

ORION® Bench grinder wheels

Ceramic bond, type 1



Application:

For machining hardened high-alloy and low-alloy steels and for regrinding HSS tools.

Advantage:

- smooth running
- includes set of reducing rings

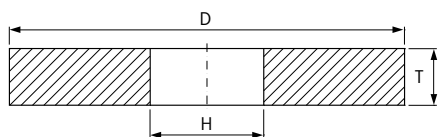
- in stackable individual packaging

Notes:

Maximum operating speed: 40 m/s. Not suitable for wet grinding.

Technical data:

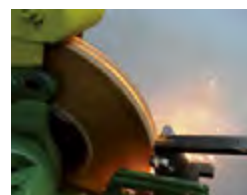
- Form: 1



Type 1



Ident. No. 051



Example application

Material to be processed			High-alloy steel, hardened Low-alloy steel, hardened HSS	High-alloy steel, hardened Low-alloy steel, hardened HSS	High-alloy steel, hardened Low-alloy steel, hardened HSS	Cast metal Carbide	Non-alloy and low-alloy steel, unhardened	Non-alloy and low-alloy steel, unhardened	Cast metal Carbide
Material of abrasive medium			White fused aluminium oxide	White fused aluminium oxide	White fused aluminium oxide	Green silicon carbide	Normal corundum	Normal corundum	Green silicon carbide
Surface structure			Medium	Medium	Fine	Fine	Rough	Medium	Medium
Grid size			46	60	80	80	36	60	60
Scheiben-Ø D (mm)	Scheibendicke T (mm)	Bohrungs-Ø H (mm)	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.
125	20	32	001	003	005	015	-	-	-
150	20	32	-	061	065	071	051	055	-
175	20	32	-	111	-	-	101	105	115
200	20	32	201	-	-	-	-	-	-
175	25	51	-	151	155	161	141	145	-
200	25	51	-	-	251	255	241	245	-
200	32	32	263	265	267	269	259	261	-
200	32	51	-	281	285	291	271	275	-
300	40	76	-	355	-	360	340	345	-

Prod. Gr. 6LO

ORION® Surface grinding wheels (ISO 525)

Ceramic bond



Advantage:

- Low wear
- Cool grinding
- Smooth cutting

Notes:

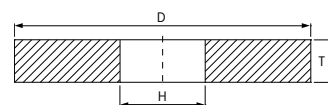
Ensure that an adequate coolant supply is available. Discs are not suitable for dry sanding. Recommended operating speed is: 20–30 m/s.



Ident. No. 616
Sintered corundum and white corundum, shape 1



Ident. No. 760-770
White corundum, shape 7



Type 1

Material to be processed					Non-alloy and low-alloy steel, hardened Non-alloy and low-alloy steel, unhardened High-alloy steel, hardened High-alloy steel, unhardened	High-alloy steel, hardened HSS Stainless steel	Non-alloy and low-alloy steel, hardened Non-alloy and low-alloy steel, unhardened High-alloy steel, hardened High-alloy steel, unhardened
Material of abrasive medium					White fused aluminium oxide	Sintered aluminium oxide and white fused aluminium oxide	White fused aluminium oxide
Surface structure					Medium	Medium	Fine
Grid size					46	60	80
Form	Scheiben-Ø D (mm)	Scheibendicke T (mm)	Bohrungs-Ø H (mm)	Cut-out clearance	69496... Ident. No.	69496... Ident. No.	69496... Ident. No.
1	200	20	51	-	611	616	621
1	200	25	32	-	641	646	651
1	225	25	51	-	671	-	681
1	250	25	76.2	-	700	705	710
1	300	30	76.2	-	730	735	740
7	300	50	76.2	155 x 10 x 10 mm	760	-	770
1	350	50	127	-	800	805	810

Prod. Gr. 6LO

ORION® Cup grinding wheels (ISO 525)

Ceramic bond, type 6



Application:

For regrounding metal cutting tools such as drills, milling cutters etc. on tool and pattern making machines.

Execution:

Ident. No. 005-035:

- HSS and special steels = grain 60-80

- Low-alloy steels = grain 46-60

Advantage:

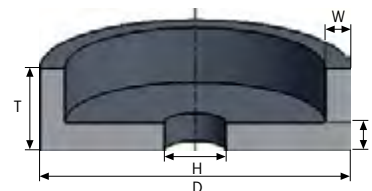
- cool grinding
- long service life
- superior surface finish

Notes:

Not suitable for wet grinding.



Ident. No. 055
Green silicon carbide



Type 6

Material to be processed							Non-alloy and low-alloy steel, hardened High-alloy steel, hardened HSS	Carbide
Material of abrasive medium							White fused aluminium oxide	Green silicon carbide
Grid size	Surface structure	Scheiben-Ø D (mm)	Scheibendicke T (mm)	Bohrungs-Ø H (mm)	Wanddicke W (mm)	Bodenstärke E (mm)	69472... Ident. No.	69472... Ident. No.
60	Medium	80	40	20	10	10	005	-
60	Medium	100	50	20	10	10	025	-
80	Fine	100	50	20	10	10	035	055

Prod. Gr. 6LO

ATORN® Diamond and CBN (cubic boron nitride) cup wheels

Grain 126, for use on all standard grinding machines

Application:

For grinding cemented carbide and Cermet as well as materials made of stone, glass, porcelain, graphite, GFP, etc.

Execution:

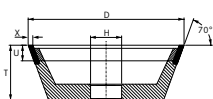
- With vibration-reducing body
- In synthetic resin bonding

Advantage:

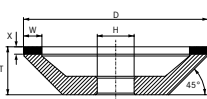
- Maximum service life with consistently high removal rate

Notes:

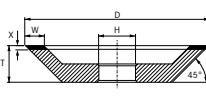
Wet grinding is always preferable with regard to tool life, heat generation and performance.



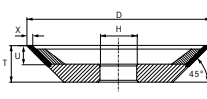
Ident. No. 010
Type 11V9



Ident. No. 020
Type 12A2



Ident. No. 030
Type 12V2



Ident. No. 040
Type 12V9

Form	Washer Ø (mm)	Bore Ø (mm)	Washer thickness (mm)	Wall thickness (mm)	Lining thickness (mm)	Material of abrasive medium		Diamond Ident. No.
						Min./max. recommended peripheral surface speed for dry sanding	Min./max. recommended peripheral surface speed for wet sanding	
11V9	100	20	35	10	3	15-20 m/s	25-30 m/s	010 ●
12A2	100	20	26	10	4	15-20 m/s	25-30 m/s	020 ●
12V2	100	20	20	10	2	15-20 m/s	25-30 m/s	030 ●
12V9	100	20	20	10	3	15-20 m/s	25-30 m/s	040 ●

Prod. Gr. 696

DIAPOINT single-diamond dressing tools

For dressing ceramic sanding discs

Application:

Suitable for all machines with corresponding holder.

Chucking: Dressing tool must be tilted from 5° to 15° towards centre of sanding disc

We recommend that the **selection of the correct diamond weight** for single-diamond dressing tools in combination with the sanding disc to be dressed is carried out according to the following graphic.

Execution:

- Universal, traditional dressing tool with a single diamond with protruding working tip

Notes:

When ordering single-diamond dressing tools with cylindrical shaft, please specify the **dimension and**

length of the shaft.

Holder for manual dressing of grinding wheels, see no. 61220.

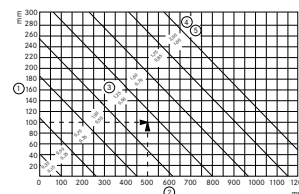
If the sharpness decreases, rotate the dressing tool by approx. 60° around its own axis. Do this in good time: the blunt surface should be no greater than approx. 0.5 mm²

Technical data:

- Min./max. side feed per revolution: 0.05-0.15 m/s
- Min./max. supply per throughput: 0.01-0.03 mm
- Number of pieces per packet: 1 PCS



No. 61124 050



Shank style		Morse taper	Morse taper	Morse taper	Morse taper	Cylindrical	Cylindrical
Morse taper size		MK 0	MK 0	MK 1	MK 1		
Natural tip quality		3	2	3	2	3	2
DIN	Weight of diamond (carat)	61124... Ident. No.	61135... Ident. No.	61124... Ident. No.	61135... Ident. No.	61124... Ident. No.	61135... Ident. No.
228	0.5	050 ●	050 ●	350 ●	350 ●	-	-
228	0.7	070 ○	070 ●	-	370 ●	-	-
228	1.0	100 ○	100 ○	400 ●	-	-	-
228	0.4	-	040 ○	-	-	-	-
-	0.5	-	-	-	-	650 ○	650 ○
-	0.4	-	-	-	-	-	640 ○
-	0.7	-	-	-	-	-	670 ○

Prod. Gr. 610

DIAROND multi-grain dressing tools

For dressing straight ceramic-bonded sanding discs

Application:

For all straight ceramic sanding discs.

Chucking: Dressing tool is clamped vertical to the spindle axis

Execution:

- Standard dressing tool for machines with a suitable mounting
- With cylindrical, sintered diamond insert with many working tips

Advantage:

- Maintenance-free over the entire service life
- Robust and hard-wearing where handled incorrectly
- Can be used up fully
- For use with higher dressing traverse speed than single diamonds

Notes:

Not suitable for profile sanding discs.

When using for the first time it is recommended that several strokes are effected at an increased feed rate

For **particularly aggressive, hard abrasive compounds**, a more hard-wearing dressing tool bond R is available on request

Technical data:

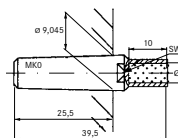
- Min./max supply per throughput: 0.01-0.03 mm
- Min./max. side feed per revolution: 0.3-0.5 m/s
- Number of pieces per packet: 1 PCS



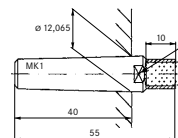
Ident. No. 010

Ident. No. 015

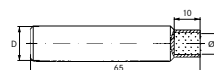
Ident. No. 020



Ident. No. 010
Design MK0



Ident. No. 015, 025
Design MK1



Ident. No. 020
Cylindrical design

Shank style				Morse taper		Morse taper		Cylindrical	
Morse taper size				MK 0		MK 1			
DIN				228		228			
Shaft Ø (mm)								12	
Ø (mm)	Weight of diamond (carat)	Suitable for min./max. sanding disc Ø	Suitable for min./max. sanding disc width	61200... Ident. No.		61200... Ident. No.		61200... Ident. No.	
8	2.5	150-400 mm	20-80 mm	010	●	015	●	020	●
11	5.0	400-600 mm	0-300 mm	-	-	025	●	-	-

Prod. Gr. 610

Accessories for		61200 015	61200 025
61220... Holder for dressing diamonds Type A, for manual use	Ident. No.	010 ●	010 ●

Sanding disc dressing tool made from steel

For dressing straight sanding discs

Execution:

- Sharpening roller consists of specially hardened discs made of Swedish steel that are joined together and equipped with U-shaped teeth
- Sharpening roller runs on hardened, lubricated shaft

Advantage:

- The teeth retain their sharpness and hardness until the wheel is completely worn down.

Technical data:

- Number of pieces per packet: 1 PCS



Suitable for min./max. sanding disc Ø	Suitable for min./max. sanding disc width	Handle length (mm)	Roll width (mm)	Roll Ø (mm)	Sanding disc dressing tool made from steel Ident. No.	Replacement wheels for steel sanding disc dressing tools Ident. No.
125-250 mm	0-32 mm	285	12	35	61964... 005	61965... 005
300-500 mm	40-65 mm	435	24	55	010	010
300-500 mm	70-100 mm	435	51	55	020	020

Prod. Gr. 694

Sanding disc dressing tool

For dressing grinding wheels

Execution:

- The dressing tool consists of a round steel handle and a replaceable ceramic dressing cup.
- Dressing cup version: rotating, with ball bearings, conical, coarse grain

- Ident. No. 020-030:** Dressing cup with sheet steel jacket

Delivery:

- Ident. No. 030:** Dressing cup attachment: Cone with bolt



Size	Handle length (mm)	Handle Ø (mm)	Fastening thread	Roll Ø (mm)	Number of pieces per packet (PCS)	Sanding disc dressing tool Ident. No.	Replacement dressing cups for sanding disc dressing tool Ident. No.
00	100	22	M6	35	1	61955... 010	61956... 010
0	230	30	M10	45	1	020	020
1	230	30	-	55	1	030	030

Prod. Gr. 694

Diamond saver

Coarse grain, hard silicon carbide dressing rod in plastic sleeve

Application:

As a cost-effective alternative to dressing diamonds.

Outer Ø (mm)	25
Length (mm)	370
Material of the grip handle	Wood
61950... Ident. No.	020

Prod. Gr. 610



ORION® Dressing stone for diamond and boron nitride sanding discs

Type 9010, grain size 180

Execution:

- Made of white corundum

- Unground

Length x width x height	100 x 25 x 13 mm
60597... Ident. No.	010

Prod. Gr. 601



ORION® Diamond multi-grain hand dressing tool

For precise dressing and profiling of ceramic sanding discs

Execution:

- **Ident. No. 010:** For T-shaped peripheral wheels

- **Ident. No. 020:** for P-shape cup wheels



Ident. No. 010
Type T



Ident. No. 020
Type P

Form	Lining length x lining width	Length (mm)	Weight of diamond (carat)	61230... Ident. No.
T	25 x 8 mm	200	1.5	010 ●
P	25 x 8 mm	200	1.5	020 ●

Prod. Gr. 601

ORION® Diamond hand lapping tools

For cemented carbide cutters

Application:

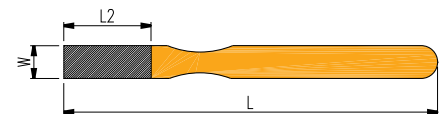
For the maintenance and re-machining of cemented carbide cutting edges.

Advantage:

- Good grip
- High dimensional stability
- Long service life
- Use of the hand lapping tool increases the service life of the cemented carbide cutting edges

Execution:

- **Ident. No. 010–030:** Highly wear-resistant and suitable for robust applications
- **Ident. No. 040:** Primarily designed for precision cutting operations



			Binding	Metal	Plastic
Range of applications			For standard cutting and milling tools	For fine boring and precision turning tools	
L2 x W	L (mm)	Grain size (µm)	60400... Ident. No.	60400... Ident. No.	
30 x 8 mm	140	64	010 ●	-	-
40 x 12 mm	150	107	020 ●	-	-
40 x 12 mm	150	46	030 ●	-	-
30 x 9 mm	140	91	-	-	040 ●

Prod. Gr. 601