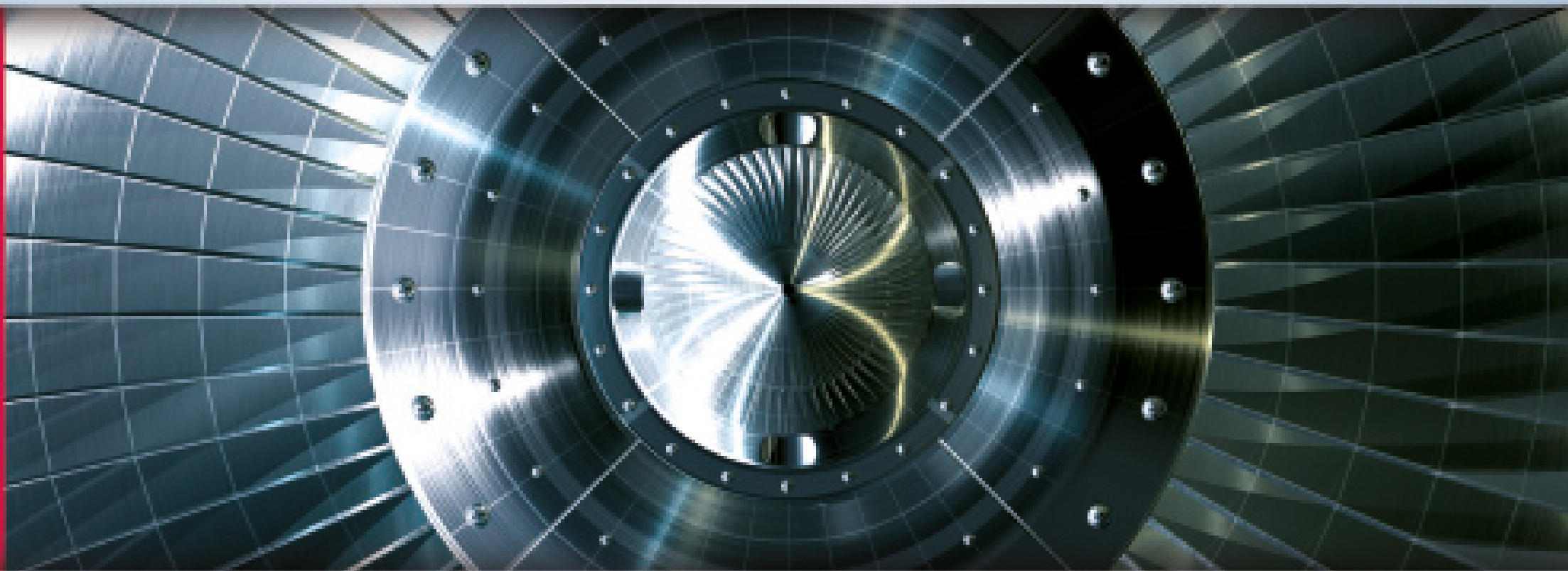


Dorfner Seit 1927
Schleifmittelwerk GmbH



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Dorfner is present everywhere where there are extreme conditions.

The right composition - the best grinding result.

Dorfner

Dorfner is a medium-sized premium manufacturer of high-quality wheels. We are part of a small, dynamic group of family-owned and operated Wuppertal companies which include Michael Clauberg Schleifmittelfabrik GmbH and Lauterjung & Tesche Schleifmittelfabrik GmbH.

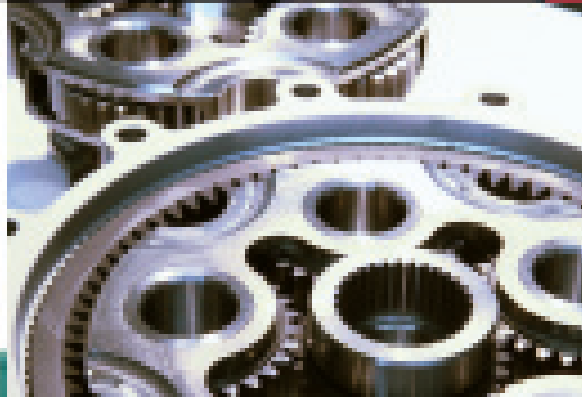
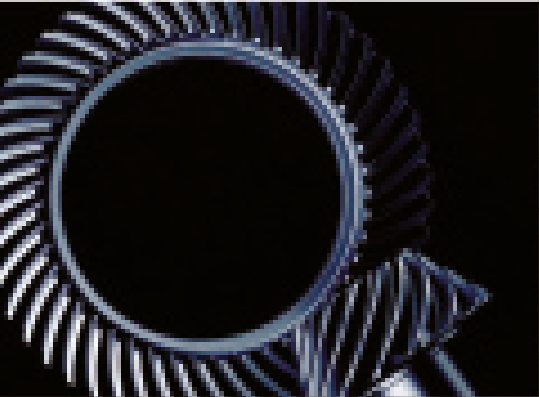
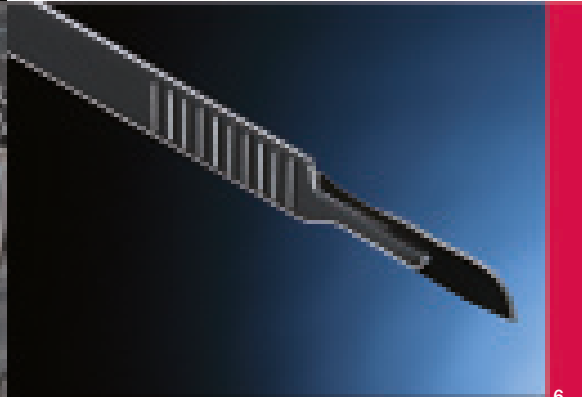
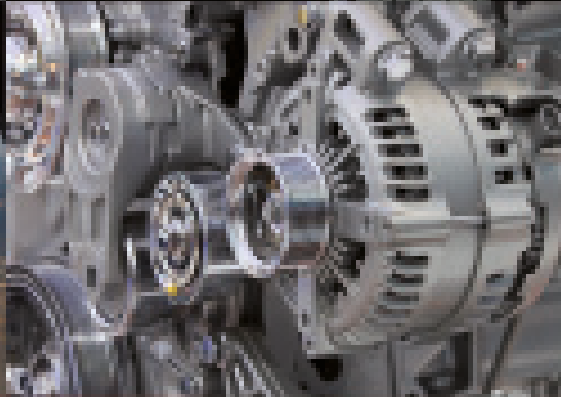
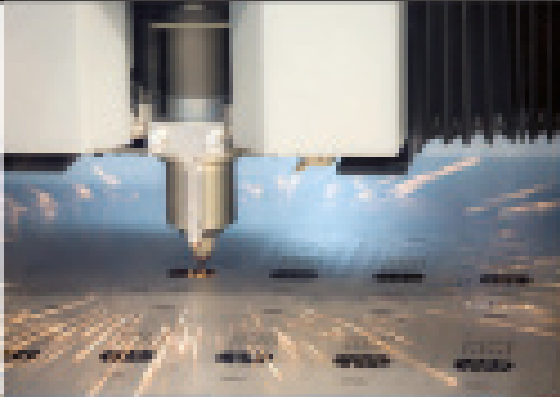
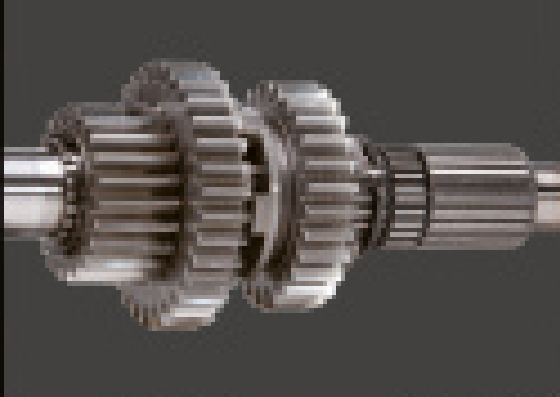
Dorfner is a worldwide specialist for:

- cast ceramic wheels (Ø up to 915 mm)
- pressed grinding wheels (Ø up to 900 mm)
- grinding wheels with a width of up to 400 mm
- high-performance CBN and diamond wheels
- shortest possible delivery times

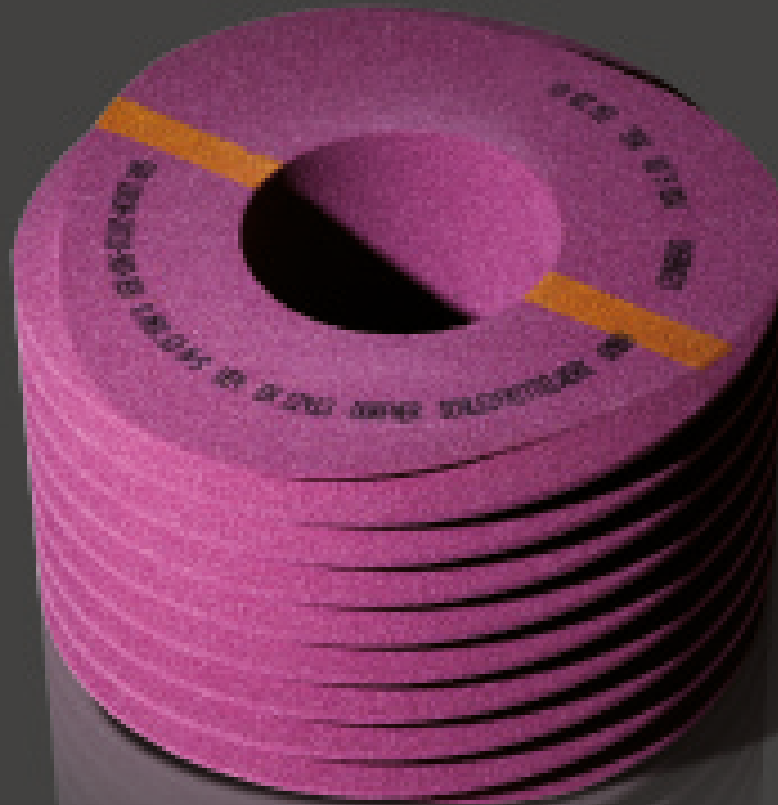
The right combination – the best possible grinding results,
versatility, flexibility and satisfied customers.

The superior performance of Dorfner grinding wheels result from the ideal combination of raw materials, bond variations, firing processes and fillers.

The possibilities for achieving different grinding wheel qualities are almost unlimited.



The trick is



finding the best formula for each application.

Pressed products

Identification of pressed Dorfner grinding wheels
(using 1A46-K10-VAX as example)

internal designation	international designation							internal designation		
↓ grinding material ↓		grain size		hardness		structure	bonding			
1A		46		K		10	V	AX e.g. bonding composition		
1A	= EK pink	20	rough	G	soft	1	dense		V = ceramic	
2A	= EK white	24		H		2			B = Bakelite	
3A	= EK ruby	30		I		3			R = rubber	
4A	= EK white/blue corund	36	medium	J	medium	4				
5A/5A88	= monocrystal corund	40		K		5				
6A	= EK special mixture	46		L		6				
50A	= special corund	(54)		M		7			open	
60A	= special corund	60				8				
83A	= sintered corund	(70)	N	9						
1C	= SC green	80	fine	O	hard	10				
5B	= CBN	90		P		11				
1D	= diamond	100		Q		12				
		120		R		13				very open
		150		S		14				
		180				15				
		220				16				
		230		17						
		240	very fine	18						
		280		19						
		320		20						



Cast products



Identification of cast Dorfner grinding wheels
(using EK80-C4-V as example)

grinding material	grain size	-	structure	hardness	bonding
EK	80	-	C	4	V
EKE = monocrystal corund	36			1 = very soft	ceram.
EK = special corund pink	46			2	
SC = silicon carbide green	60			3	
	80			4	
	120			5	
	150			6	
	180			7	
	200			8	
	240			9	
	320			10 = very hard	

EK80 – 7-V open structure
 EK80 – K6-V medium structure
 EK80 – C4-V dense structure

Dorfner – materials of the very finest quality





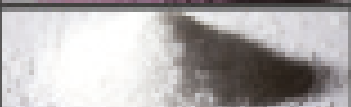





Dorfner grinding raw materials and their uses

grinding material	DGS abbreviated ID	application
fine corund pink	1A, EK	non-and low-alloy steel,
sintered corund	80A-85A	mostly hardened, but also non-hardened steel, hard chrome
fine corund white	2A	special non-hardened steel,
sintered corund/special corund	83A, 50A, 60A	but also non-alloyed hardened steel
fine corund ruby	3A	high-alloy steel
monocrystal corund	5A, 5A88, EKE	hardened and non-hardened,
sintered corund/special corund	80A-85A, 50A, 60A	especially with face grinding
corund special mixture	6A	universal application up to high-quality steel, especially with cylindrical
sintered corund/special corund	80A-85A, 50A, 60A	grinding between points and centreless
silicon carbide green	1C, SC	high-alloy steels, especially cylindrical grinding, cast-iron, non-ferrous metals
cubic boron nitride	5B	hardened steels from 58 HRC PM steels
diamond	1D	hard metal, ceramics, glass

grain size to FEPA	med. grain Ø [mm]	achievable edge radius [mm]
20	1.095	1.2
24	0.775	0.8
30	0.650	0.7
36	0.545	0.6
46	0.385	0.4
60	0.273	0.3
70	0.230	0.25
80	0.193	0.2
90	0.163	0.18
100	0.137	0.15
120	0.115	0.12
150	0.089	0.1
180	0.075	0.09
220	0.063	0.07
240	0.045	0.06
320	0.033	0.05
500	0.019	0.03

Dorfner grinding raw materials

raw materials	average purity	characteristics	
normal corund	95.5% Al_2O_3	tough, hard	
semi-fine corund	97.5% Al_2O_3	tough, effective cutting	
special corund, pink	99.5% Al_2O_3 + 0.25% Cr_2O_3	brittle, hard, effective cutting	
special corund, dark red	97.8% Al_2O_3 + 2.0% Cr_2O_3	tough, hard	
special corund, white	99.8% Al_2O_3	brittle, hard, very effective cutting	
sintered corund	96.8% Al_2O_3	very tough very cutting, microcrystalline	
monocrystal corund	99.6% Al_2O_3	very hard, tough, effective cutting	
silicon carbide, green	99.5% SiC	brittle, very hard	

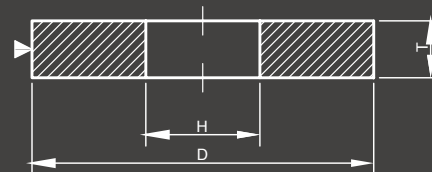
Grinding body shapes

We manufacture grinding bodies to DIN EN 12413 up to an external diameter of 900 mm.

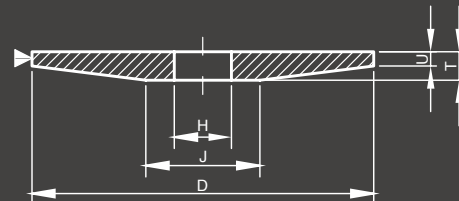
All standard shapes in accordance with ISO 525 are possible.

Non-standardised wheel shapes can be manufactured to customer requirements using drawings.

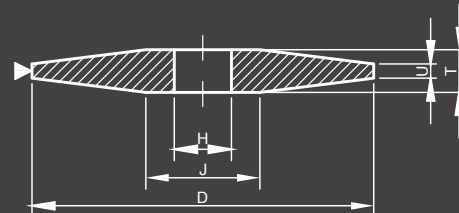
Shape 1



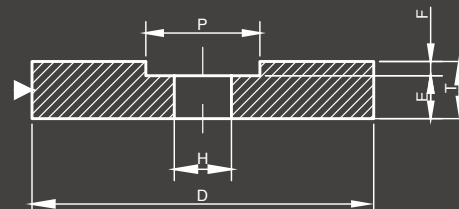
Shape 3



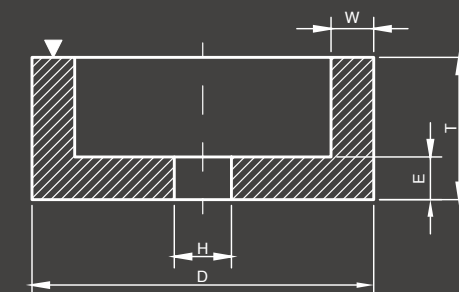
Shape 4



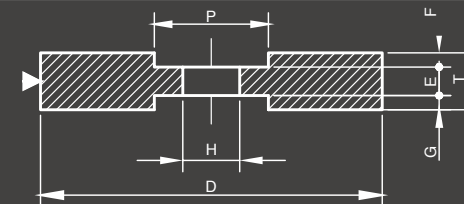
Shape 5



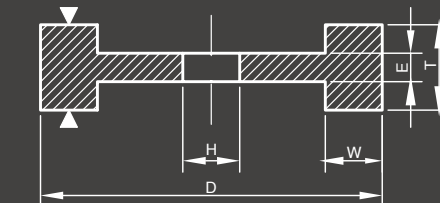
Shape 6



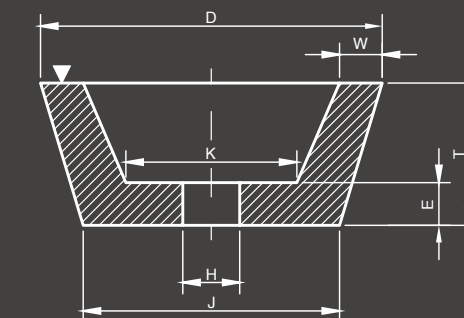
Shape 7



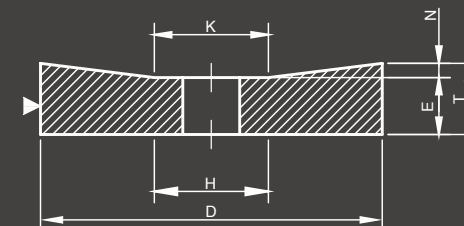
Shape 9



Shape 11



Shape 20



Cutting speeds

dependent on diameters (mm) and speeds (revolutions per minute)

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





Cutting speeds in m/s

dia in mm	15 m/s	20 m/s	25 m/s	30 m/s	35 m/s	40 m/s	50 m/s	63 m/s	80 m/s	100 m/s	125 m/s	140 m/s
10	28274	37699	47124	56549	65973	75398	94248	118752	150796	188495	235619	263894
20	14137	18850	23562	28274	32987	37699	47124	59376	75398	94248	117810	131947
30	9425	12566	15708	18850	21991	25133	31416	39584	50265	62832	78540	87965
40	7069	9425	11781	14137	16493	18850	23562	29688	37699	47124	58905	65973
50	5655	7540	9425	11310	13195	15080	18850	23750	30159	37699	47124	52779
60	4712	6283	7854	9425	10996	12566	15708	19792	25133	31416	39270	43982
70	4039	5386	6732	8078	9425	10771	13464	16965	21542	26928	33660	37699
80	3534	4712	5890	7069	8247	9425	11781	14844	18850	23562	29452	32987
90	3142	4189	5236	6283	7330	8378	10472	13195	16755	20944	26180	29322
100	2827	3770	4712	5655	6597	7540	9425	11875	15080	18850	23562	26389
150	1885	2513	3142	3770	4398	5027	6283	7917	10053	12566	15708	17593
200	1414	1885	2356	2827	3299	3770	4712	5938	7540	9425	11781	13195
250	1131	1508	1885	2262	2639	3016	3770	4750	6032	7540	9425	10556
300	942	1257	1571	1885	2199	2513	3142	3958	5027	6283	7854	8796
350	808	1077	1346	1616	1885	2154	2693	3393	4308	5386	6732	7540
400	707	942	1178	1414	1649	1885	2356	2969	3770	4712	5890	6597
450	628	838	1047	1257	1466	1676	2094	2639	3351	4189	5236	5864
500	565	754	942	1131	1319	1508	1885	2375	3016	3770	4712	5278
550	514	685	857	1028	1200	1371	1714	2159	2742	3427	4284	4798
600	471	628	785	942	1100	1257	1571	1979	2513	3142	3927	4398
650	435	580	725	870	1015	1160	1450	1827	2320	2900	3625	4060
700	404	539	673	808	942	1077	1346	1696	2154	2693	3366	3770
750	377	503	628	754	880	1005	1257	1583	2011	2513	3142	3519
800	353	471	589	707	825	942	1178	1484	1885	2356	2945	3299
850	333	444	554	665	776	887	1109	1397	1774	2218	2772	3105
900	314	419	524	628	733	838	1047	1319	1676	2094	2618	2932
950	298	397	496	595	694	794	992	1250	1587	1984	2480	2778

approximate rpm

Highest working speed and colour labelling

EN 12413 specifies labelling of the highest working speed (m/s) using colour strips. Information about the maximum permissible speed is related to the nominal wheel diameter.

blue	50 m/s	
yellow	63 m/s	
red	80 m/s	
green	100 m/s	
blue/yellow	125 m/s	
blue/red	140 m/s	



Quality and environmental protection



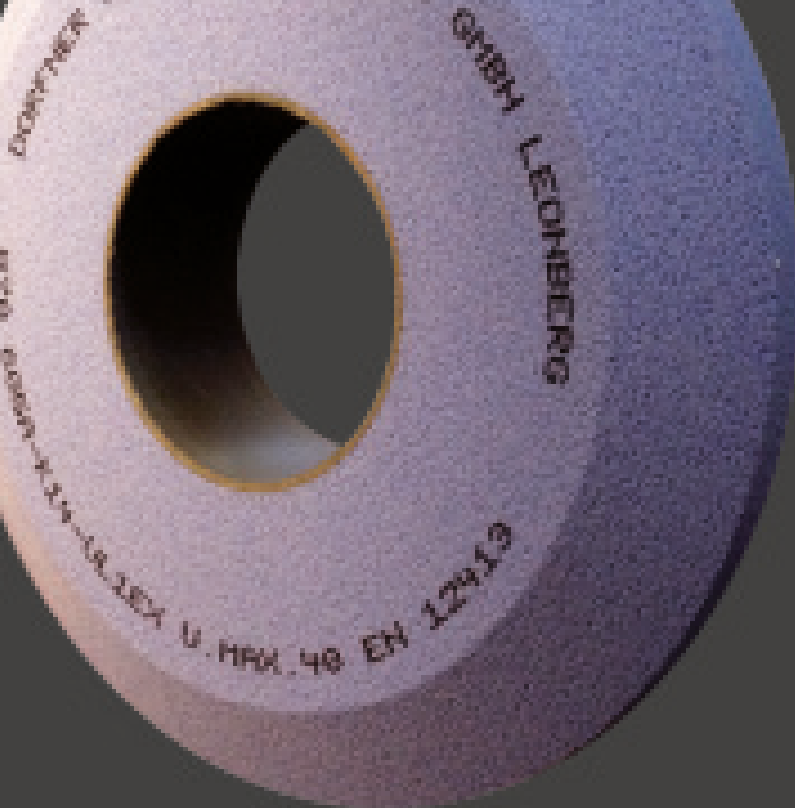
As an expert partner to the industry, it is our aim to permanently meet the continuously increasing requirements made by our customers. To this end we have been certified to DIN EN ISO 9001 by the Bureau Veritas Quality International. Regular interval audits in all sectors guarantee the high-quality and position of our products.

Our highly-qualified employees ensure a continuous high level of quality through their committed work and continuous further training. All products are subject to continuous quality checks - from incoming goods inspections through production sequence checks up to imbalance and strength checks.

We are aware of our responsibilities for the environment, and practice active environmental protection. We ensure that we play an important role in the retention and improvement of our environment from resource-saving production of grinding equipment up to the collection and recycling of all production remnants.

During our production, we do without environmentally-harmful and medically-damaging additives in order not to endanger the health of our customers. If you require, we can provide safety data sheets containing information on individual components for all our products.





Gear grinding



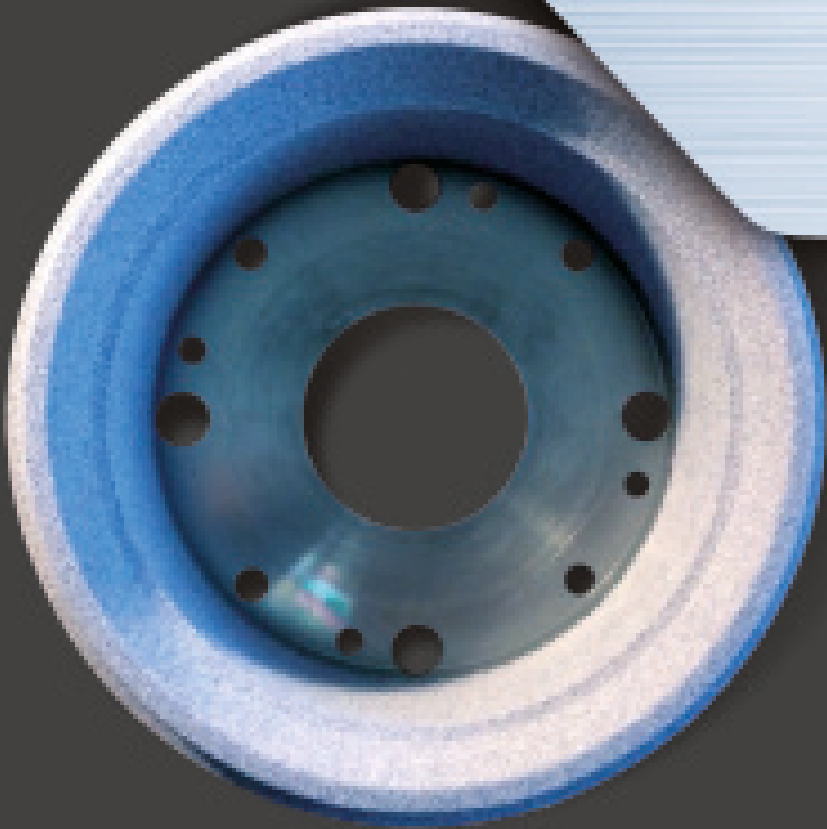
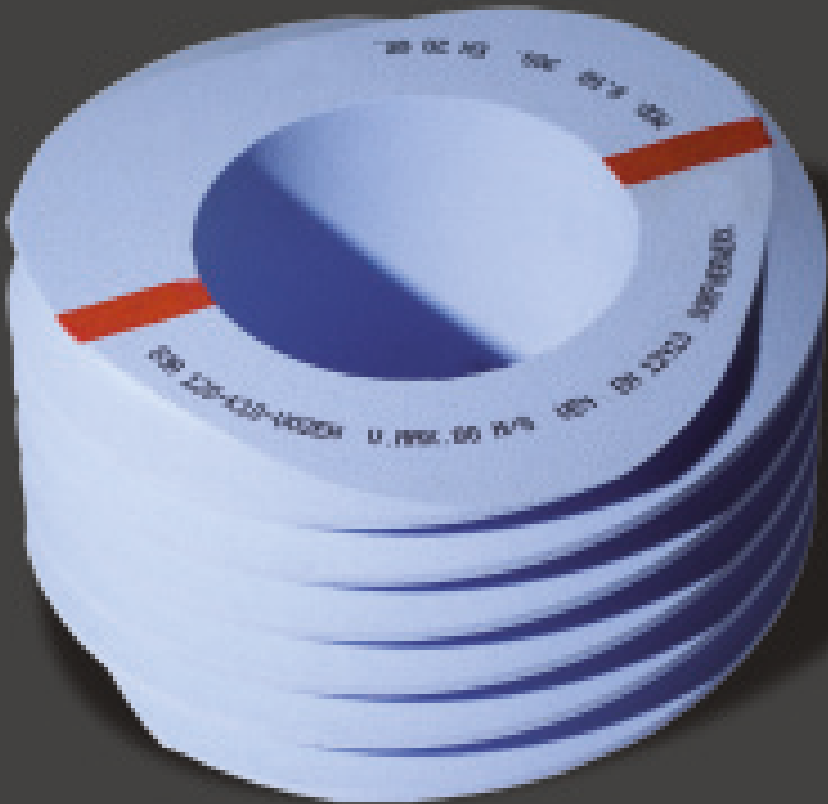
Profile grinding (e.g. Gleason-Pfauter, Klingelnberg (Höfler), Niles...)

dimensions Dia x D x H	specification	note
350/... x 40/10 x 127	std. perf.: 5A886060-JOT14-2VL3EX	bevels can be applied if requested (e.g. 50° or 60°), available at short notice.
350/... x 63/15 x 127	83A60-JOT14-VL1EX	
400/... x 45/10 x 127	83A605A-JOT14-VL1EX	
400/... x 60/15 x 127	high perf.: 5A886060-JOT14-4VL3EX	
400/... x 100/30 x 127	85A605A-K14-VL1EX	
450/... x 50/12 x 127	87A605A-K14-VL1EX	
450/... x 60/15 x 127		
450/... x 80/20 x 127	into the solid: 5A8860-JOT12-5VL3EX057	
450/... x 100/30 x 127		
450/... x 130/50 x 127		
grinding of internal gears (ring gears)		
400/... x 40/10 x 127	standard	bevels can be applied if requested (e.g. 50°, 60° or 70°), available at short notice.
	performance: 5A886060-JOT14-2VL3EX	
	83A46-JOT12-VL1EX	
83A46-JOT16-VM1EX002		
high		
performance: 85A465A-JOT14-VL1EX		



Continuous grinding (e.g. Gleason-Hurth, Niles, Reishauer, Liebherr...)

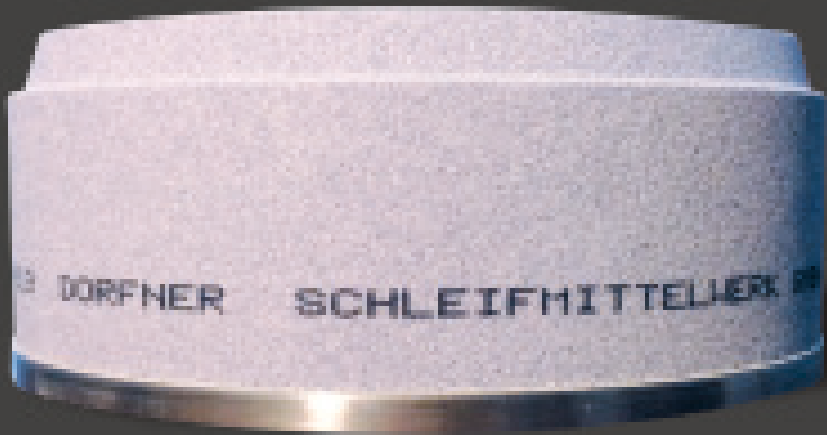
dimensions Dia x D x H	specification	note
275 x 125 x 160	module < 3: 32A120-K8-VEH	the wheels will be pre-profiled with one or more starts depending on your requirements, module 1-16 possible, please state pressure angle, number of starts and circumferential speed, available at short notice.
280-320 x 160 x 115	32A120-K10-2VL2EH	
300 x 125 x 160	5A88120-K14-10VR2EH	
350 x 84 x 160	83A120-K10-V02EH (sintered corund)	
350 x 104 x 160	module 3-6: 32A100-K10-V02EH	
350 x 160 x 160	83A100-K9-VL2EH (sintered corund)	
	module 6-12: 1A80-K10-V2EH	
	5A888060-K10-2VL3EH	
	50A80-K12-9V03EH	



Available pre-profiled and cemented on steel plate or pre-profiled without steel plate.

Bevel gear grinding (e.g. Gleason-Phoenix, Klingelnberg, ...)

specification	note
5A886060-L8-2V2EX	for grinding into the solid material of not hardened bevel gears, as well as rough and finish grinding of hardened bevel gears with the same specification.
83A1201A-K10-VEX	



material	example	specification	note
changing material		EK80-C4-V EK80-K4-V 2A60-M6-VAX SC320-3-V	predominantly non- and low-alloy, soft + hard, for workpiece $\emptyset < 25$ mm universal, non- and low-alloy, soft + hard, for workpiece $\emptyset > 25$ mm pre-grinding finishing wheel
non- and low-alloy steel soft and hardened	C45 (1.1191) 16 MnCr5 (1.7131) 100 Cr6 (1.3505)	6A60-L8-VAX EK80-C4-V 2A60-M10-VF1AX 2A80-K6-V2EX 6A80-O8-V2AX 83A80-K4-V2EX	scrub disc universal cool grind universal very edge-stable high cutting performance
high-alloy steel, soft and hardened	tool steels HSS powder steels 1.7131 1.7131, 1.2343 St 37, 1.2379 1.2343, 1.2344, 1.2067 1.2343, 1.2344, 1.2067	SC80-8-V SC80-9AE-V 5A60-K6-VEX 5A80-K6-V2EX 5A120-K6-V1EX 5A180-K8-V1EX 70A80-K10-V2EX 5A8880-K6-5V2EX 83A805A-JOT10-V2EX 83A805A-K10-VP2EX 83A120-K4-V1EX 81A150-K4-V1EX 5B91-K7-V240-2 8B91-RC-VC75W	for workpiece $\emptyset > 30$ mm for small workpiece \emptyset very edge-stable good surface finest surface rotors SK cone, HSK high cutting performance universal shafts, tools pin grinding pin grinding fine CBN for workpieces > 58 HRC CBN for workpieces > 58 HRC
stainless steel	1.4301 1.4110 (hardenable) 4021, 4462	SC 80-8-V 5A 80-M10-VK3EX 5A88605A-K10-5VP2EH	
nitrided steel		5A80-M8-V2A 5B91-K7-V240-2 8B91-RC-VC75W	untreated – soft CBN, nitrided CBN
cast material	gray cast iron GG ductile cast iron GGG	6A60-L8-VAX 2A60-N12-VP1NX	
hard chrome		EK80-K5-V EK80-K4-V	universal for workpiece $\emptyset < 70$ mm universal for workpiece $\emptyset > 70$ mm
hard metal		1D91-JOT12-VC75	diamond disc
technical ceramics		1D91-JOT12-VC75 1D46-JOT14-VC100-6	diamond disc
non-ferrous metals	aluminium, copper, bronze	on request	
plastics, rubber		on request	

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[illegible]

Further wheels available - see next page.

External cylindrical grinding between centers

Programme, second part. These wheels are available immediately.
We would be pleased to manufacture other dimensions and qualities.

dimensions dia x D x H	cutouts/shape dia x D	cast version	pressed version
400/200 x 40 x 127, 5° cone-shaped on one side	shape 20		5A60-K6-VEX 5A80-M8-V2AX
400 x 80 x 127	shape 1		6A60-L8-VAX 5A120-K8-V1EX
500/290 x 50 x 203.2, 5° cone-shaped on one side	shape 20	SC80-6-V	5A60-K8-VEX
500 x 50 x 203.2	shape 1	EK80-C4-V	1A120-K8-V1AX 2A80-K6-V2EX 5A8880-K6-5V2EX 5A120-K8-V1EX 6A60-L8-VAX 6A80-O8-V2AX 83A80-K6-V2EX 83A805A-K10-VP2EX 83A805A-JOT10-V2EX
500 x 80 x 203.2	shape 1		2A60-N12-VP1NX 5A8880-K6-5V2EX 83A805A-K10-VP2EX 83A805A-JOT10-V2EX
500 x 82 x 203.2	280 x 30, shape 5		6A60-L8-VAX
600 x 80 x 203.2	shape 1	EK80-C4-V	
750 x 100 x 304.8	shape 1	EK80-C4-V	6A80-K8-VEX

External cylindrical grinding centerless

material	example	specification	note
changing materials		EK60-K7-V 6A80-08-V2AX	scrubbing smoothing
non- and low-alloy steel, soft and hardened	C45 (1.1191) 16 MnCr5 (1.7131) 100 Cr6 (1.3505)	83A1001A-K7-VEH 83A801A-K4-V2EH	high cutting performance, good surface
high-alloy steel, soft and hardened	tool steels HSS powder steels	SC80-8-V SC80-9AE-V SC240-6-V	workpiece $\varnothing > 30$ mm small workpiece \varnothing fine surface
stainless steel	1.4301 1.4110 (hardenable)	SC80-8V SC80-9AE-V	workpiece $\varnothing > 30$ mm workpiece $\varnothing < 20$ mm
hard metal		1D76-JOT12-VC100-6	
technical ceramics		1D76-JOT12-VC100-6	
non-ferrous metals	aluminium, copper, bronze	SC60-7-V SC80-8-V	



Regulating/control wheels

rubber-bonded regulating wheels	A90-R-R	universal application
ceramic-bonded regulating wheels	A80/5-Z1-V25	e.g. small workpiece \varnothing

Reciprocating surface grinding




material	example	specification	note
changing materials		3A46-JOT7-VAX 5A46-K14-VG1AX 2A80-M12-VB3AX 83A46-JOT10-VEX	universal application universal application finishing wheel, good surface high-performance sintered carborundum for highest cutting performance
non- and low-alloy steel	CK45 (1.1191)	2A30-M10-VAX EKR46-K5-V	universal scrub disc universal application
soft	St 37 (1.0252) St 52-2 (1.0421)	2A80-M12-VB3AX EK120-K3-V	very edge-stable for prefabricated grooves and surfaces finishing wheel
non- and low-alloy steel hardened	16 MnCr5 (1.7131) 100 Cr6 (1.3505) 90 MnCrV8 (1.2842)	EK46-K5-V 2A46-K10-VAX 3A46-JOT7-VAX 2A80-M12-VB3AX EK120-K3-V 70A46-K14-VD1EX 83A4688-JOT12-7VEX35/35	universal application very edge-stable for prefabricated grooves and bevelling finishing wheel
high-alloy steel, soft	1.2080 1.2379	5A46-K14-VG1AX 83A46-JOT12-VEX 5A60-JOT10-VEX 5A100-K10-VAX	universal application, good removal rate very edge-stable, for prefabricated grooves and bevelling finishing wheel
high-alloy steel, hardened	1.2080 1.2379 1.2436 PM steels 1.2080	EKE46-K3-V 3A46-JOT7-VAX 5A60-JOT10-VEX 5B91-K6-V240-2 83A465A-K14-VG1AX 83A605A-K14-VG1AX 83A1205A-JOT10-V1EX 60A465A-K14-8VG1AX 83A6088-JOT12-7V1EX 83A10088-K10-7VAX 5A8846-JOT12-5VG1EX 5A88120-K6-5V1EX	scrub disc scrub disc CBN narrow grooves, sharp corners
SS and HSS	13343	5B91-K6-V240-2 5A80-K10-VK3AX 5A100-K10-VAX	CBN very edge-stable finishing wheel
nitrided steel		EK60-K4-V 5A80-K10-VK3AX 5B91-K6-V240-2	hardness up to 63 HRC finishing wheel CBN, hardness > up to 63 HRC
casting	Grey cast iron up to approx. 250 HB hard casting above 250 HB	EKR46-K5-V 2A46-JOT14-VD1EX 5A466A-JOT18-VD15AX 5A46-K14-VG1EX 8A60-JOT12-VD1EX SC80-K3-V	universal wheel for high cutting performance slideway grinding cast and steel scrub disc for high cutting performance finishing wheel
hard metal		SC80-K3-V SC180-K3-V 1D91-JOT12-VC75-6	diamond disc
non-ferrous metals	ALU alloy brass copper	6A46-Jot14-VD1EX 70A46-K14-VD1EX 2A150-I10-V1EX SC80-K3-V EK80-K3-V	scrub disc for high cutting performance long profile bars, Diaform good surfaces finishing wheel
spring steel	54 SiCr6	5A8846-L14-5V1EX	spring ends, cool grind

These wheels are available immediately. We would be pleased to manufacture other dimensions and qualities.



Reciprocating profile surface grinding



material	profile shape example	open  grain size 60-80	radii > 0.2 mm  grain size 100-150	radii > 0.2 mm  grain size 180-320
non- and low-alloy steel, soft	St 37 St 52 (1.0413) CK 45 (1.1191)	EK60-K4-V EK80-K2-V 2A80-M12-VB3AX	2A100-L10-VAX EK120-K3-V 2A120-J0T8-V1EX	EK200-K3-V EK320-B5-V
non- and low-alloy steel, hardened	16 MnCr5 (1.7131) 100 Cr6 (1.3505)	EK80-K2-V 2A80-L12-VB3AX	1A100-K10-VAX EK80-K2-V 2A120-J0T8-V1EX	EK200-K3-V EK320-B5-V
high-alloy steel, soft	1.2379 1.2436	5A80-K10-VK3AX	5A100-K10-VAX	EK200-K2-V EK320-B5-V
high-alloy steel, hardened SS and HSS	1.2379 1.2080 1.3343	5A80-J0T12-VK3EX 5A80-K12-VK3AX	5A100-J0T10-VEX 5B91-K6-V240-2 81A1205A-J0T8-V1EX	EK200-K2-V EK320-B5-V
changing materials		EK80-K2-V 2A80-M12-VB3AX	EK120-K2-V 2A120-J0T8-V1EX 5A150-J0T4-V1AX	EK200-K2-V EK320-B5-V

These wheels are available immediately. We would be pleased to manufacture other dimensions and qualities.

dimensions dia x D x H	cutout / shape dia x D	cast version	pressed version
225 x 6 x 51	shape 1	EK120-K2-V	
225 x 8 x 51	shape 1	EK120-K2-V	
225 x 10 x 51	shape1	EK80-K2-V EK120-K2-V EK200-K2-V	1A100-K10-VAX 5A100-K10-VAX
225 x 12 x 51	shape 1	EK120-K2-V	
225 x 16 x 51	shape 1	EK80-K2-V EK120-K2-V EK200-K2-V	1A100-K10-VAX 5A100-K10-VAX 4A150-N4-V1AX 5A180-JOT4-V1AX
225 x 20 x 51 and 225 x 25 x 51	shape 1	EK80-K2-V EK120-K2-V EK120-K3-V SC80-K3-V	2A80-M12-VB3AX 2A120-JOT8-V1EX 5A80-K10-VK3AX 5A100-K10-VAX 5A100-K12-VAX 5A180-JOT4-VAX 81A12088-K12-9V1EX
225 x 30 x 51	120 x 5, shape 5	EK80-K2-V EK120-K2-V	
225 x 35 x 51	120 x 10, shape 5	EK80-K2-V	
250 x 10 x 51	shape 1	EK80-K2-V EK120-K2-V EK200-K2-V	5A100-K10-VAX 2A120-JOT8-V1EX
250 x 12 x 51	shape 1	EK120-K2-V	
250 x 16 x 51	shape 1	EK120-K2-V	4A150-N4-V1AX 2A120-JOT8-V1EX 5A100-K10-VAX
250 x 20 x 51	shape 1		5A100-JOT12-VEX
250 x 20 x 51 and 250 x 25 x 51	shape 1	EK80-K2-V EK120-K2-V EK200-K2-V EK320-B5-V	2A80-M12-VB3AX 2A120-JOT8-V1EX 2A220-I8-V1EX 5A80-JOT8-V2EX 5A80-K10-VK3AX 5A100-JOT12-VEX 5A100-K10-VAX 5A150-JOT4-V1AX 5A180-JOT-V1AX 81A12088-K12-9V1EX
250 x 30 x 51	120 x 5, shape 5	EK120-K2-V	2A120-JOT8-V1EX
300 x 20 x 76.2	shape1	EK80-K2-V EK120-K2-V	
300 x 25 x 76.2	shape 1	EK120-K2-V	
300 x 30 x 76.2	shape 1	EK80-K2-V EK120-K2-V	2A80-M12-VB3AX 5A80-K10-VK3AX 5A100-K10-VAX 5A150-JOT4-V1AX 81A12088-K12-9V1EX
300 x 50 x 76.2	155 x 10, shape 5	EK120-K2-V	
300 x 50 x 76.2	155 x 10/10, shape 7		5A100-K10-VAX
400 x 40 x 127	shape 1	EK80-K2-V	5A80-K10-VK3AX 81A12088-K12-9V1EX

Profile surface grinding in full width

material	example	specification	note
universal application		2A60-JOT16-VM1EX 2A80-JOT16-VW3SX 2A100-JOT20-VH20EX	low-alloy, hard and soft low-alloy, hard wheels Ø > 400 mm and machines with powerful drives
non- and low-alloy steel, soft	9S 20K (1.0711) 16 MnCr5 (1.7131) C45 (1.119)	1A80-I12-VM3AX 1A80-JOT19-VR15AX 2A120-JOT14-VM2AX	for fine profile for open profile for fine profile
non- and low-alloy steel, hardened	90 MnCrV8 (1.2842) 100 Cr6 (1.3505) 16 MnCr5 (1.7131)	2A100-JOT20-VH20EX 5A120-JOT16-VR2EX 5A180-JOT16-VW2AX 85A805A-I16-VL3EX	for open profile for open profile for fine profile for open profile
high-alloy steel, soft	1.2080 1.2436	2A36-K19-VD1AX 9A100-JOT16-VM1AX 2A120-JOT15-VM2EX	for open profile for fine profile for fine profile
high-alloy steel, hardened	1.2379 1.2080	1C120-I18-VM2TX 1C180-I16-VW3TX	for open profile for fine profile
high-speed steels SS and HSS	1.3343	hardly machinable with conventional wheels; economical grinding only possible with boron nitrate (CBN), please ask our application technician.	

These wheels are available immediately.
We would be pleased to manufacture
other dimensions and qualities.

dimensions, dia x D x H	cutout / shape dia x D	cast version	pressed version
225 x 25 x 51	shape 1		2A80-JOT15-VW3SX 5A120-JOT14-VR2EX 1C180-I16-VW3TX
250 x 16 x 51	shape 1		5A120-JOT14-VR2EX
250 x 25 x 51	shape 1		2A100-JOT20-VH20EX 5A120-JOT14-VR2EX 1C180-I14-VW3TX 1C180-I16-VW3TX
250 x 30 x 51	120 x 5, shape 5		5A120-JOT14-VR2EX
300 x 30 x 76.2	shape 1		2A80-JOT16-VW3SX 5A120-JOT16-VR2EX 1C180-I16-VW3TX
400 x 40 x 127	shape 1		2A60-JOT17-VH1EX 2A80-JOT17-VW3SX 2A100-JOT20-VH20EX 5A120-JOT16-VR2EX 1C180-I18-VW3TX



Internal cylindrical grinding

The specification recommendation is mainly dependent on the coolant, grinding process and possible speed.

material	example	specification	note
changing materials		1A / EK 85A	predominantly non- and low-alloy, soft+hard sintered carborundum for high cutting
non- and low-alloy steel, soft and hardened	C 45 (1.1191) St 37 (1.0252) 16 MnCr5 (1.7131) 100 Cr6 (1.3505)	1A / EK	
high-alloy steel, soft	tool steels HSS powder steels	3A / 5A 85A	
hardened >58 HRC	tool steels HSS nitrided steels case-hardening steels	5B91-K8-V300-2 5B91-K6-V360-2 4B46-K6-V360-2 1C / SC	for grinding body Ø > 18 mm for grinding body Ø < 15 mm for grinding body Ø < 6 mm for surface < RT 1 µm only recommended for small dimensions
hard metal		1D / 80	diamond
technical ceramics		1D / 80	diamond



Grinding pencils

	grinding pencils and shaft diameters	pressed versions
roller pencils	10 x 12-6 x 40 16 x 20-6 x 40	EK60-N-V EK60-N-V
shaft taper pencils 60°	12 x 32-6 x 40 20 x 32-6 x 40 25 x 32-6 x 40	EK60-R-V EK60-R-V EK46-R-V

Small grinding bodies with continuous drill holes. If cutouts are stated, deliveries can also be made without these if required (85A only with cutout).

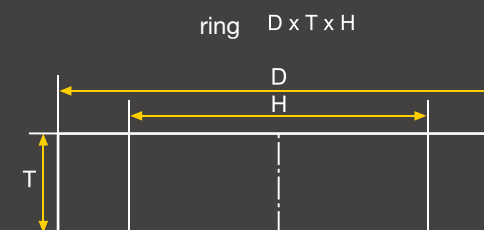
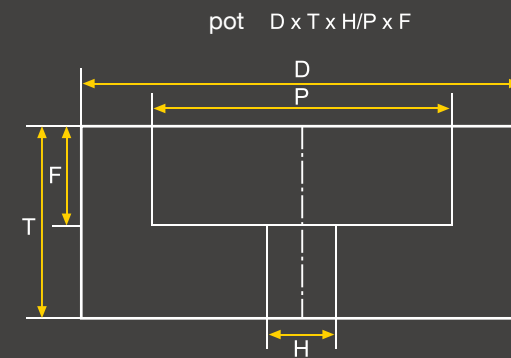
dimensions dia x D x H	cutout / shape dia x D	special carborundum	silicon carbide
13 x 16 x 4	shape 1	1A60-N10-V718 85A60-K7-VX206	1C80-L9-V720
16 x 16 x 6	shape 1	1A60-N10-V718 85A60-K7-VX206	1C80-K9-V720
20 x 20 x 6	11 x 5, shape 5	85A60-K7-VX206	1C80-K9-V720
22 x 22 x 8	13 x 10, shape 5	1A60-M10-V718	
25 x 25 x 6	11 x 5, shape 5	1A60-M10-V718/85A60-K7-VX206	
25 x 25 x 8	13 x 10, shape 5	1A60-M10-V718/85A60-K7-VX206	
25 x 25 x 10	16 x 10, shape 5	1A60-M10-V718	
30 x 30 x 10	16 x 10, shape 5	1A60-L10-V718/85A60-K7-VX206	1C60-K9-V720
30 x 30 x 13	18 x 10, shape 5	1A60-L10-V718	
32 x 20 x 10		2A80-JOT9-V716H	
40 x 40 x 13	22 x 10, shape 5	1A60-K10-V718/85A60-K9-VX206	1C60-JOT9-V720
50 x 50 x 16	27 x 20, shape 5	1A60-K10-V718/85A 60-K9-VX206	1C60-JOT9-V720
80 x 40 x 20	shape 1	EK46-K4-V	
100 x 50 x 20	80 x 40, shape 6	EK46-K4-V	

Surface grinding with pots and rings

material	example	specification	note
changing materials		2A36-JOT14-VG1AX EK46-K2-V 1A46-JOT11-VAX 2A46-JOT15-VD1EX	
non- and low-alloy steel, soft	St 37 (1.0252) St 52 (1.0419) CK 45 (1.1191)	2A36-K14-VG1AX EKR46-K4-V 2A46-JOT14-VD1EX	for high cutting performance universal
non- and low-alloy steel, hardened	16 MnCr5 (1.7131) 100 Cr6 (1.3505) 90 MnCrV8 (1.2842)	2A36-JOT14-VG1AX EK46-K2-V 2A46-JOT15-VD1EX	for high cutting performance universal
high-alloy steel, soft	1.2080 1.2436	2A36-JOT14-VG1AX 2A46-JOT15-VD1EX 1A46-JOT11-VAX	for high cutting performance universal
high-alloy steel, hardened	1.2379 1.2080	1A46-JOT14-VAX EK60-K3-V	for high cutting performance for better surfaces
high-speed steel SS and HSS	1.3343 HSS 52 HRC	2A36-JOT14-VG1AX 5A88801A-L10-5V2EX 5A8836-JOT14-5VG1AX	
casting	GG 25 220 Brinell	EKR46-K2-V 2A36-JOT14-VG1AX	universal for hard and soft
hard metal		SC46-2-V Diamond wheels	rock drills made of HM specification dependent on application purpose
non-ferrous metals		SC46-2-V	cooling using fat emulsion
PKD		1D16-K20-VC100-6F5 1D25-K20-VC100-6F5	fine-grain diamond wheel for finish grinding



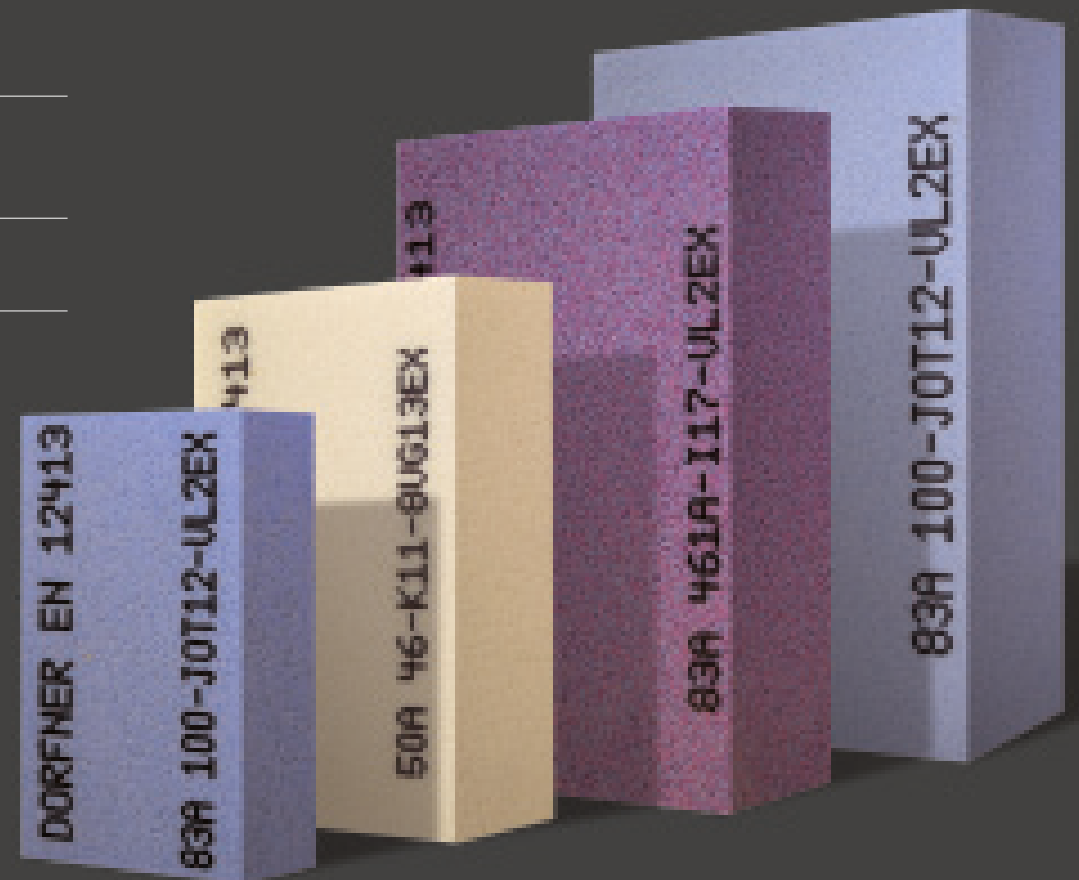
These wheels are available immediately. We would be pleased to manufacture other dimensions and qualities.



Surface grinding with segments

material	example	specification	note
non- and low-alloy steel	16 MnCr5 soft	50A46-K11-8VG13EX	extreme removal rate, less spindle load, low cutting force for big plates
changing materials soft up to 40 HRC/1300 N/mm²	42CrMoS4 soft St 37 (1.0252) St 52 (1.0419) CK 45 (1.1191)	50A24-K11-8VG13EX	
universal for all steel types from soft up to 52 HRC	1.2080 1.2379 1.2436 1.2601	83A46-JOT12-VL2EX 83A100-JOT12-VL2EX	for fine surfaces
non- and low alloy steel changing materials hardened up to 62 HRC	100Cr6 (1.3505) 16MnCr5 (1.7131) 90MnCrV8 (1.2842)	83A461A-I12-VL2EX EK46-K2-V	
high alloy steel hardened up to 66 HRC HSS / tooling steel PM-steel	1.2379 1.2080 1.2436 1.3343	83A461A-I12-VL2EX 83A461A-I17-VL2EX EK46-K2-V	

All specifications for high-performance segment grinding



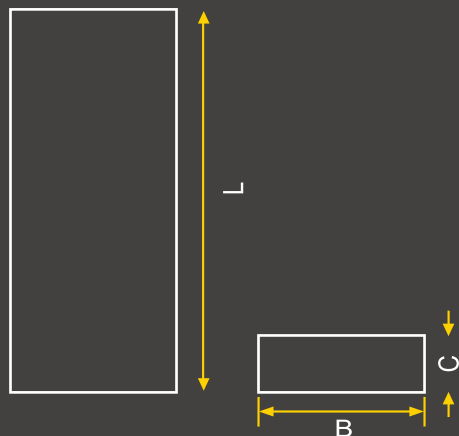
segments-stock

These grinding segments are available immediately. We would be pleased to manufacture other dimensions and qualities.

dimensions trapezoidal B / form 3109 150 x 70 / 64 x 25	prod.-no.	dimensions trapezoidal B / form 3109 200 x 103 / 94 x 38	prod.-no.	dimensions trapezoidal B / form 3109 200 x 120 / 106 x 41	prod.-no.	dimensions trapezoidal B / form 3109 250 x 120 / 106 x 41	prod.-no.
50A46-K11-8VG13EX	37729	50A46-K11-8VG13EX	37725	50A46-K11-8VG13EX	37735	50A46-K11-8VG13EX	37721
83A46-JOT12-VL2EX	37730	83A46-JOT12-VL2EX	37726	83A46-JOT12-VL2EX	37736	83A46-JOT12-VL2EX	37722
83A100-JOT12-VL2EX	37731	83A100-JOT12-VL2EX	37727	83A100-JOT12-VL2EX	37738	83A100-JOT12-VL2EX	37723
83A461A-I12-VL2EX	37734	83A461A-I12-VL2EX	37733	83A461A-I12-VL2EX	37740	83A461A-I12-VL2EX	37732
83A461A-I17-VL2EX	37728	83A461A-I17-VL2EX	37724	83A461A-I17-VL2EX	37741	83A461A-I17-VL2EX	37720

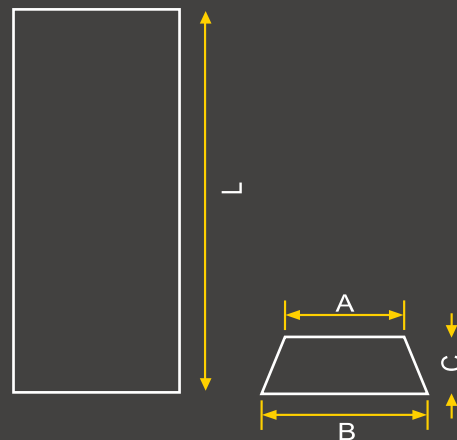
rectangular grinding segment

L x B x C



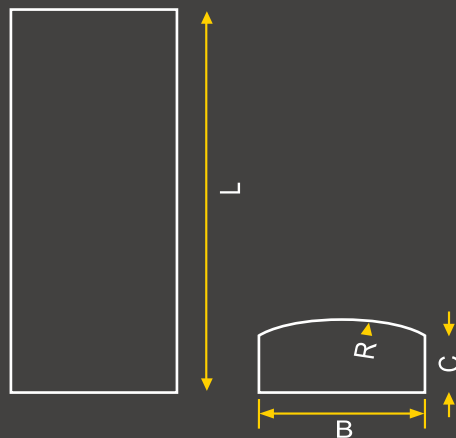
trapezoidal grinding segment

L x A/B x C



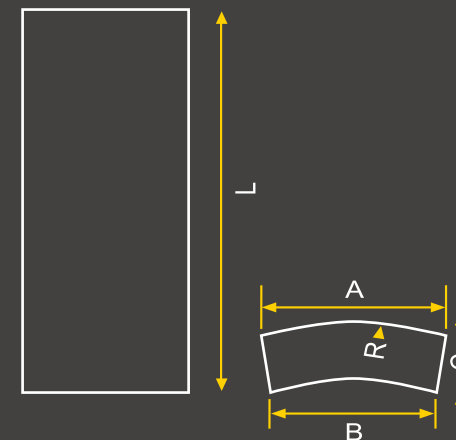
arched grinding segment

L x B x C-R



double-sided grinding segment

L x A/B x C-R



General tool grinding/rolling cutter grinding

Rolling cutter grinding

dimensions dia x D x H	specification	note
250 x 14/3 x 32	6A46-K14-VAX 6A60-K14-VAX 2A80-K11-V2EX 83A46-K14-VG1EX	grinding disc bevelled at 75° with diamond lead-out groove

These wheels are available immediately. We would be pleased to manufacture other dimensions and qualities.

Tool and high-speed steel

grinding body shape	Ø range mm	cast version	pressed version
grinding disc ISO 603-6, shape 12	75-150 175-250		2A80-K6-V2AX 5A60-K7-V1AX
grinding disc ISO 603-6, shape 12	75-150 175-250		2A80-K6-V2AX 5A60-K7-VF1AX
straight cup wheel ISO 603-6, shape 6	50-80 100-150	EK60-K5-V EK80-K5-V	2A80-K10-V2AT
conical cup wheel ISO 603-6, shape 11	50-80 100-150	EK60-K5-V EK80-K5-V	2A60-JOT10-VAX
cut-out side grinding wheel ISO 603-6, shape 5		EK60-K6-V EK80-K6-V	

dimensions dia x D x H	cutout/shape	cast version	pressed version
200 x 25 x 32	ISO 603-6, shape 1	EK46-K7-V SC180-6-V	1A150-M6-V1AX
200 x 40 x 32	ISO 603-6, shape 5 110 x 20	EK60-K6-V	
100 x 50 x 20	ISO 603-6, shape 6 80 x 40	EK80-K4-VT EK80-K5-V EK80-K5-VT SC80-K4-V	2A80-K7-V1AT 2A80-K10-V2AX 2A80-K10-V2AT 5A80-L10-V2AX
150 x 4 x 20 150 x 8 x 20	ISO 603-6, shape 1		1A80-N6-V2AX 2A60-M6-VAX

Boron nitrite grinding body for dry grinding

grinding body shape and type in accordance with FEPA	Ø range mm	scrubbing	smoothing
11 V9	100-125	8B151-RCV-C75-W	8B126-RCV-C75-W
12 V9-45°	100-125	8B181-RCV-C75-W	8B151-RCV-C75-W
12 A2-20°	100-150	8B151-RCV-C50-W	8B126-RCV-C50-W
411A2 (SB)	125-150	8B151-RCV-C50-W	8B126-RCV-C50-W
1A1	-150	8B151-RCV-C75-W	8B126-RCV-C75-W

Hard metal tools

Diamond grinding body (for dry grinding)

grinding body shape and type in accordance with FEPA	Ø range mm	scrubbing	smoothing
11 V9	100-125	6D126-RXN-C75-W	6D64-RXN-C75-W
12 V9-45°	100-125	6D126-RPR-C75-W	6D64-RPR-C75-W
12 A2-20°	100-150	6D126-RPR-C75-W	6D64-RPR-C75-W
411A2 (SB)	125-150	6D126-RPR-C75-W	6D64-RPR-C75-W
1A1	-150	6D126-RPR-C75-W	6D64-RPR-C75-W

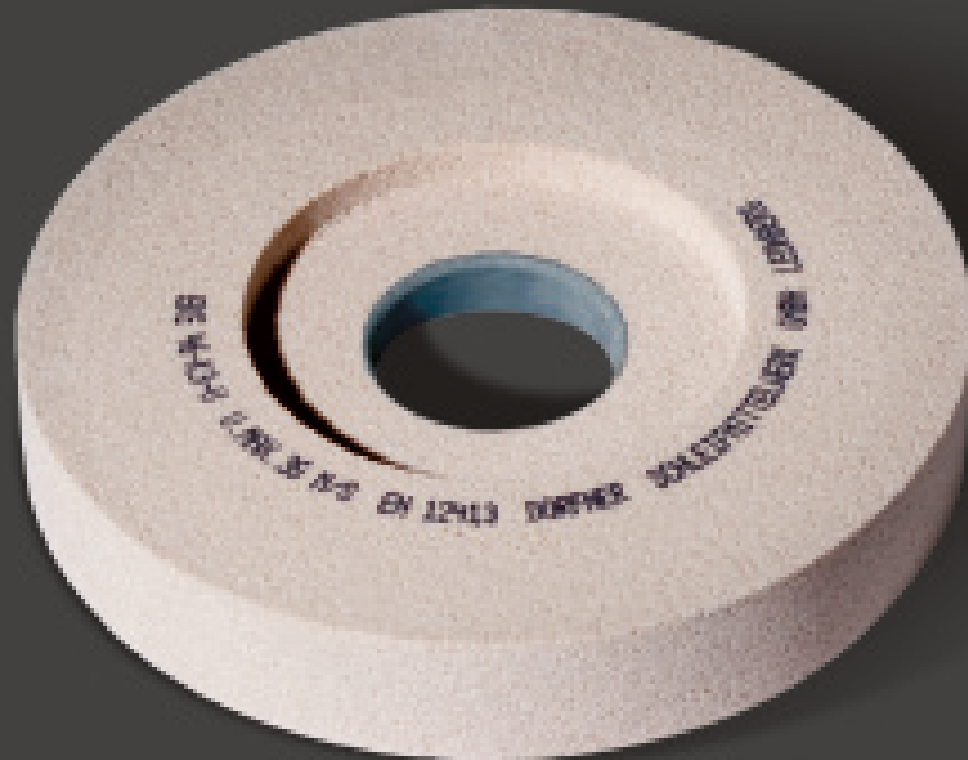
Other grinding work

Floor stand grinding machines (bench grinders)

material	specification	note
low-alloy steel	EK46-K7-V	scrub disc
	1A46-N8-VAX	scrub disc
	EK60-K7-V	scrub/finishing wheel
	EKR46-K8	for coarse working
	1A150-M6-V1AX	finishing wheel
HSS	EK46-K6-V	scrub disc
	EK60-K6-V	scrub/finishing wheel
	EK80-K6-V	finishing wheel
hard metal	SC46-7-V	scrub disc
	SC46-8-V	scrub disc
	SC80-6-V	finishing wheel
	SC180-6-V	finishing wheel
	1D20 to 1D126	diamond wheel
non-ferrous metals	SC46-1-V	whetstones
	SC80-1-V	de-burring shapes
	SC180/320-V	double-layer stone
grinding body (corundum / SiC)	WC16-S5-VDW	dressing stones coarse dressing of floor stand grinding wheels
boron nitride / diamond	1C180-H5-B1LX	sharpening of ceramic and
	6A180-JOT7-V	resin-bonded CBN and diamond wheels

Threaded worm grinding

dimensions	specification	note
all standard dimensions are possible	1A220-K6-V2EX	pre-profiling of wheels possible.
	2A150-L6-V1EX	
	82A100-JOT10-VL1EX	
	SC180-7-V	
	SC320-5-V	



These products are available immediately. We would be pleased to manufacture other dimensions and qualities.

dimensions, dia x D x H	cutout / shape dia x D	cast version	pressed version
grinding wheels for manual and machine grinding			
150 x 20 x 20 and 150 x 20 x 32	shape 1 shape 1	EK60-K7-V SC80-8-V	
175 x 25 x 20	shape 1	EK60-K7-V	
175 x 25 x 32	shape 1	EK46-K7-V, EK60-K7-V EK80-K6-V, SC80-6-V	
175 x 25 x 51	shape 1	EK60-K6-V, EK60-K7-V SC80-6-V	
200 x 25 x 32	shape 1	EK46-K7-V, SC180-6-V	1A150-M6-V1AX
200 x 25 x 51	shape 1	EK60-K7-V, SC80-6-V	
200 x 40 x 32	shape 6, 110 x 20	EK60-K6-V	
300 x 40 x 76.2	shape 1	EKR46-K8-V, SC80-8-V	
whetstones			
100 x 25 x 12			6A180-J0T7-V
200 x 25 x 13		SC180/320-V	
110 x 70 x 35		SC46-1-V, SC80-1-V	
150 x 100 x 70			
dressing stones			
100 x 25 x 13			WC16-S5-VDW
200 x 50 x 25			WC16-S5-VDW 1C180-H5-B1LX
grinding coolants			
D77	10, 30, 200 litre containers		
grinding disc mounting for face grinding machine, drillhole 51 mm			
cutting discs			
125 x 1 x 20			A70-P5-B5W
150 x 1 x 20			A70-P5-B5W
200 x 1.6 x 51			AA60-P5-B80

CBN/diamond in ceramic bonding

These wheels are available immediately. We would be pleased to manufacture other dimensions and qualities.

shape	dimension	version	speciality
CBN small grinding body: All dimensions are also available at short notice as grinding pencils (shape 1A1W and 1A8W).			
1A8	8 x 8 x 3	5B91-K6-V360-2	
1A8	18 x 12 x 8	5B91-K6-V300-2	
1A1	25 x 16/3 x 13	5B91-K6-V300-2	
CBN face grinding			
1A1	225/120 x 10/4 x 51	5B91-K6-V240-2	2° conical on both sides
1A1	225/120 x 12/4 x 51	5B91-K6-V240-2	2° conical on both sides
1A1	225/120 x 15/4 x 51	5B91-K6-V240-2	2° conical on both sides
1A1	250/160 x 15/4 x 51	5B91-K6-V240-2	2° conical on both sides
1A1	300/180 x 15/3 x 76.2	5B91-K6-V240-2	2° conical on both sides
1A1	300/200 x 15/3 x 127	5B91-K6-V240-2	2° conical on both sides
1A1	400/200 x 30/5 x 127	5B126-J0T14-V240-2	2° conical on both sides
CBN cylindrical grinding			
1A1	400/200 x 20/3 x 127	5B91-K7-V240-2	2° conical on both sides
1A1	400/200 x 20/3 x 127	5B64-K9-V240-2	2° conical on both sides
diamond face grinding			
1A1	200/120 x 10/4 x 51	1D91-J0T12-VC75	2° conical on both sides
diamond cylindrical grinding			
1A1	400/200 x 20/3 x 127	1D91-J0T12-VC75	2° conical on both sides

in resin bonding

shape	dimension	version	speciality
CBN tool grinder			
11V9	100 x 10/2 x 20	8B151-RCV-C75-W	



Dressing

Dressing can influence the grinding process. This can be both negative and positive. The trick is to analyse the working process precisely and provide exactly the right dresser.

Dorfner offers the following:

- diamond multigrain dresser
- diamond mini-wheel
- single-grain dressing diamond
- Jung profile diamond
- Diaform profile dresser
- multi-grain dresser plate
- holder for dresser
- rotor dresser
- MKD dresser needle plate



Our
company
group

Dorfner Seit 1927
Schleifmittelwerk GmbH

We are a family company which owns the following:
Clauberg Schleifmittelfabrik GmbH and
Lauterjung & Tesche Schleifmittelfabrik GmbH.
We produce abrasives for the following industrial
sectors at our Wuppertal works:

- agriculture
- machine cutter industry
- saw industry
- cutting facilities
- cutlery industry
- tool industry

The product range includes the following:

- grinding wheels
- cup wheels
- grinding cylinders and
- grinding segments in all standard sizes for coarse, fine and very fine grinding.

We produce the following product groups in Wuppertal:

- pressed phenolic resins
- cast epoxy and polyurethane resins, rigid and elastic
- dual-zone stones - grinding and polishing in one operation
- magnesite bonding with up to 2000 mm diameter

MICHAEL seit 1966
Clauberg
SCHLEIFMITTELFABRIK GmbH

Lauterjung seit 1896 & **Tesche** seit 1801
SCHLEIFMITTELFABRIK GmbH

You can find further information at
www.clauberg-schleifmittel.de and
www.lauterjung-schleifmittel.de





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