How to order Diamond and CBN Tools

To meet your requirements, We need the following information.

1) Shape and dimension of them

2) Grit size of Diamond or CBN

3) Concentration

4) Bond (Resin, Metal, Vitrified)

5) Working Condition

- Machine name & Power
- RPM of Diamond or CBN Tools
- RPM of workpiece
- Table speed (mm/min.)
- Depth/pass (mm/min.)
- Infeed (mm/min.)
- Total stock removal
- Wet or Dry application
- Cycle time
- Grinding method (through, feed, Infeed)
- Coolant
- Dressing method

6) Work piece

- Material of workpiece
- Shape of workpiece (dimension)
- Hardness of workpiece

7) Required quality

- Surface roughness
- Concentricity
- Straightness
- Others

8) Special requirements

- Marking

Diamond and CBN Grinding Wheel Parameter

Abrasive type	Hardness grade	Bond type
SD (Synthetic diamond)	**J** : Soft	**B** : Resin
SDC (Synthetic metal coated)	**N** : Medium	**M** : Metal
CBN (Cubic Boron Nitride)	**R** : Hard	**V** : Vitrified

SDC 170 N 100 B

Grit size

Application	US (JIS) MESH	FEPA (μm)
GRINDING	30/40#	D602
	40/50#	D427
	50/60#	D301
	60/80#	D252
	80/100#	D181
	100/120#	D151
	120/140#	D126
	140/170#	D107
	170/200#	D91
	200/230#	D76
	230/270#	D64
	270/325#	D54
	325/400#	D46
	400/500#	40-60

Remark : GRIT SIZE (μ) = 15000/MESH SIZE

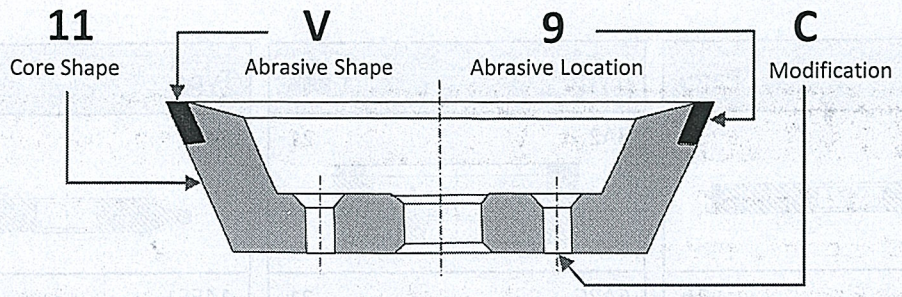
Application	US (JIS) MESH	FEPA (μm)
LAPPING	500#	30-40
	600#	22-36
	800#	20-30
	1000#	15-25
	1200#	10-12
	1500#	8-16
POLISHING	1800#	6-12
	2000#	5-10
	3000#	4-8
	5000#	3-6
	8000#	2-4
	12000#	1-3
	14000#	0-2

Concentration

%	ct/cm^3
25	1.1
50	2.2
75	3.3
100	4.4
125	5.5
150	6.6

* Other sizes, please contact the sales department.

The Shapes Coding System of Diamond and CBN Tools



Core Shape

1
2
3
4
6
9
11 (Larger than 45°)
12 (45° or Less)
14
15

Abrasive Shape

A
AH
B
C
CH
D
DD
E
EE
F
FF
G
H
J
K
L
LL
M
P
Q
QQ
S
U
V
Y

Abrasive Location

1 Periphery

2 Side

3 Both Sides

6 Part of Periphery

8 Through out

9 Corner or Periphery

Modification

B Drill and Counter Bore

C Drill and Counter Sink

H Plain Hole

T Threaded Hole

M Holes Plain and Threaded

P Relieved One Side

R Relieved Two Side

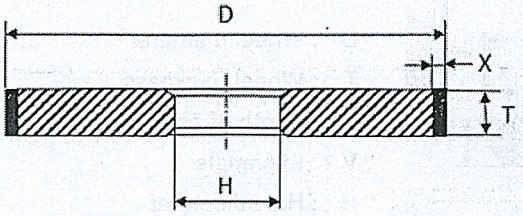
S Segmented Abrasive Section

Q Inserted

Wheel Shapes

Type	Page
1A1	16
1A1R	16
1E1	17
1EE1	17
1V1	18
1FF1	18
3A1	19
4A2	19
4B2	20
6A9	20
6A2	21
6A2C	21
9A3	22
11A2	22
11B2	23
11C9	23
11V9	24
11Y9	24
12A2	25
12V9	25
14A1	26
14EE1	26
14U1	27
3A2	27

Type : 1A1



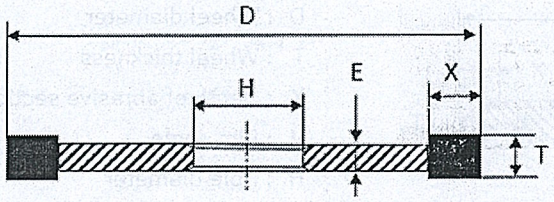
D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	H	Available bonds
30 ~ 45	2 ~ 15	3,5,10	As specified by you .	B
		5,10		M
50,75,100	2 ~ 40	3,5,10,15,20		B
	2 ~ 15	5,10,15,20		M
	5 ~ 40	5,10,15,20		V
125,150,175	5 ~ 40	3,5,10,15,20		B
	5 ~ 15	5,10,15,20		M
	5 ~ 40	5,10,15,20		V
200,220	5 ~ 15	5,10,15,20		M
	5 ~ 40			B,V

* Other sizes, please contact the sales department. *

Type : 1A1R



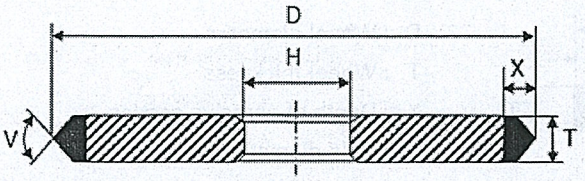
D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	E	H	Available bonds
75,100	0.4 ~ 0.7	3,5	0.3 ~ 0.6	As specified by you .	B
	0.5 ~ 1.0		0.4 ~ 0.9		M
125,150,175	0.5 ~ 2.0	3,5	0.4 ~ 1.9		B,M
	1.0 ~ 2.0	3,5,8	0.8 ~ 1.9		
200,220	1.0 ~ 2.0	3,5,8	0.8 ~ 1.9		B,M

* Other sizes, please contact the sales department. *

Type : 1E1

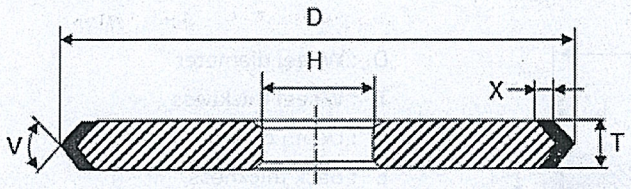


D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
V : Rim angle
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	V	H	Available bonds
75,100,125,150	3	3	≥90°	As specified by you .	B
		5	≥60°		B,M
		8	≥30°		B,M
	5	5	≥90°		B,M
		8	≥60°		
		10	≥45°		
175,200,220	5	5	≥90°		B,M
		8	≥60°		
		10	≥45°		
* Other sizes, please contact the sales department. *					

Type : 1EE1

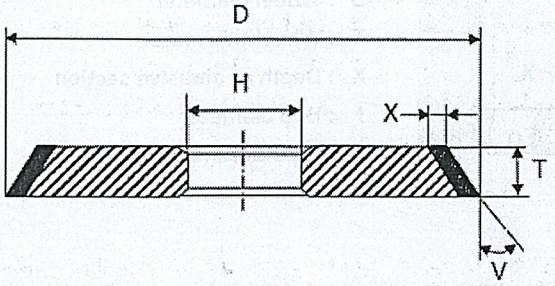


D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
V : Rim angle
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	V	H	Available bonds
75,100,125,150,175	3,5	3,5	≥30°	As specified by you .	B,M
	10		≥45°		
	15		≥60°		
200,220	5,10	3,5	≥60°		B,M
	15		≥90°		
* Other sizes, please contact the sales department. *					

Type : 1V1

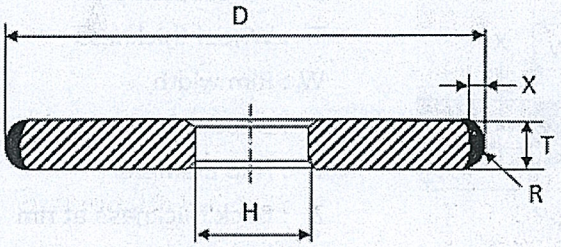


D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
V : Rim angle
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	V	H	Available bonds
75	5 ~ 20	3,5	30° ~ 45°	As specified by you.	B
	5 ~ 15				M
100,125,150	5 ~ 20		15° ~ 45°		B
	5 ~ 15				M
175,200,220	5 ~ 20	3,5,7	15° ~ 45°		B
	5 ~ 15				M
* Other sizes, please contact the sales department. *					

Type : 1FF1

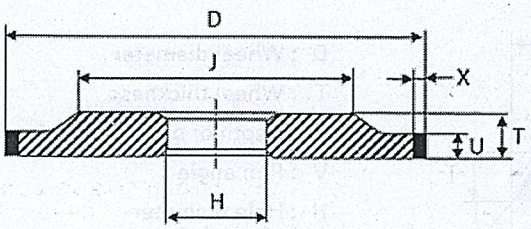


D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
R : Rim radius
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	X	R	H	Available bonds
50,75	3 ~ 10	3,5,10	0.5T	As specified by you.	B
		5,10			M
100,125,150	3 ~ 20	3,5,10			B
	3 ~ 15	5,10			M
175,200,220	5 ~ 20	3,5,7			B
	5 ~ 15	5,7			M
* Other sizes, please contact the sales department. *					

Type : 3A1

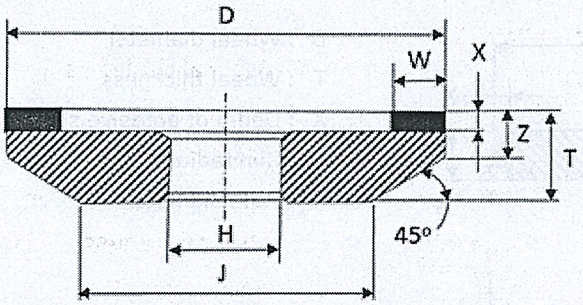


D : Wheel diameter
T : Wheel thickness
X : Depth of abrasive section
J : Hub diameter
U : Face thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	H	Available bonds
75	10,15,20	3,5	3,5	As specified by you.	B
			5		M
100	10,15,20,25	3,5,10	3,5,8		B
			5,8		M,V
125	10,15,20,25,30	3,5,10	5,8,10		B,M,V
150,175		5,10,15	5,10,15		B,M,V
200,220		5,10,15	5,10,15		B,M,V
* Other sizes, please contact the sales department. *					

Type : 4A2

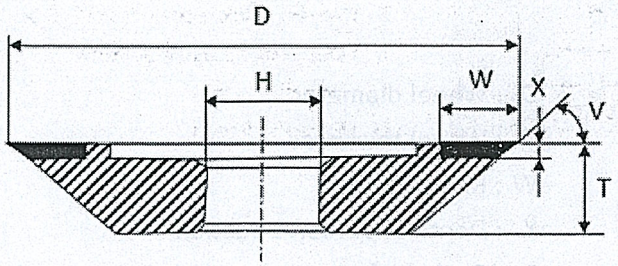


D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
J : Hub diameter
Z : Back thickness at rim
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	H	Available bonds
75,100	8 ~ 15	3,5	3,5	As specified by you.	B,M,V
125,150	10 ~ 25	3,5,10	3,5,7		
175,200,220	15 ~ 25	5,10,15	3,5,7		
* Other sizes, please contact the sales department. *					

Type : 4B2



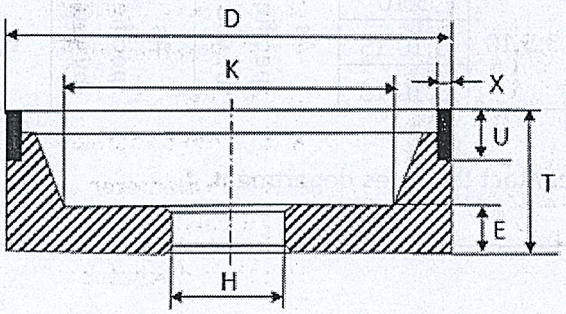
D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
V : Rim angle
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	V	H	Available bonds
100	7	5,8,10	1.5~2	15° , 30° , 45°	As specified by you .	B,M
125	7 ~ 10	5,8,10,12	1.5~3			
150,175,200	7 ~ 12	5,8,10,12	1.5~3			

* Other sizes, please contact the sales department. *

Type : 6A9



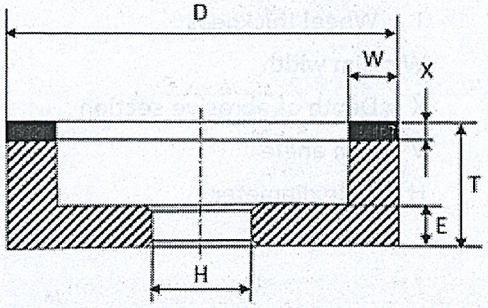
D : Wheel diameter
T : Wheel thickness
U : Length of insert
X : Depth of abrasive section
K : Inside flat diameter
E : Back thickness
H : Hole diameter

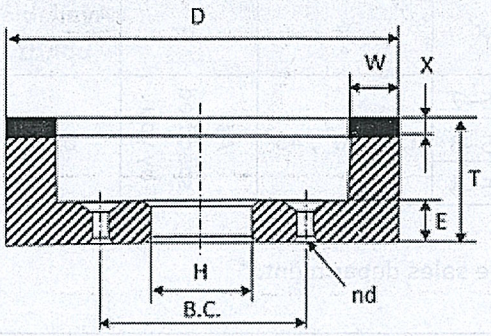
B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	E	H	Available bonds
75,100,125	25,30	5~12	1.5,3	10	As specified by you .	B
			3			M,V
150,175,200,220	30,35	5~12	3	10,20		B,M,V

* Other sizes, please contact the sales department. *

Type : 6A2, 6A2C



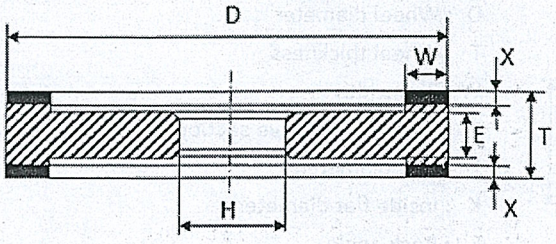


D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
E : Back thickness
H : Hole diameter
* B.C. : Pitch circle diameter(P.C.D.)
* nd : Number of holes and diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	E	H	B.C. , nd	Available bonds
75,100,125	15~30	5,10,15	3,5,10	5,10	As specified by you .	As specified by you .	B,M,V
150,175	15~40	5,10,15,20		5,10,15			
200,220	20~50	5,10,15		5,10,15			
* Other sizes, please contact the sales department. *							

Type : 9A3

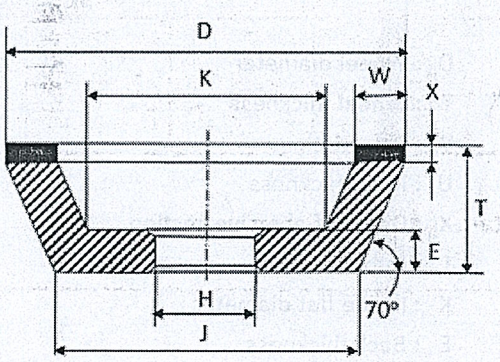


D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	E	H	Available bonds
100,125	20~30	5,10	1.5,2,3	10	As specified by you .	B,M
150,175,200,220		5,10,15	1.5,2,3,5			
* Other sizes, please contact the sales department. *						

Type : 11A2

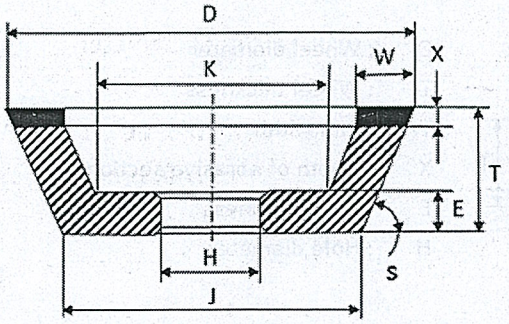


D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	E	H	Available bonds
75	25~30	5,10	5,8	10	As specified by you .	B,M,V
100,125	30~35	5,10	5,8,10			
150,175	35~40	5,10,15,20	5,10,15,20			
200,220	40~45	5,10,15	5,10,15			
* Other sizes, please contact the sales department. *						

Type : 11B2



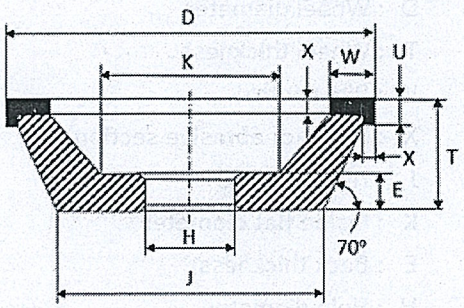
D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
S : Back angle
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	S	E	H	Available bonds
75	25~30	5,10	5,8	70°	10	As specified by you .	B,M,V
100,125	25~30	5,10	5,8,10	60°,70°			
150,175,200,220	25~40	5,10,15	5,8,10	45°,60°,70°			

* Other sizes, please contact the sales department. *

Type : 11C9



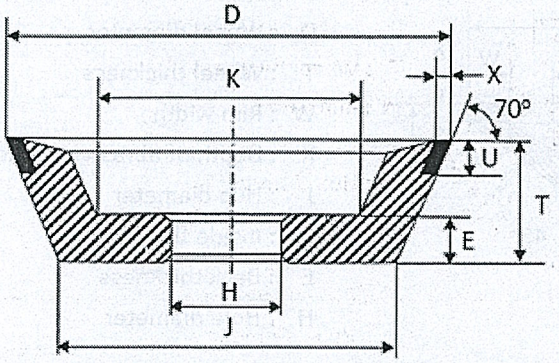
D : Wheel diameter
T : Wheel thickness
W : Rim width
U : Face thickness
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	U	X	E	H	Available bonds
75,100	25~30	10,15	3,5	3,5	10	As specified by you .	B,M
125,150	25~35		3,5,10				
175,200,220	30~40		3,5,10				

* Other sizes, please contact the sales department. *

Type : 11V9



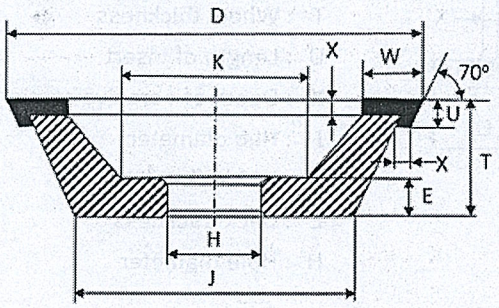
D : Wheel diameter
T : Wheel thickness
U : Length of insert
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	E	H	Available bonds
75	25~30	5~10	3,5	10	As specified by you .	B,M
100	30~35					
125,150	30~40					

* Other sizes, please contact the sales department. *

Type : 11Y9



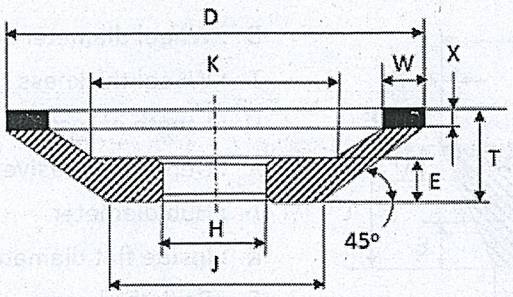
D : Wheel diameter
T : Wheel thickness
W : Rim width
U : Face thickness
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	U	X	E	H	Available bonds
75,100	25~30	5,10	5,7	2,3	10	As specified by you .	B,M
125,150	25~35	5,10	5,7	2,3			
175,200,220	30~40	5,10,15	5,7,9	2,3,5			

* Other sizes, please contact the sales department. *

Type : 12A2

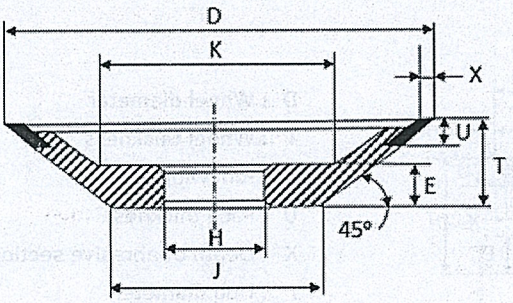


D : Wheel diameter
T : Wheel thickness
W : Rim width
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	X	E	H	Available bonds
75	25~30	5,10	5	10	As specified by you .	B,M,V
100,125	30~35	5,10	5,8			
150,175	30~40	5,10,15,20	5,8,10			
200,220	30~45	5,10,15	5,8,10			
* Other sizes, please contact the sales department. *						

Type : 12V9

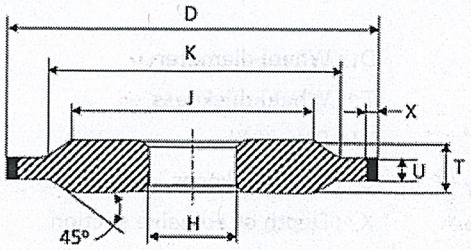


D : Wheel diameter
T : Wheel thickness
U : Length of insert
X : Depth of abrasive section
J : Hub diameter
K : Inside flat diameter
E : Back thickness
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	E	H	Available bonds
75	20,25	5,10	3,5	10	As specified by you .	B,M
100	20,25					
125,150	25,30					
175,200	25,30,35					
* Other sizes, please contact the sales department. *						

Type : 14A1

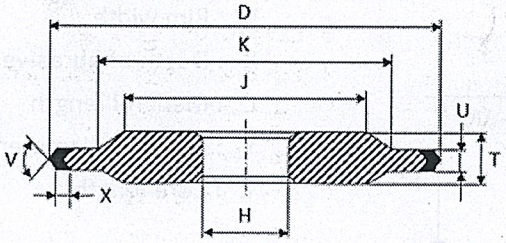


D : Wheel diameter
T : Wheel thickness
U : Face thickness
X : Depth of abrasive section
J : Hub diameter
K : Total hub diameter
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	H	Available bonds
50,75	7~10	1.2~5.0	3,5	As specified by you .	B,M
		5~8			V
100,125,150	7~20	1.2~15			B,M
		5~15			V
175,200,220	7~25	1.2~15			B,M
		5~15			V
* Other sizes, please contact the sales department. *					

Type : 14EE1

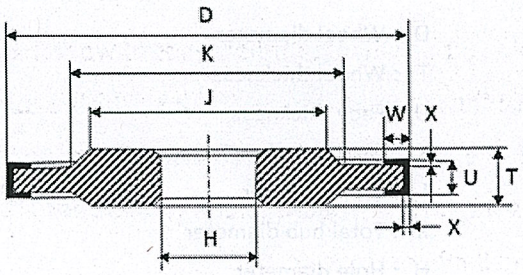


D : Wheel diameter
T : Wheel thickness
U : Face thickness
X : Depth of abrasive section
V : Rim angle
J : Hub diameter
K : Total hub diameter
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	U	X	V	H	Available bonds
75,100,125,150,175	15~30	3,5	3,5	≥30°	As specified by you .	B,M
		10		≥45°		
		15		≥60°		
200,220	15~30	5,10	3,5	≥60°		
		15		≥90°		
* Other sizes, please contact the sales department. *						

Type : 14U1



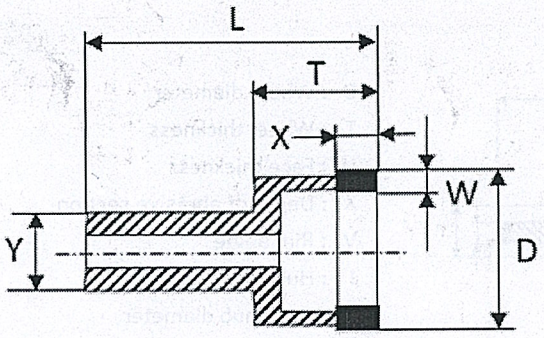
D : Wheel diameter
T : Wheel thickness
W : Rim width
U : Face thickness
X : Depth of abrasive section
J : Hub diameter
K : Total hub diameter
H : Hole diameter

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	T	W	U	X	H	Available bonds
100,125	15~20	5,10	10	3	As specified by you .	B,M
150,175	20~30	5,10,15		3,5		
200,220	20~40	5,10,15		3,5		

* Other sizes, please contact the sales department. *

Type : 3A2 Core drill



D : Wheel diameter
W : Rim width
X : Depth of abrasive section
L : Mandrel length
Y : Mandrel diameter
T : Core length

B : Resin Bond M : Metal Bond V : Vitrified Bond

D	W	X	T	Y	L	Available bonds
20~25	5~8	2~5	As specified by you .	As specified by you .	80~100	B,M
30~40	5~10					
45~60	5~15					

* Other sizes, please contact the sales department. *