

pdtools
SUPERABRASIVES



VITRIFIED BONDED CBN GRINDING WHEELS

Vitrified bonded CBN grinding wheels

The Application Area

- cylindrical grinding, flat grinding, internal grinding operations
- producing of details for bearing industry etc.
- sharpening of metal cutting tools
- gear-grinding operations
- thread-grinding operations
- producing parts for turbine etc.

Main Processed Materials

- instrument steel (P18, P6M5 etc.)
- bearing steel
- titanium alloy
- heat-resistant steel
- alloy-threaded steel



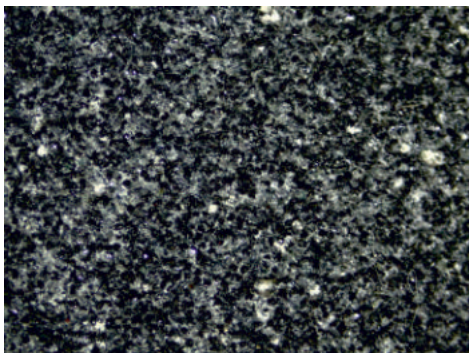
Recommendations for Wheel's Hardness Selection

Table 1. Types of hardness

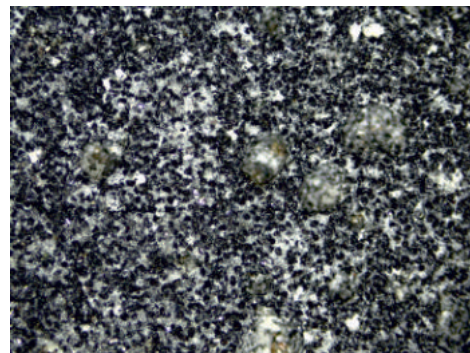
Group of Hardness	Designation in accordance with ISO Standards
Soft	J
	K
	L
Medium-soft	M
	N
	O
Hard	P
	Q
	R
	S

Main Rules for Vitrified Bonded Grinding Wheels Hardness Selection

1. Grinding of hard materials – soft bond.
The soft bond also could be used for grinding of soft and yielding materials, such as heatproof and nonferrous alloys.
2. For rough grinding should be used wheels with harder bond.
3. In case of speed rising client should decrease the hardness of the bond.
4. In case of large contact of grinding wheel with processed surface should be used softer bond.



VBA05 - normal porosity



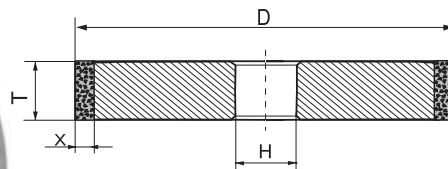
VBB05 - extended porosity

Grit and bond hardness recommendations for vitrified bonded wheels

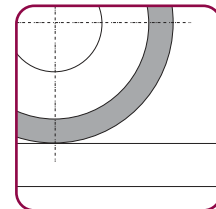
Grinding method	Grit size	Hardness
Surface grinding: Peripheral grinding, Ra 0,32 - 1,25 Face grinding, Ra 0,16 - 0,63	B91...B126 B54...B76	L-M K-L
Internal grinding:	B64...B126	O-R
Cylindrical grinding: In-feed grinding, Ra 0,32 - 1,25 Traverse grinding Ra 0,16- 0,63	B126...B151 B54...B107	N-O M-N
Gear grinding: Module < 3 mm Module > 3 mm	B76...B91 B107...B151	L-N K-M
Thread grinding: Pitch of thread 0,5-0,8 mm Pitch of thread 0,8-1 mm Pitch of thread 1-1,5 mm Pitch of thread > 1,5 mm	B16...B25 B25...B40 B40...B54 B54...B76	P-S O-P M-N L-N

1A1 STRAIGHT GRINDING WHEELS

- Grinding wheels are used for surface, cylindrical, ID and centerless grinding of forged, cemented, bearing, heat-resistant, tool, alloyed, high-speed steels etc.



1A1 D*T*X*H



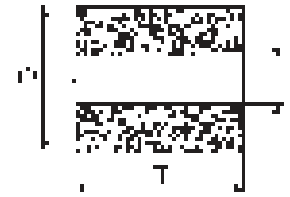
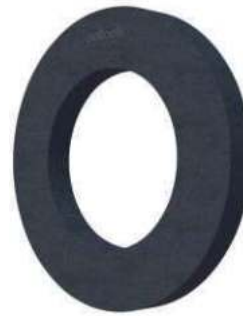
Flat surface grinding

Catalog number	D, mm	T, mm	X, mm	H, mm
K-0085	125	10	5	32
K-0124	20	30	5	10
K-0125	30	30	5	10
K-0126	32	20	5	10
K-0123	20	30	3	10
K-0127	35	32	5	10
K-0129	40	20	5	10
K-0130	40	32	5	20
K-0115	50	40	5	20
KD0119	60	50	5	32
K-0118	60	40	5	20
K-0117	60	32	5	20
K-0116	60	20	5	32
KB0085	125	4	5	32
KB0148	100	20	5	32
K-0120	70	20	5	20
K-0068	125	20	5	32
KG0055	150	20	5	32
K-0055	150	10	5	32
KD0004	200	8	5	32
K-0004	200	10	5	32
KB0036	200	10	10	32
K-0002	200	20	5	32
KL0036	200	20	10	32
KJ0011	250	20	10	76
KL0011	250	25	10	76
KD0011	250	16	10	76
K-0011	250	20	5	76
KB0003	300	13	5	127
K-0318	300	20	10	127
K-0320	300	40	10	127
K-0013	350	20	5	127
K-0319	350	20	10	127
K-0321	350	40	10	127
K-0199	400	20	10	203
K-0198	400	20	10	127
K-0200	400	40	10	203
K-0200	400	40	10	127
K-0203	450	40	5	127
K-0205	500	50	6	203

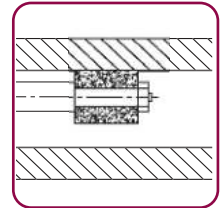
Customer-specific and other grinding tools can be produced on request.

A8 STRAIGHT FLAT GRINDING DIAMOND WHEELS

- Grinding wheels are used for internal (ID) grinding of forged, cemented, bearing, heat-resistant, tool, alloyed, high-speed steels etc.



A8 D*T*H



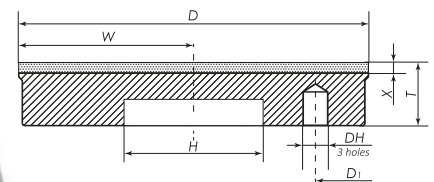
Internal grinding

Catalog number	D, mm	T, mm	H, mm
K-0185	10	10	4
KD0185	10	14	4
KB0192	12	18	4
KG1791	15	20	5
KB1791	15	25	5
KD0223	18	20	6
Kb0113	25	30	6
K-0121	12	20	5
KG0192	12	16	4
KB0038	10	18	3
KB0023	6	10	3
K-0255	4	10	1,6
K-0256	5	10	2,6
K-0257	6	10	2,6
KB0022	8	14	3
K-0038	10	10	3
K-0039	15	10	4
K-0122	15	18	4
K-0223	20	20	6
K-0195	20	20	8
K-0007	25	20	10
K-0132	30	30	10
K-0128	35	35	10
KB0025	40	40	10
K-0131	60	32	20

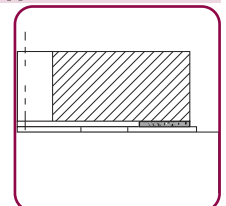
Customer-specific and other grinding tools can be produced on request.

6A2 FLAT RECESSED DIAMOND GRINDING WHEELS (PREMIUM LINE and STANDART)

- Grinding wheels are used for surface, cylindrical, face grinding of forged, cemented, bearing, heat-resistant, tool, alloyed, high-speed steels etc.



6A2 D*W*X*T*H



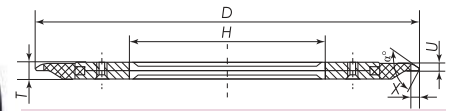
Face grinding

Code	D, mm	W, mm	X, mm	T, mm	H, mm
K-0062	100	15	10	40	20
K-0064	100	15	10	40	40
K-0067	125	5	10	40	40
K-0001	150	20	10	40	40
K-0033	150	20	10	40	40
K-0051	150	15	10	40	40

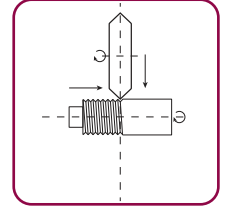
Customer-specific and other grinding tools can be produced on request.

1E6Q

- Grinding wheels are used for grinding of metric, pipe, trapezoidal (tapered), buttress threads of different hard steels etc.



1E6Q D*T*U*X*α°*H



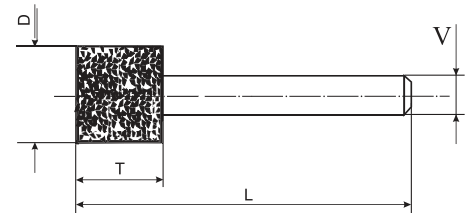
Thread grinding

Code	D,mm	T,mm	U,mm	X,mm	α°,mm	H,mm
K-0014	400	14	10	4	40	203
K-0015	400	14	10	4	60	203
K-0016	400	14	10	4	90	203
K-0017	400	14	10	6	40	203
K-0018	400	14	10	6	60	203
K-0019	400	14	10	6	90	203

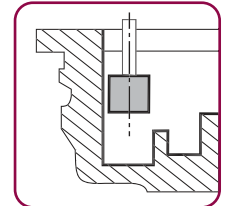
Customer-specific and other grinding tools can be produced on request.

AW CYLINDRICAL DIAMOND POINTS

- Grinding of cylindrical surfaces.
- The diamond layer is made of diamond grinding powder and micropowders with metal or resin bonds.
- For metal bonded tools coolant is required.
- Hollow teeth grinding.
- Inner diameter grinding of hard metal, HSS and nonmetal workpieces.



AW D*T*V*L



Internal grinding

Catalog number	D, mm	T, mm	V, mm	L, mm
K-0322	4	10	1,6	50
K-0323	5	10	2,6	50
K-0324	6	10	2,6	50

Customer-specific and other grinding tools can be produced on request.