

DIAMOND AND CBN WHEELS

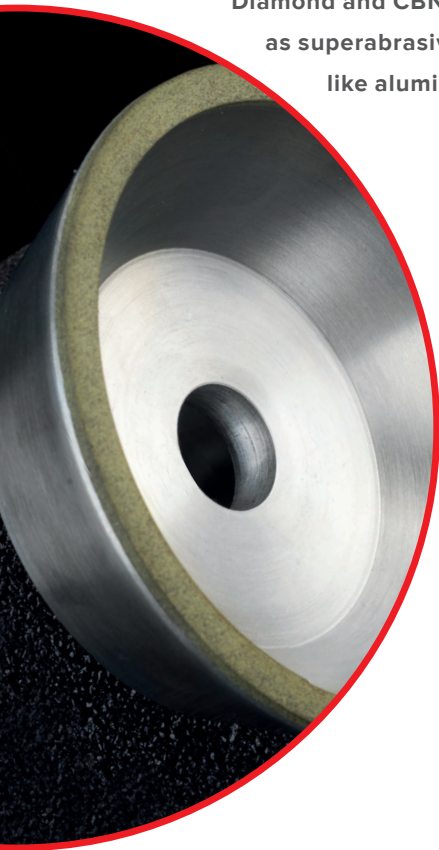
According
to **your**
needs



PRODUCER OF PROFESSIONAL ABRASIVE TOOLS

DIAMOND AND CBN WHEELS

Diamond and CBN (Cubic Boron Nitride) are very hard abrasive materials. Both are also known as superabrasives due to their excellent properties when compared with traditional abrasives like aluminum oxide or silicon carbide.



Fields of application:

- sharpening of cutting tools;
- grinding of hard materials;
- cutting-off with high efficiency.



Benefits:

- much longer life of the wheel;
- high efficiency;
- shorter cycle time;
- high durability;
- higher removal rate;
- lower grinding temperature.

DIAMOND

- due to its properties; high hardness and wear resistance it is a perfect abrasive material when grinding hard to grind materials;
- it is not recommended to use diamond wheel during grinding of steel.

Application



sintered carbides



natural stone



glass



cermets



cast iron



graphite



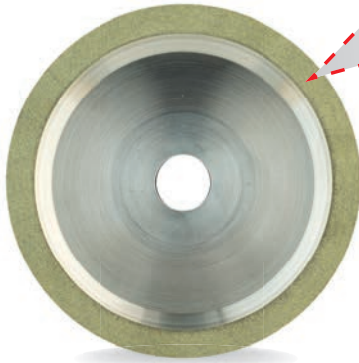
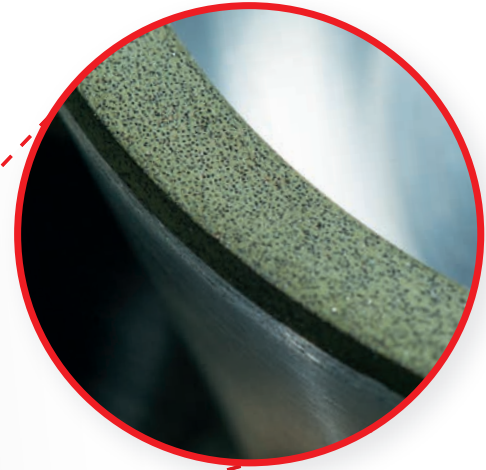
reinforced plastics



porcelain



PCD/PCBN



CBN

- similar to diamond it is achieved by high temperature and high pressure synthesis when soft hexagonal form of crystal structure is transformed to hard cubic form;
- hardness of CBN is slightly lower than diamond but its heat resistance and chemical passivity is higher instead, what makes it an ideal tool material for hard steel machining (over 50 HRC).

Application



tool steel



high speed steel (HSS)



high alloy steel



bearing steel



spring steel



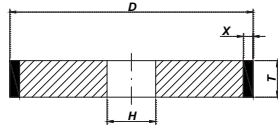
tungsten

DIAMOND AND CBN WHEELS

WITH RESIN BOND*

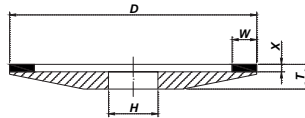
TYPE 1A1**

D	T	X
50	20	3 · 5
55	20	3
63	20	3
100	10 · 15 · 20	4
125	10 · 15 · 20	4
150	10 · 15 · 20	4
250	10 · 15 · 20	4



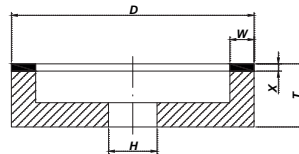
TYPE 4A2**

D	T-X	W	X
100	6	6 · 10	2 · 3 · 4
125	7	6 · 10	2 · 3 · 4
150	9	6 · 10	2 · 3 · 4



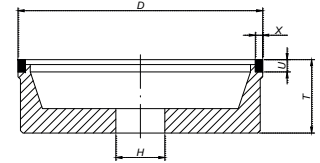
TYPE 6A2**

D	T-X	W	X
50	20 · 30	5	2 · 3 · 4 · 5 · 6
100	23	6 · 10	2 · 3 · 4 · 5 · 6
125	23	6 · 10 · 15	2 · 3 · 4 · 5 · 6
150	23	6 · 10	2 · 3 · 4 · 5 · 6
200	25	6	2 · 3 · 4 · 5 · 6



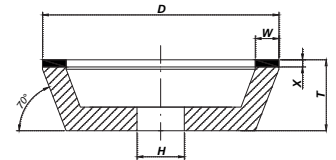
TYPE 6A9**

D	T	X	U
100	30	3	10
125	30	3	10
150	35	3	10



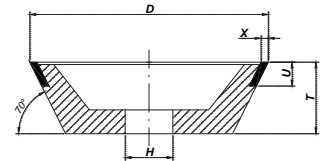
TYPE 11A2**

D	T-X	W	X
75	20	4,5	2 · 3 · 4 · 5 · 6
100	23	6 · 10	2 · 3 · 4 · 5 · 6
125	23	6 · 10	2 · 3 · 4 · 5 · 6
150	23	6 · 10	2 · 3 · 4 · 5 · 6



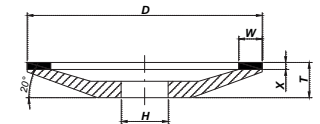
TYPE 11V9**

D	T	X	U
75	30	3	10
100	35	3	10
125	40	4	10



TYPE 12A2-20°**

D	T-X	W	X
100	10	6 · 10	2 · 3 · 4
125	14	6 · 10	2 · 3 · 4
150	16	6 · 10	2 · 3 · 4

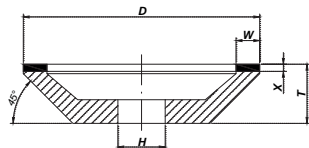


* individual request also possible

** diameter of hole on request

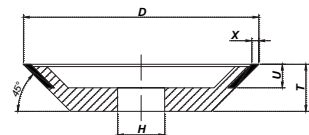
TYPE 12A2-45° **

D	T-X	W	X
100	23	6 · 10	2 · 3 · 4
125	23	6 · 10	2 · 3 · 4
150	23	6 · 10	2 · 3 · 4



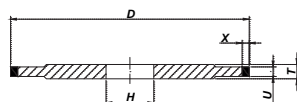
TYPE 12V9**

D	T	X	U
100	20	3	10
125	25	3	10



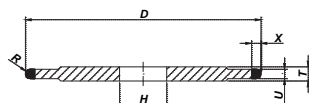
TYPE 14A1**

D	U	X	T
200	2 · 3,2 · 3,5	5	8



TYPE 14F1**

D	U	X	T
200	1,3 · 2 · 2,5	5/8	8

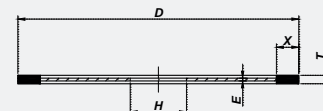


DIAMOND AND CBN WHEELS

ELECTROPLATED **

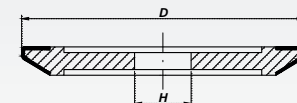
TYPE 1A1R**

DIAMOND WHEEL			
D	T	X	E
180	3	5	1,7
180	3,7	5	2,4
230	3	5	1,7
230	3,7	5	2,4



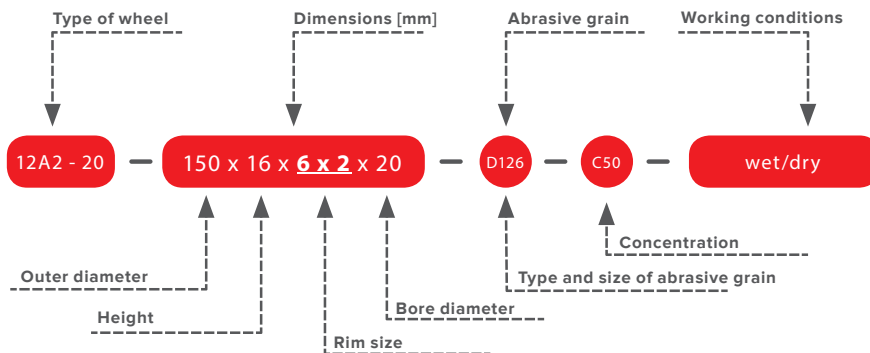
Sharpening of saw blades

CBN WHEEL			
D	H	grain size	saw profile
127	12,7 · 20	B126 · B151	10/30 (summer profile) 9/29 (winter profile)
150	20	B126 · B151	10/30 (summer profile) 9/29 (winter profile)
203,2	25,4 · 32	B126 · B151	10/30 (summer profile) 9/29 (winter profile)
350	127	B126 · B151	10/30 (summer profile) 9/29 (winter profile)



HOW TO ORDER?

- 1 Select the type of wheel you are interested in.
- 2 Select dimensions and technical characteristics according to the scheme below:



- select appropriate wheel type;
- decide about dimensions: outer diameter, height, size of abrasive layer (rim) and bore diameter;
- select type and size of abrasive grain according to the table: „Type and size of abrasive grain“;
- select concentration according to the table: „Concentration“;
- decide whether the wheel will work wet or dry.

- 3 Send your order by e-mail or fax to Export Department:

- e-mail: inquiries@andre.com.pl
- tel: **+48 63 26 26 360; 301; 343**
- fax: **+48 63 26 26 323**

- ? Do you need any help in technical matter? Please contact Customer Service Department:

- e-mail: tok@andre.com.pl
- tel: **+48 63 26 26 365**
- fax: **+48 63 26 26 323**



Type and size of abrasive grain

Appropriate selection of type and size of superhard abrasive grain guarantees optimal grinding wheel operation and required surface quality. The smaller the grain size, the better the surface roughness.

Type of grinding	FEPA designation		Grain size [μm]	MESH
	Diamond	CBN		
Rough	D181	B181	180 - 150	80 / 100
Medium	D151	B151	150 - 125	100 / 120
	D126	B126	125 - 106	120 / 140
Fine	D107	B107	106 - 90	140 / 170
	D91	B91	90 - 75	170 / 200
	D76	B76	75 - 63	200 / 230
Very fine	D64	B64	63 - 53	230 / 270
	D54	B54	53 - 45	270 / 325
	D46	B46	45 - 38	325 / 400

Concentration

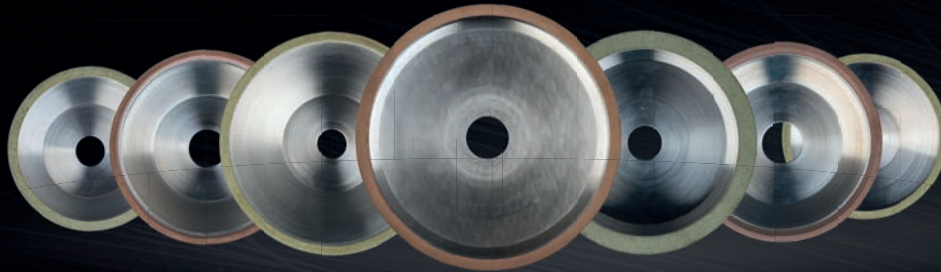
Concentration affects tool life and material removal rate. High concentration is recommended during profile grinding as well as in case of large size grains or hard bond. In case of very fine grains or wide rim, low concentration is recommended.

Diamond	
Concentration	Quantity [carat/cm ³]
C50	2,2
C75	3,3
C100	4,4
C125	5,5

CBN	
Concentration	Quantity [carat/cm ³]
V120	2,09
V180	3,13
V240	4,18
V300	5,22



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