SUPER II

NEW GENERATION GRINDING WITH DIAMOND AND CBN WHEELS

INCREASES PRODUCTIVITY
IMPROVES SURFACE FINISH
REDUCES GRINDING COSTS

SUPER ABRASIVE TOOLINGS

New Generation Wheels

Continuous research of two decades has helped us to understand the various intricacies that make Diamond and Cubic Boron Nitride (CBN) work harder, faster and much longer than conventional wheels. **Super II** range of Diamond and CBN wheels incorporate the following features.

- Every wheel is custom-made based on the operating requirements of the client.
- Quality tested Diamond abrasives are selected from a grain size of 300µ to as fine as 0.5µ.
- A special composition of bond mix is developed for homogenous bonding of abrasive powders, binders and fillers which have diverse densities.
- Formulation, mixing and hot pressing are carried out in state-of-the-art equipment under humidity and temperature controlled atmosphere to avoid any unwanted reactions of material compositions.
- Core materials used include Sintered Aluminium, Aluminium Rods, Copper, Bakelite, Silicon Carbide and Special Grade Steel, which are selected as per requirement.
- O.D. of abrasive section is precisely trued with respect to bore to check both radial and lateral runouts.

Quality Assurance

- Dimensional checks for precision accuracy within prescribed tolerances.
- Metallographic inspection is carried out on every piece to check the metallurgical structure, the density achieved and to detect any flaws or cracks.
- Every wheel is dynamically balanced and excess weight is removed by a drilling process to ensure smooth operation of the wheel for a long period.
- Spin testing to 1 ½ times of recommended speed.

Bonding Systems

1) Resin Bonding : Specially developed resin bonding is provided for dry or wet grinding where high metal removal rates, superior surface finish and faster and free cutting action are achieved with minimum heat generation.

2) 'Res+Met' Bonding is applied for wet grinding of tougher, though free cutting applications. This bonding is ideal for creep and plunge grinding where faster production is combined with long lasting economy. It is a near replacement to the metal bonding system.

3) Sp. 'POLY MET' Bond of our innovation for highly specialised applications & new generation work-pieces.

4) Sp. Bonding for PCD-PCBN, Ceramic grinding, Ferrite grinding & other speciality materials, on highly sophesticated CNC machines.

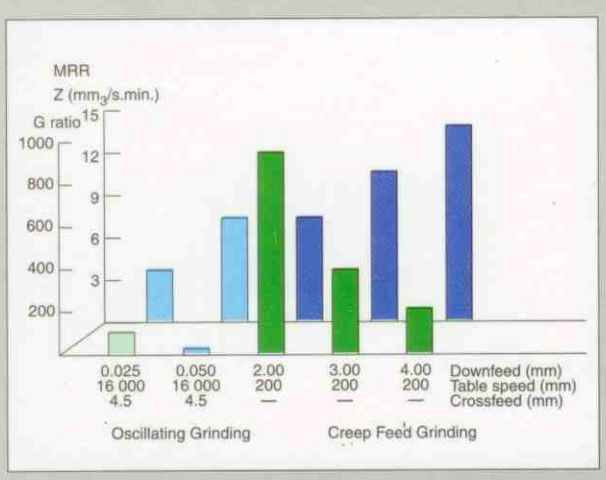
Super Abrasive Media

Super II range include both Diamond as well as Cubic Boron Nitride (CBN), which together can handle a wide range of hard materials, as shown below :

Diamond	CBN
Carbides	High speed steels
Ceramics	Tool and Die steels
Ferrites	Space-age alloy
Quartz	steels
Semiconductors	Stainless steel
Carbon	Chilled cast iron
Exotic nonmetallic	Hard metallic
Materials	Materials

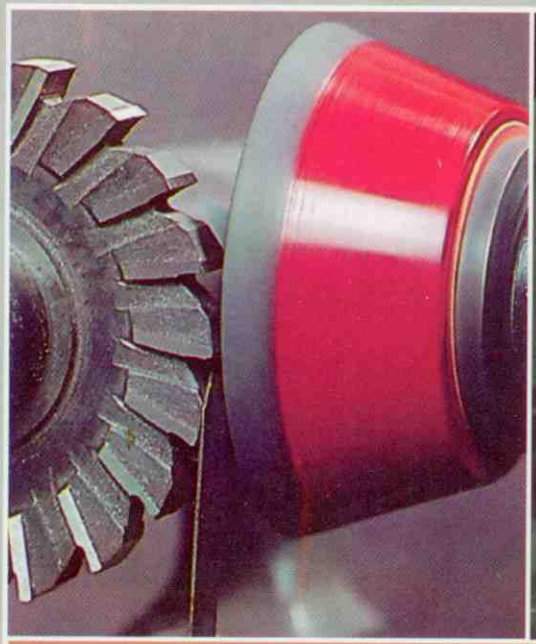
Creep Feed Grinding

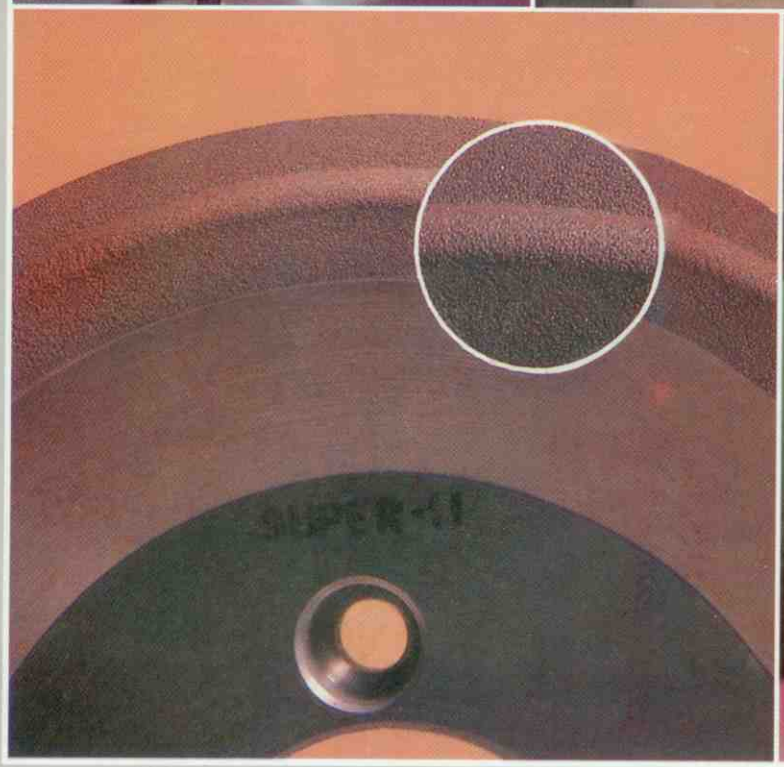
Super II range of Diamond and CBN wheels have enhanced material removal capabilites for creep feed grinding. The material removal rate is almost 10 times higher than the conventional grinding operation, while maintaining the same grinding ratio and the required tolerances.

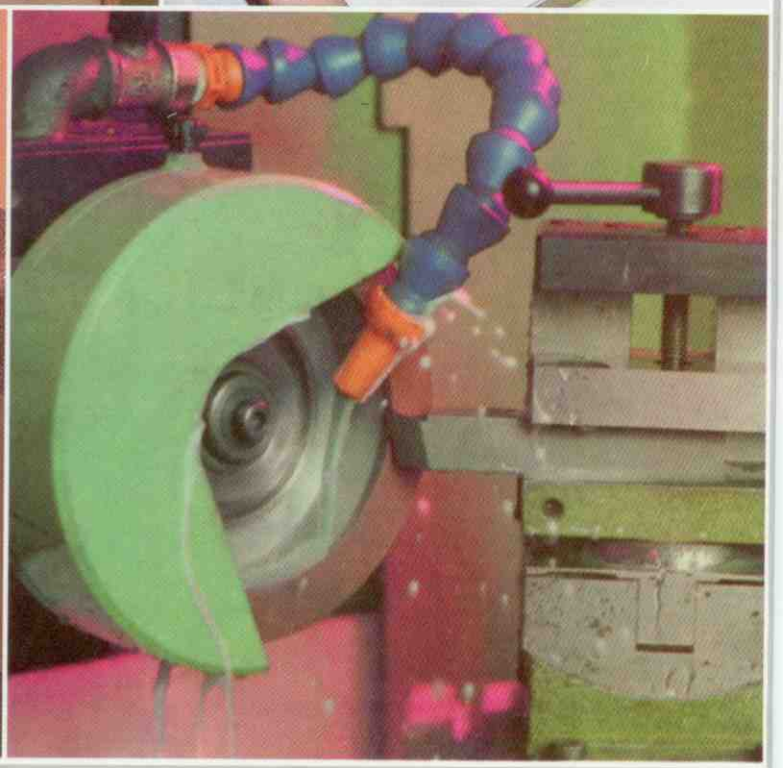


SUPER II

Try Our "Super II" Series and run your own cost-effectiveness test.







SUPER II

The technocrats of Super Abrasive Toolings have several years manufacturing experience with a leading Diamond/CBN wheel manufacturer in the U.S.A. During last two decades, we have produced thousands of custom-designed solutions in Diamond and CBN grinding applications for handling a wide variety of hard materials. Today we have fully self contained state-of-the-art systems for manufacturing and quality control. Technical data on every new design is preserved in our data bank. We have a growing clientele throughout India and overseas. Almost 50% of our production is exported to Europe, S. E. Asia, U.S.A., Japan and Far East countries.

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SUPER ABRASIVE TOOLINGS

MFGS. AND EXPORTERS OF DIAMOND AND CBN GRINDING WHEELS

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WORKS :
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75, VILLAGE ROAD, OPP. WMI CRANES
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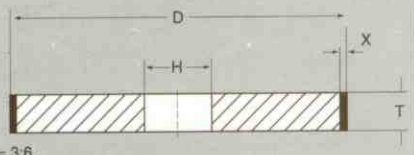
TEL. : +91 22 2566 5117
FAX : +91 22 2566 5116

Basic Selection Data

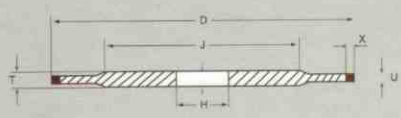
1A1



X = 3;6.

D	T
19	3 4 5 6 8 10 12
25	3 4 5 6 8 10 12
32	3 4 5 6 8 10 12
38	3 4 5 6 8 10 12
50/2"	3 4 5 6 8 10 12
75/3"	3 4 5 6 8 10 12
100/4"	3 4 5 6 8 10 12
125/5"	3 4 5 6 8 10 12 15
150/6"	3 4 5 6 8 10 12 15 20
175/7"	6 8 10 12 15 20
200/8"	6 8 10 12 15 20
250/10"	10 12 15 20 25
300	10 12 15 20 25
350	12 15 20 25
400	12 15 20 25
450	12 15 20 25
500	15 20 25

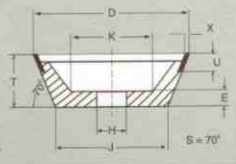
14A1



X = 3; 6

D	U	T	J
75/3"	1 2	6 8	50
100/4"	1 2 3	6 8	70
125/5"	2 3	6 8	100
150/6"	2 3	10 12	120
175/7"	3 6	10 12	140
200/8"	3 6 8	12 15	160
250/10"	6 10	12 15 20	200
300	6 10	15 20	250

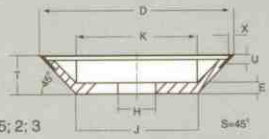
11V9



X = 1.5;2; 3

D	T	U	E	K	J
76	30	10	10	40	53
95	38	10	10	55	65
100	38	10	10	55	75
127	40	11	10	75	96

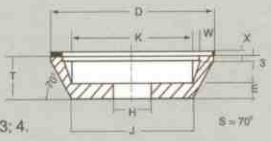
12V9



X = 1.5; 2; 3

D	T	U	E	K	J
75	20	6	10	45	35
100/4"	20	6 10	10	65	60
125/5"	25	6 10	10	80	75

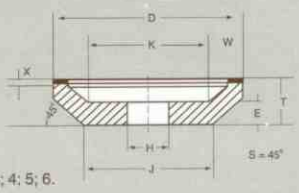
11A2



X = 2; 3; 4.

D	T-X	W	E	K	J
75/3"	20	3 4 5 6 10	10	48	63
100/4"	33	5 6 10 12	10	55	68
125/5"	23	5 6 10 12	10	98	110

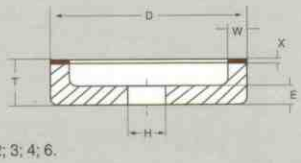
12A2



X = 2; 3; 4; 5; 6.

D	T-X	W	E	K	J
75/3"	20	3 4 5 6 10	9	37	41
100/4"	23	5 6 10	10	54	56
125/5"	23	5 6 10	10	79	81
150/6"	23	6 10 15	10	94	106

6A2



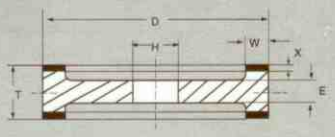
X = 2; 3; 4; 6.

D	T-X	W	E
50/2"	20	3 5	10
75/3"	20	3 4 5 6 10	10
100/4"	23	5 6 10 12 15	10
125/5"	23	5 6 10 12 15 20 25	10
150/6"	23	6 10 12 15 20 25	10
175/7"	25	6 10 15 20 25	13
200/8"	25	10 15 20 25	13
250	25	10 15 20 25	13

Note :
1. Bore diameter (H) as per customers' requirements.
2. Special shapes, sizes and specifications are available on request.

SUPER II

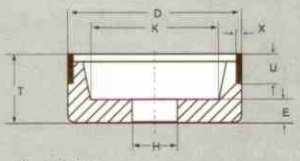
9A3



X = 2; 3; 4

D	T-2X		W					E
100/4"	22		6	8	10			10
150/6"	22	31	6	8	10	12		14
175/7"	22	31	6	8	10	12		14
200/8"	30		8	10	12			18

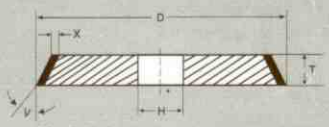
6A9



X = 1.5; 2; 3

D	T	U		E	K
75/3"	25	6		10	60
100/4"	30	6	10	10	80
125/5"	30	6	10	10	110
150/6"	35	6	10	10	135

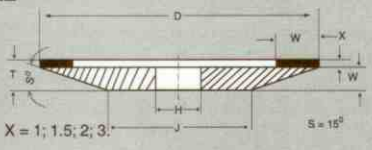
1V1



X = 2; 3; 4.

D	T					V				
50/2"	4	5	6	8	10	5^0	10^0	15^0	20^0	30^0
63/2.5"		5	6	8	10	5^0	10^0	15^0	20^0	30^0
75/3"		5	6	8	10	5^0	10^0	15^0	20^0	30^0
100/4"		5	6	8	12	5^0	10^0	15^0	20^0	30^0
125/5"			6	10	12	5^0	10^0	15^0	20^0	30^0
150/6"		6	10	12	15	5^0	10^0	15^0	20^0	30^0

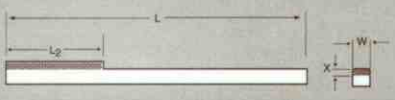
4A2



X = 1; 1.5; 2; 3.

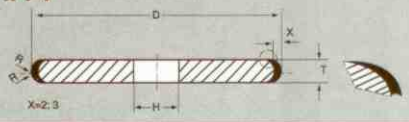
D	T-X	W					J
100/4"	7.5	3	4	5	6	10	50
125/5"	10.5	3	4	5	6	10	55
150/6"	13.5	3	4	5	6	10	55

Hand Hones



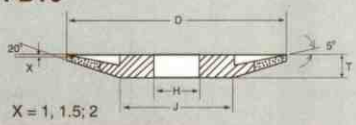
L2	W	X	L
25	10	1, 5, 2	125/150

IFF1



D	R	T
50/2"	1 to 6	2R
75/3"	1 to 6	2R
100/4"	1 to 6	2R
125/5"	1 to 6	2R
150/6"	1 to 6	2R

4 BT9



X = 1, 1.5; 2

D	T	W	J
75/3"	8	6, 10	37
100/4"	10	6, 10	50
125/5"	12	10	65

Marketing Codes

SD 150 R 100 B D1 1/8 PA

SUPERABRASIVES

- ND - Natural Diamond
- SD - Uncoated Synthetic Diamond
- ASD - 56% Nickle Coated Synthetic Diamond
- CSD - 50% Copper Coated Synthetic Diamond
- SSD - Synthetic Diamond forCarbide and Steel
- SD3 - 30% Nickle Coated Synthetic Diamond
- CBN - Cubic Boron Nitride (60% Nickle Coated)
- MSD - Metal Bond Synthetic Diamond

GRIT SIZE

46	100	180	320	600
60	120	220	400	800
80	150	240	500	1000

GRADE

J.L - Soft N.P - Medium R.S.T - Hard

CONCENTRATION

25 50 75 100 125

BOND TYPE

B - Resin M - Metal

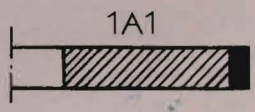
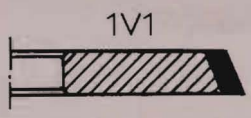
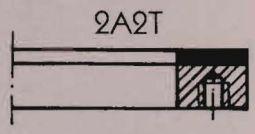
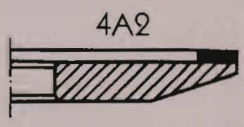
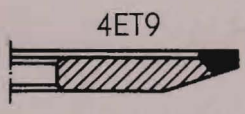
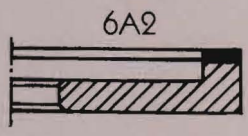
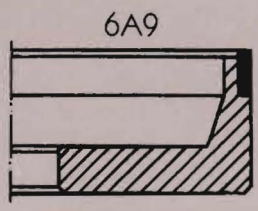
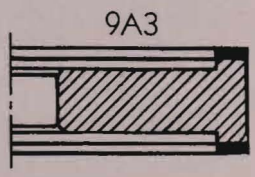
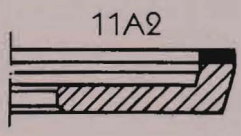
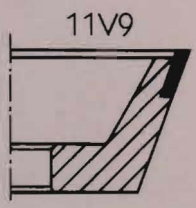
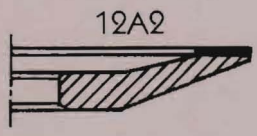
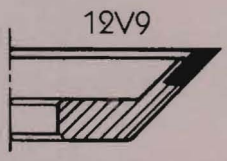
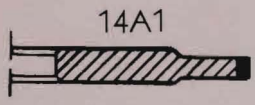
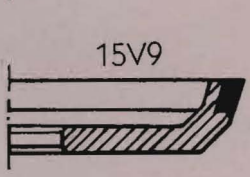
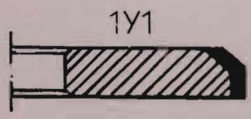
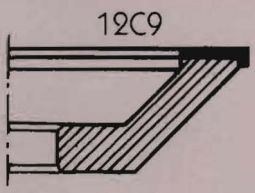
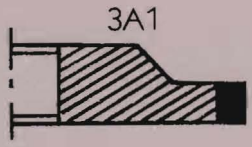
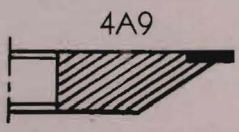
BOND MODIFICATION

D1 - 9 - Dry X230
W1 - 9 - Wet XBC
C - Copper E
} Electrolytic

DEPTH OF SUPERABRASIVES

1/16 1/8 1/4 1/2

CORE METERIAL

AB - Abrasive
BP - Black Plastic
PC - Plastic Copper
AL- Metal Aluminium
PA - Plastic Aluminium
ST - Steel

Standard range of Shapes