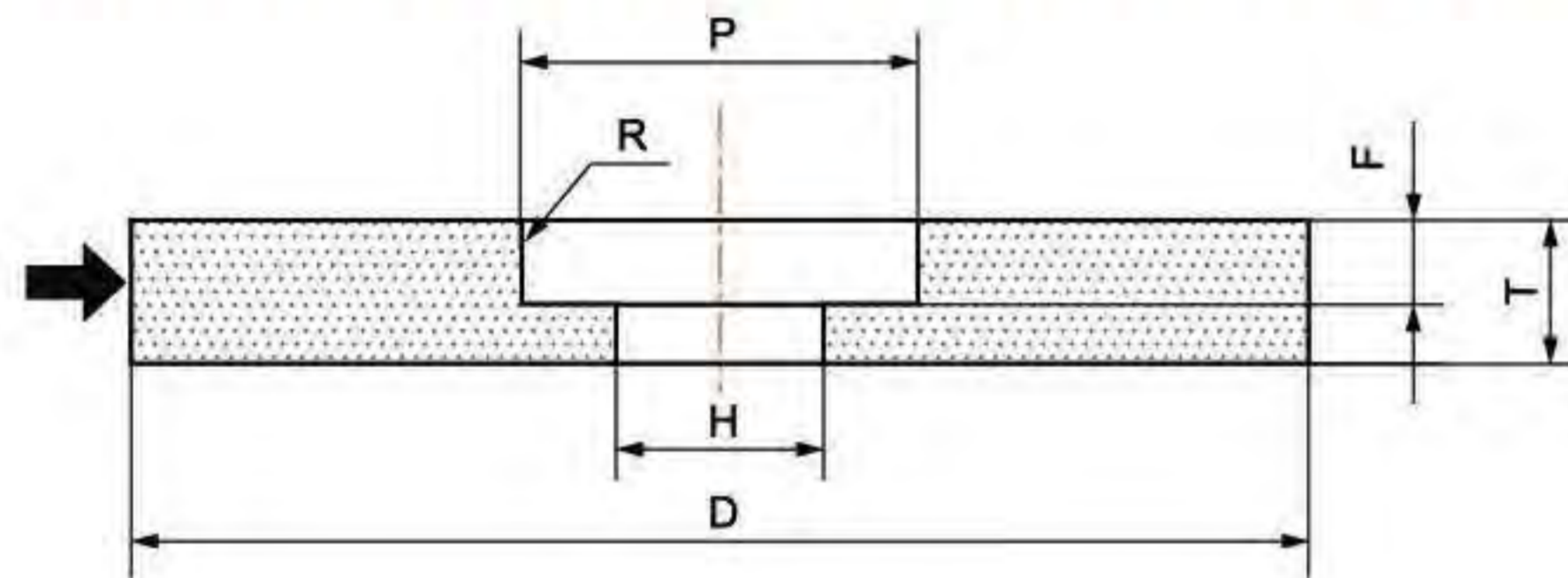


Main Size

mm

D	T	H	D	T	H	D	T	H
3-8	8 10 13	1.5 2	25	6 13 20 25	6	60	32 50	
4	6	2 3		25 32 50	10		8 10 13 20 32 50 63	
5	8	2 3	30	6 10 25 32 40 63	10	70	6 8 10 13 16 25 32 50	
6	6	2 3	35	6 8 10 25 32 40 63	10	80	8 13 16 20 32 50 63	
8	8	2 3	40	6 16 32	10	90	10 13 16 20 25 32 50 63	
10	6 10 13 20	3		6 8 12	13	100	63 75 100 120	
13	6 13 16 20 32	3 4		8 10 25 32 40 50 63	16	125	63 75 100 120	
16	10 16	4	45	32	16	150	63 75 100 120	
	6 13 20 25	6	50	6	13			
20	6 8 10 20 25 32	6		6 8 10 16 20 25 32 40 50 63	16			

© Internal Grinding Wheel (Shape Code 5)



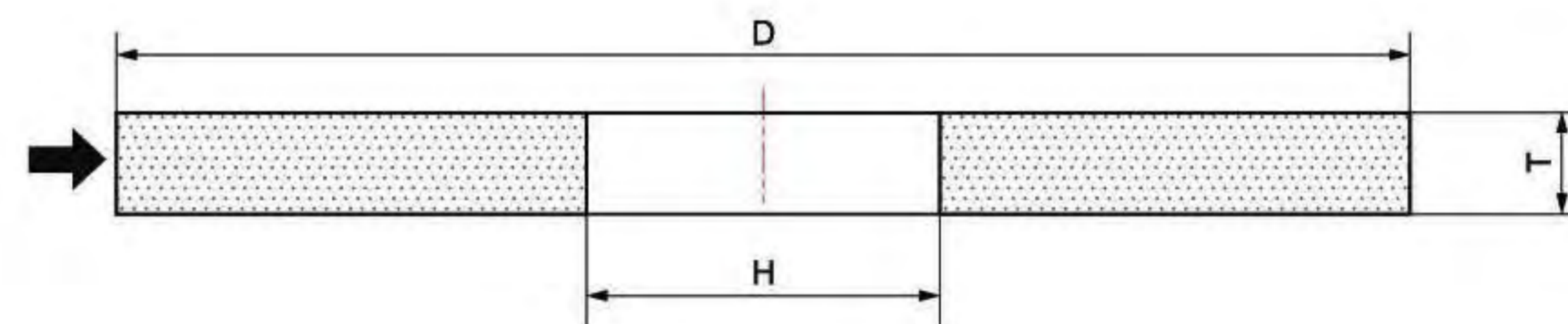
Main Size

mm

D	T	H	P	F	Rmax	D	T	H	P	F	Rmax	D	T	H	P	F	Rmax	
13	13	4	8	6	0.8	40	25	20	20	10	1.2	100	50	32	50	20	2.0	
16	10	6	10	4			40			63			25					
	16			6		125	40	32	63									
20	13	6	13	6		50	25	20	32	10		150	40	32	80	15		2.0
	20			8			125			63			25					
25	10	6 10	16	4		63	25	20	40	10		200	40	32	100	15		
	16			6			150			50			20					
	25			10			150			63			25					
32	13	10	16	6		80	40	32	45	15		200	50	32	100	20		
	20			8			200			60			25					
	32			12			200											
40	16	13	20	6		1.2	100	40	32	50		15	2.0					

Roll Grinding Wheel (Shape Code 1)

The wheels are widely used in steel plant (corporation) for grinding all kinds of hot-rolled steel plate, cold-roll steel sheets, silicon steel plate and strip, stainless steel plate and strip, nonferrous plate and strip, as well as working roll and back-up roll of aluminium foil production line or others metal foil production line, and metal rolls used in papermaking industry. The grinding process is divided into three stages: rough grinding, accurate grinding, and polishing. The linear speed can reach 60m/s. The grinding wheel has the characters of high strength, uniform structure and hardness, good self-sharpening, high efficiency, etc. The rolls grinded by the wheels have high precision and no chatter marks.



Main Size			mm
D	T	H	
600	65	254	
750	75	304.8 305	
750	100	304.8 305	
800	80	304.8 305	
900	90 100	304.8 305	
915	100 152	304.8 305 508	
1070	152	304.8 305	
1250	152	508	

For special size grinding wheels, we can produce according to customer's requirements.

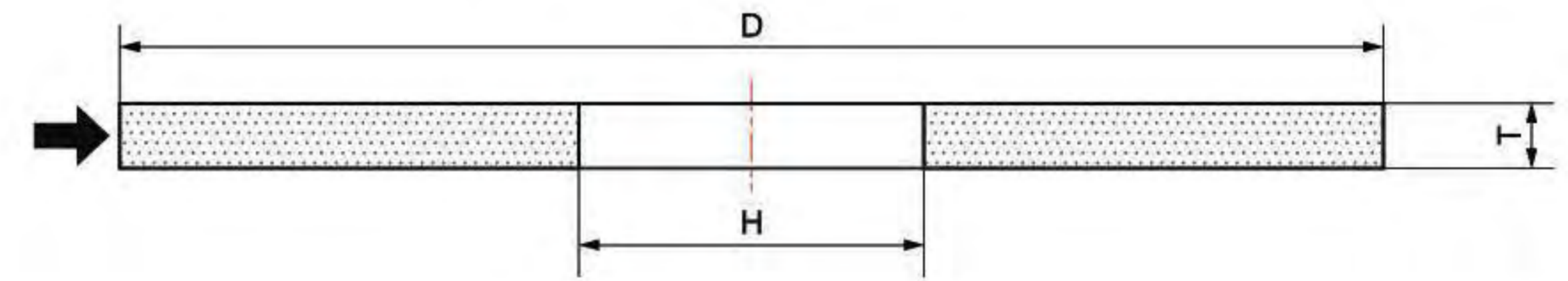
Ceramic Microcrystal Grinding Wheel

The wheels are made by new-type abrasive grains exclusively researched and developed by ourselves in China. Compared with common alumina grinding wheels, they have features of better shape retention, stronger sharpness, anti-clogging, not burning workpieces, high abrasive ratio, fewer dressing amount (about 1/3 of the common alumina grinding wheels). They can realize high efficiency, high precision and high quality under the current conditions of existing grinding machine and wheel dresser. They are used for grinding the metal materials whose surface are treated by special technology and the materials which are difficult to grind by common alumina grinding wheels, such as alloy tool steel, high-speed tool steel, heat resistant steel, bearing steel, stainless steel, etc. The grinding ways are internal grinding, cylindrical grinding, surface grinding, etc. The operation linear speed of the wheels is 30m/s - 60m/s. They can replace the similar imported grinding wheels.



New-type High-temperature Resistance Large Diameter Resin Cutting Wheel (Shape Code 41)

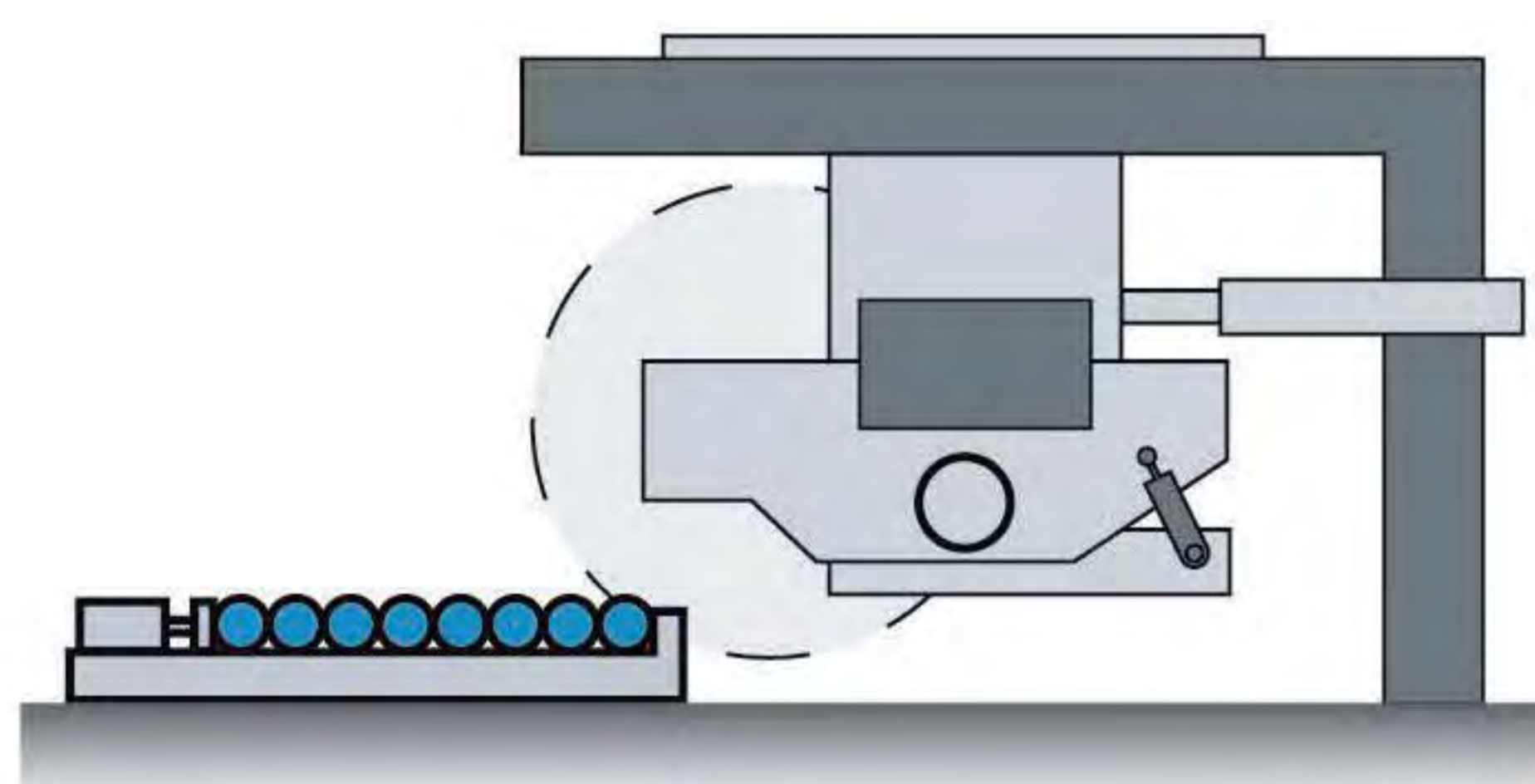
It is a kind of cut-off wheel with the characters of high-temperature resistance (300-800 °C), high speed (100m/s), and large diameter (1100mm-1600mm). It is used in modern steel enterprises for on-line fixed-length cutting when producing linear material (such as ϕ 20-500mm round steel, square steel, etc.). It has higher cutting efficiency and higher balance performance. It can meet the requirements of automatic production conditions, improve efficiency greatly when cutting all kinds of profile steel. It has already replaced the imported cut-off wheels.



Main Size mm

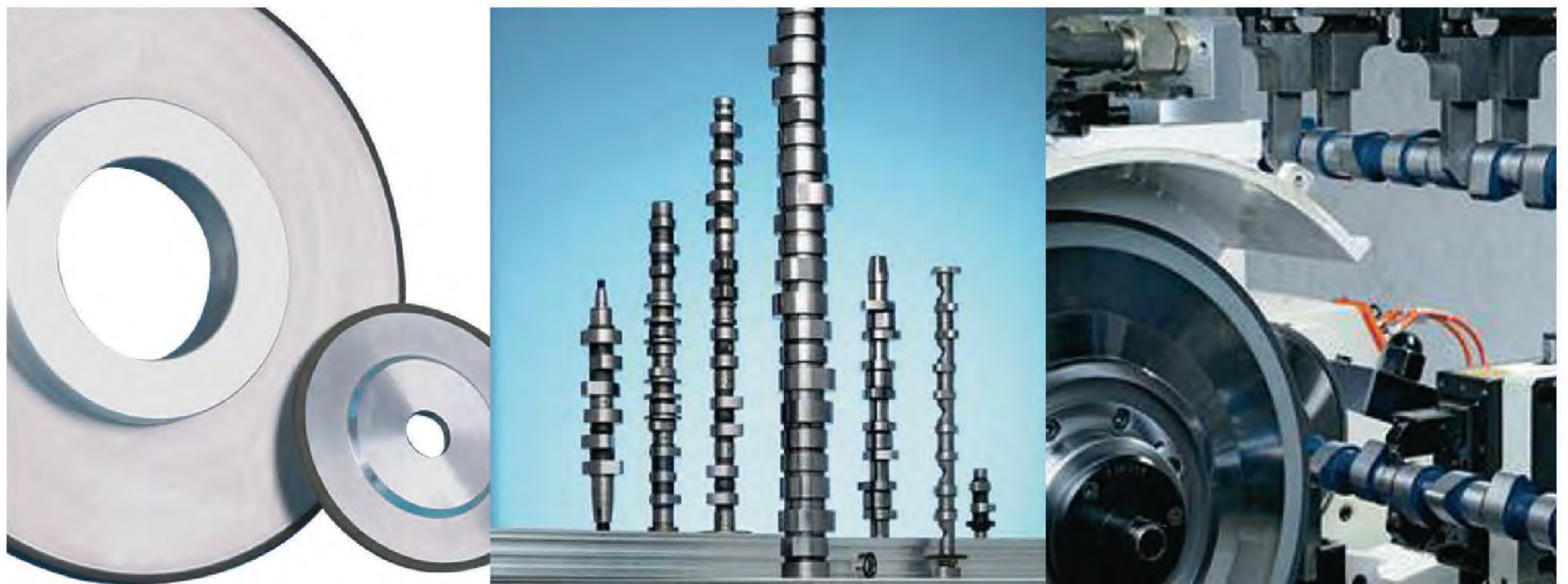


D	T	H
1000-1100	12	100
1250	13 14	127 152.4 230
1550	16 18	152.4 230.2 280
1600	16 18	152.4 230.2 280

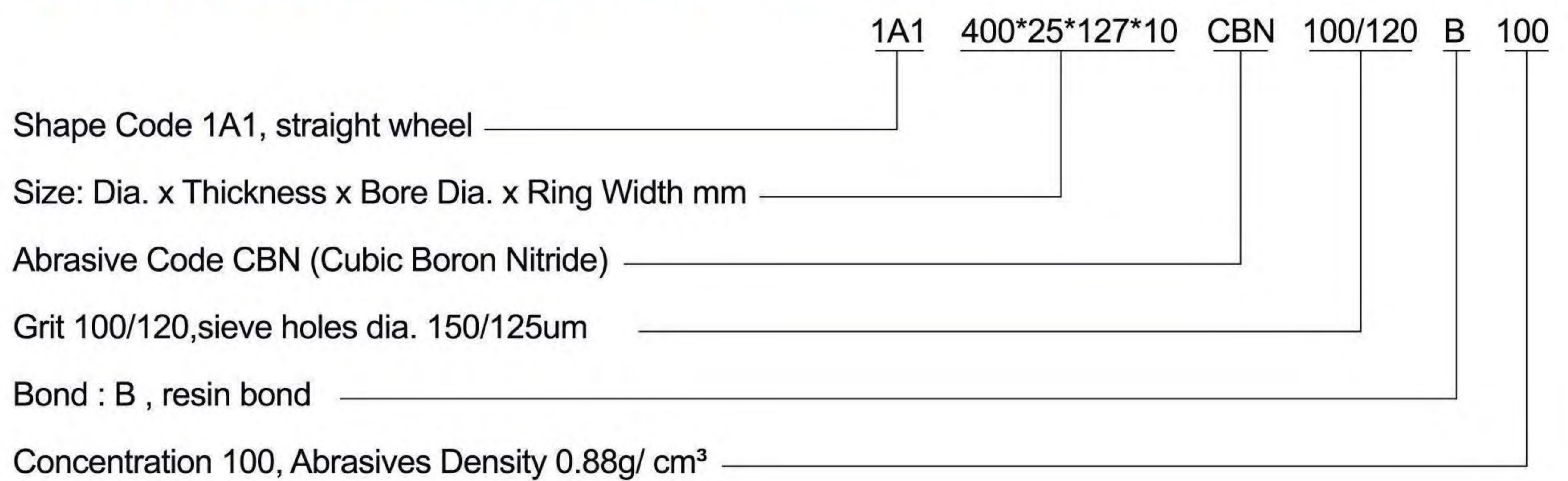


Super Abrasives --- Diamond and CBN Grinding wheels

In order to meet the requirements of high efficiency grinding and high efficiency form grinding for material which is difficult to process, and the rapid development of ultra-precision parts, we have devoted ourselves to the development and application of super abrasives over the years. Our diamond and CBN grinding wheels have the characters of low pressure of critical grinding, small cutting resistance, stable quality and high abrasive resistance.



© Meaning of Super Abrasives Specification



◎ Application

Abrasive Type	The Material to Be Processed
Diamond	brittle material: cemented carbide, optical glass, semiconductor material, jewel, ceramic, concrete, stone, etc. Nonferrous metals: copper, aluminium and their alloy. Materials: ferrite, neodymium iron boron, permanent magnetic. High vanadium high-speed steel
Cubic Boron Nitride	Tools steel, heat resistant steel, ball bearing steel, powder metallurgy. Chilled cast iron, nickel-chromium cast iron, titanium alloy, Chromium alloy, nickel alloy, etc.

◎ The Principle of Selecting Abrasives Grit

Under meeting the surface roughness requirement, in order to guarantee the quality and increase the efficiency, try to select the coarser grits as possible as it can be.

Grains Grit	70/80~100/120	100/120~140/170	140/170~230/270	270/325~10/20	8~12-2.5/5
Surface Roughness Ra (um)	3.2—0.8	0.8—0.4	0.4—0.2	0.2—0.1	0.1—0.05

◎ Bond and Characteristics of Super Abrasives

Type	Code	Bond Characters
Resin Bond	B	Good elasticity, polishing ability. But when grinding, the grains are easy to fall off at high temperature.
Ceramic Bond	V	Strong sticking ability for grains, good heat resistance, easy to remove chips.
Metal Bond	M	Good rigidity and strong sticking ability for grains
Electroplate Bond	D	Strong sticking ability for grains, high efficiency, but lifetime is short.