Mounted Points

PFERD

203

Mounted Points

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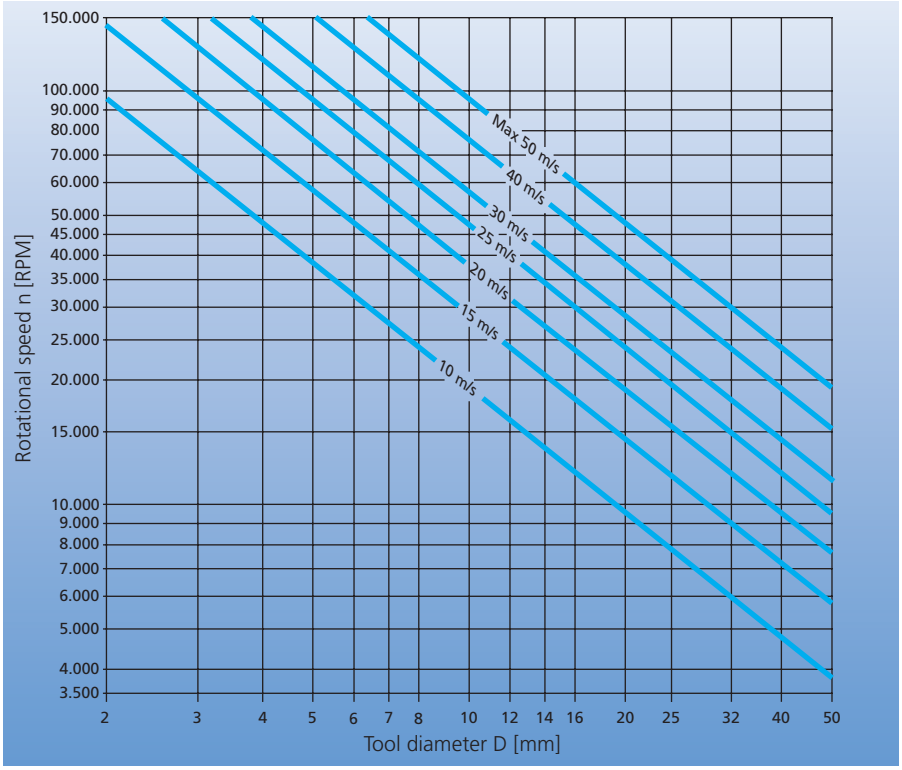
Cutting speeds of mounted points

The diagram on the right allows you to determine the rotational speed [RPM] from a given peripheral speed. Recommended cutting speeds are stated in the introductory descriptions for the various hardness grades on the following pages.

In the diagram, rotational speeds are represented by blue diagonal lines. Each vertical line represents a tool diameter. From its point of intersection with the diagonal line for a given peripheral speed, proceed horizontally to the left margin where you will find the corresponding rotational speed [RPM] of the grinding tool and spindle.

Example:
Mounted point: dia. 20 mm
Hardness grade: O
Cutting speed: 25 - 40 m/s
Rotational speed: 24.000 - 38.000 RPM



Products made to order

Should you not find a suitable solution for your task in our extensive programme line, we can produce tailor-made mounted points for your application. We will take into consideration your specifications and whishes, drawings, information on bonds, hardnesses, grit sizes, grit types, shapes, dimensions, shanks and packaging. Please call your local sales consultant. We will be happy to advise you.

Customer support

Our experienced sales consultants and customer support engineers will be glad to assist with any specific grinding problem you may have.

Spindle extensions

Using spindle extensions it is possible to increase the shank length of mounted points, making it easier to work in hard-to-reach areas e.g. inside pipes and ducts. The extension is simply fitted into the collet of the machine (air or electric grinder) or inserted into a flexible shaft handpiece. With these spindle extensions you can replace expensive tools with long shanks.
Important!
Observe applicable safety codes and accident prevention regulations when working with spindle extensions.

For more information and ordering data on spindle extensions, please refer to catalogue 209, accessories for tool drives, extensions for drive spindles.

Safety recommendations

= Wear eye protection!

= Wear hearing protection!

= Read the instructions!

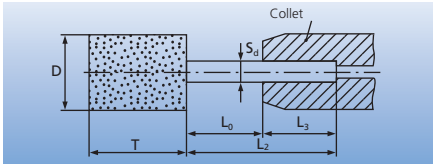
All mounted points supplied by PFERD are approved for a maximum peripheral speed of 50 m/s.
Maximum RPM levels for the various shank lengths and shank diameters are defined in DIN 69170 based on EN 12413. These limits must be strictly observed to prevent hazards due to shank buckling.

Regardless of the shank length, the clamping depth (L_3) in the machine collet must be at least 10 mm.

Each package of PFERD mounted points comes with RPM recommendations for a given unsupported shank length (L_0) of that product. Please ensure the concentric accuracy and correct clamping function of the drive.

A table with the maximum permitted RPM for the whole PFERD mounted point product range is available on request.

The buckling speed [RPM] calculated in accordance with EN 12413 is determined by the following factors:
- Shape and dimensions of the mounted point
- Diameter of the steel shank S_d
- Unsupported shank length L_0



D = Mounted point dia.
T = Width of mounted point
S_d = Shank dia.
L_0 = Unsupported shank length
L_2 = Shank length
L_3 = Clamping length of shank

Mounted Points

The Fast Way to the Best Tool

PFERD offers a very extensive line of vitrified and resinoid-bonded mounted points.

Designed to meet individual application needs, these products come in a broad range of grain types, grit sizes, hardness levels and shapes. The mounted points are manufactured on advanced production lines to high standards of dimensional accuracy and stability, consistent quality, and close tolerances.

To select the correct group mounted point, the material, main fields of application and specific operating requirements have to be taken into consideration. This overview shows which different types (abrasives, bonds and hardness grades) are recommended for the various materials and the tasks at hand.

How do I find the best mounted point?

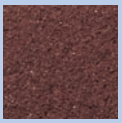
❶ Material

Normally it is necessary to determine the material to be machined. The various material groups are colour-coded and shown on the left-hand side of the chart below.

❷ Application

The application must then be selected according to the type of work on the material. We make the following differentiation:

- General use,
- surface grinding and
- edge grinding applications.

❶ Material groups			Bond ▶	Resinoid bond	
			❸ Hardness grade ▶	Hardness L	Hardness N
			Abrasive grit type ▶	ADW 	AN 
			Recommended cutting speed ▶	35-50 m/s	35-50 m/s
			❷ Application ▼		
Steel, cast steel	Non-hardened, non-heat-treated steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels	**General use** on edge and surface		
			Surface grinding with high stock removal	❍	
			Edge grinding with high form stability		❍
	Hardened, heat-treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempering steels, alloyed steels	**General use** on edge and surface		
			Surface grinding with high stock removal		
			Edge grinding with high form stability		
	Cast steels	Non-alloyed cast steels, low-alloyed cast steels	**Surface grinding** with high stock removal	❍	
			Edge grinding with high form stability		❍
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	**Surface grinding** with high stock removal	●	❍
			Edge grinding with high form stability	❍	●
Non-ferrous metals	Soft non-ferrous metals	Alu-alloys, brass, copper, zinc	**General use** on edge and surface	❍	
	Hard non-ferrous metals	Bronze, titanium, titanium alloys, hard aluminium alloys		●	
	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)		❍	
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	**Surface grinding** with high stock removal	❍	❍
			Edge grinding and grinding of burning-in with high form stability	❍	❍
Plastics and other materials		FRP, thermoplastics, rubber, wood	**General use** on edge and surface		
			❹ Catalogue page ▶	30-31	32-34

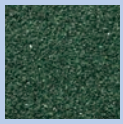
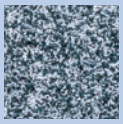
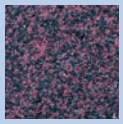
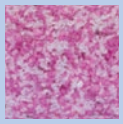
● = highly suitable ❍ = suitable * = extra models for foundries

It is necessary to differentiate the selection criteria into material, application and required surface finish to find the optimum mounted point and correct bond type. The mounted point bond and the grain mix have an impact on the grinding output, tool life and aggressiveness of the tools.

- For **general use**, the emphasis is on the balance between grinding output and tool life.
- In **surface grinding**, the mounted points are subject to fewer loads. This is why the mounted point bond is comparatively soft and designed to give high stock removal.
- If **edge grinding**, the mounted points must be dimensionally stable. This is why the mounted point bond is comparably hard and designed for a long tool life.

❸ Mounted point hardness
After determining the application (see column ❷), the hardness can be selected in the horizontal row. The "highly suitable" bond is shown with a black dot (•). The hardness grades within the bonds are arranged from "soft" to "hard".

❹ Refer to the catalogue page
for more information about the hardnesses, mounted point shapes, dimensions and grit sizes, the corresponding catalogue pages are stated in the table.

Vitrified bond									
Hardness D	Hardness F-Alu	Hardness H	Hardness I	Hardness J	Hardness K	Hardness M	Hardness O	Hardness R	Hardness T
AH	CN	AWN	AW	AWCO	ARN	ADW	AR	CU	AW
									
5-20 m/s	20-40 m/s	30-50 m/s	30-50 m/s	30-50 m/s	30-50 m/s	30-50 m/s	25-40 m/s	30-50 m/s	15-20 m/s
						●			
		❍	❍			●	❍		
						❍	●		❍
						●			
		●	●	●		❍			
				❍			❍		●
		❍			❍	●	❍ *		
						❍	● *		❍
						❍			
							❍		
	●								
	❍			●		❍			
			❍	●					❍
					●		❍ *	❍ *	
					❍		❍ *	● *	
●	❍								
42	41	22-23	24-25	28-29	35-36	7-10	11-21	37-40	26-27

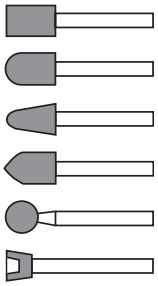
Ordering Instructions

Order code according to EN 12413
Cylindrical mounted point
ZY 2025 6 AR 30 O 5 V
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶ Tool shapes

DIN 69170

ZY = Cylindrical
WR = Cylindrical with radius end
KE = Tapered
SP = Tree
KU = Ball
TO = Cup



US-shapes according to ANSI B74.2
Series W (cylindrical in inch-dimensions)
Series A and B (other shapes)

❷ Dimensions

according to ISO 525
Dia. D x width T mm
e.g. D x T = ISO designation
3 mm x 6 mm = 0306
20 mm x 25 mm = 2025
50 mm x 13 mm = 5013

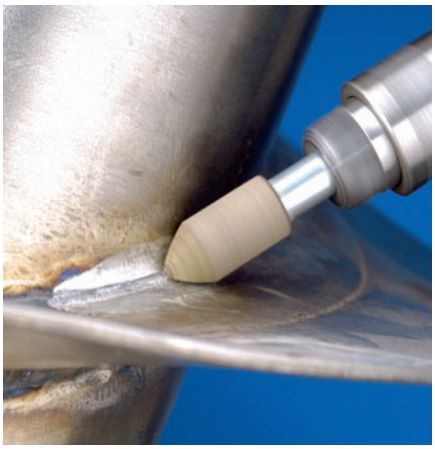
US dimensions
Series W cylindrical mounted points and series A + B shaped mounted points are specified by a number (e.g. W 143).

❸ Shanks

Please state the shank diameter in your order number. Shank lengths are factory-defined according to shank diameter as follows:
3 mm dia. x 30 mm shank length
6 mm dia. x 40 mm shank length
8 mm dia. x 40 mm shank length
1/8" dia. x 1 1/4" shank length
1/4" dia. x 1 1/2" shank length

❹ Abrasives

As a rule, two types of abrasives with internationally defined designations according to ISO 525 are used.
A = aluminium oxide (Al_2O_3)
C = silicon carbide (SiC)
In order to specify the exact type of abrasive or grain mixture, further classification – beyond this ISO 525 – is necessary. The following classification is used:
AD = aluminium oxide, dark red
AW = aluminium oxide, white
AR = aluminium oxide, pink
AN = aluminium oxide, regular
AH = bubble grain
CN = silicon carbide, green
CU = silicon carbide, grey
CO = ceramic grit
ADW = alum. oxide mixture AD + AW
AWN = alum. oxide mixture AW + AN
ARN = aluminium oxide mixture AR + AN
ADR = aluminium oxide mixture AD + AR
AWCO = aluminium mixture AW + CO



❺ Grit sizes

Grit sizes are specified according to ISO 525 and ISO 8486.
The grit sizes of PFERD mounted points are correlated to the shape and diameter of the point.

❻ Hardness grades

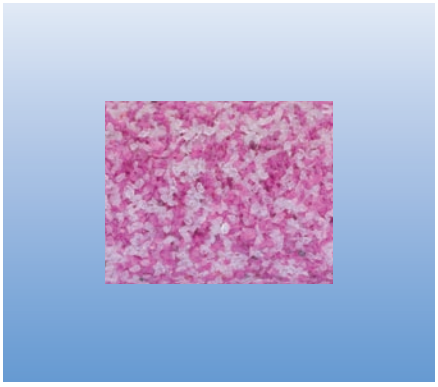
Abrasive hardness grades are classified according to ISO 525, using letters in alphabetical order to specify the hardness on an incremental scale (from soft to hard) (see page 4-5).

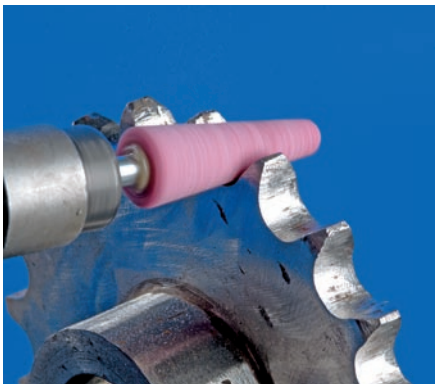
❼ Structure number

The density of the structure, indicated in accordance with ISO 525 is given in the order number. The scale ranges from
1 = dense structure to
14 = open (porous) structure.

❽ Bond

Bond types are designated by an internationally standardized letter code according to ISO 525.
V = vitrified bond
B = resinoid bond





Mounted points in **hardness grade M** are manufactured from a mix of dark red and white aluminium oxide in a vitrified bond. This grit combination leads to a good balance between stock removal rate and tool life. The hardness grade M is the most universally-used bond for work on steel and cast steel.

Advantages

- The mix of easy to break down, white aluminium oxide and tough dark red aluminium oxide is perfect for general use on surfaces and edges of steel materials and is characterised by high abrasion and stock removal rates.
- This high stock removal rate reduces grinding time and labour costs.

Application examples

- Grinding of high-speed steel (HSS) components.
- Weld dressing on steel structures.

Recommendations for use

Mounted points in hardness grade M perform best in general use at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

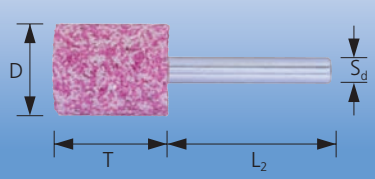
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097601**
ZY 3232 6 ADW **46** M 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

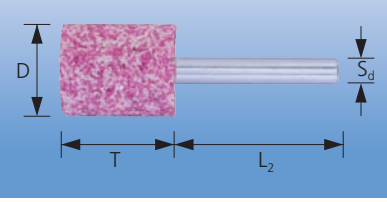
Hardness M, cylindrical ZY



Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60	80	100						g
	EAN 4007220											
Shank ø 3 mm												
ZY 0205 3 ADW . . . M 5 V	-	-	-	-	-	094365	W 141	3 x 30	2 x 5	201.800	10	20
ZY 0306 3 ADW . . . M 5 V	-	-	-	-	-	094518	W 144	3 x 30	3 x 6	206.100	10	20
ZY 0408 3 ADW . . . M 5 V	-	-	-	094679	-	094662	-	3 x 30	4 x 8	175.100	10	20
ZY 0510 3 ADW . . . M 5 V	-	-	-	094877	-	094860	W 153	3 x 30	5 x 10	130.700	10	26
ZY 0613 3 ADW . . . M 5 V	-	-	-	095140	-	095133	W 163	3 x 30	6 x 13	93.600	10	30
ZY 0810 3 ADW . . . M 5 V	-	-	095331	-	095348	-	W 169	3 x 30	8 x 10	87.600	10	38
ZY 0816 3 ADW . . . M 5 V	-	-	095522	-	659878	-	-	3 x 30	8 x 16	61.000	10	50
ZY 1002 3 ADW . . . M 5 V	-	-	-	-	-	098653	W 172	3 x 30	10 x 2	95.400	10	27
ZY 1013 3 ADW . . . M 5 V	-	-	095706	-	-	-	W 176	3 x 30	10 x 13	58.400	10	55
ZY 1303 3 ADW . . . M 5 V	-	-	-	098783	-	098776	W 122	3 x 30	13 x 3	73.400	10	35
Shank ø 6 mm												
ZY 0306 6 ADW . . . M 5 V	-	-	-	-	-	094457	W 144	6 x 40	3 x 6	206.100	10	80
ZY 0408 6 ADW . . . M 5 V	-	-	-	094570	-	-	-	6 x 40	4 x 8	177.400	10	85
ZY 0510 6 ADW . . . M 5 V	-	-	-	094754	-	-	W 153	6 x 40	5 x 10	157.800	10	90
ZY 0613 6 ADW . . . M 5 V	-	-	-	095034	-	095027	W 163	6 x 40	6 x 13	131.500	10	95
ZY 0810 6 ADW . . . M 5 V	-	-	-	-	095263	-	W 169	6 x 40	8 x 10	119.300	10	105
ZY 0816 6 ADW . . . M 5 V	-	-	095416	-	095423	-	-	6 x 40	8 x 16	119.300	10	112
ZY 1013 6 ADW . . . M 5 V	-	-	095614	-	095621	-	W 176	6 x 40	10 x 13	95.400	10	116
ZY 1020 6 ADW . . . M 5 V	-	-	095850	-	095867	-	W 177	6 x 40	10 x 20	95.400	10	138

Continued on next page.

Hardness M, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097601**
ZY 3232 6 ADW **46** M 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Continued from last page.

Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60	80	100						
	EAN 4007220											
Shank ø 6 mm												
ZY 1025 6 ADW . . . M 5 V	-	-	095959	-	659892	-	W 178	6 x 40	10 x 25	83.200	10	145
ZY 1032 6 ADW . . . M 5 V	-	-	096017	-	659908	-	W 179	6 x 40	10 x 32	83.200	10	165
ZY 1313 6 ADW . . . M 5 V	-	-	096093	-	-	-	W 185	6 x 40	13 x 13	73.400	10	137
ZY 1320 6 ADW . . . M 5 V	-	-	096260	-	659915	-	W 186	6 x 40	13 x 20	73.400	10	167
ZY 1325 6 ADW . . . M 5 V	-	-	096345	-	096352	-	W 187	6 x 40	13 x 25	73.400	10	180
ZY 1340 6 ADW . . . M 5 V	-	-	098035	-	-	-	W 188	6 x 40	13 x 40	42.400	10	280
ZY 1604 6 ADW . . . M 5 V	-	-	098912	-	660003	-	-	6 x 40	16 x 4	59.600	10	120
ZY 1620 6 ADW . . . M 5 V	-	096451	-	096468	-	-	W 195	6 x 40	16 x 20	59.600	10	235
ZY 1632 6 ADW . . . M 5 V	-	096598	-	096604	-	-	-	6 x 40	16 x 32	51.200	10	290
ZY 1640 6 ADW . . . M 5 V	-	096727	-	-	-	-	-	6 x 40	16 x 40	40.500	10	345
ZY 1650 6 ADW . . . M 5 V	-	659922	-	659939	-	-	W 197	6 x 40	16 x 50	40.500	10	410
ZY 2006 6 ADW . . . M 5 V	-	-	099117	-	660010	-	W 201	6 x 40	20 x 6	47.700	10	150
ZY 2020 6 ADW . . . M 5 V	-	096895	-	659946	-	-	W 204	6 x 40	20 x 20	47.700	10	295
ZY 2025 6 ADW . . . M 5 V	-	096994	-	097007	-	-	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2032 6 ADW . . . M 5 V	-	097106	-	659953	-	-	W 206	6 x 40	20 x 32	41.100	10	385
ZY 2040 6 ADW . . . M 5 V	-	097212	-	097229	-	-	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2506 6 ADW . . . M 5 V	-	-	099322	-	-	-	W 216	6 x 40	25 x 6	38.100	10	210
ZY 2525 6 ADW . . . M 5 V	-	097335	-	659977	-	-	W 220	6 x 40	25 x 25	38.100	10	475
ZY 2532 6 ADW . . . M 5 V	-	097434	-	-	-	-	-	6 x 40	25 x 32	32.900	10	545
ZY 3208 6 ADW . . . M 5 V	-	099575	-	660034	-	-	W 226	6 x 40	32 x 8	29.800	5	160
ZY 3216 6 ADW . . . M 5 V	099667	-	-	-	-	-	-	6 x 40	32 x 16	29.800	5	235
ZY 3220 6 ADW . . . M 5 V	099773	-	660065	-	-	-	W 228	6 x 40	32 x 20	29.800	5	287
ZY 3232 6 ADW . . . M 5 V	097595	-	097601	-	-	-	W 230	6 x 40	32 x 32	25.700	5	460
ZY 3240 6 ADW . . . M 5 V	097717	-	659984	-	-	-	W 231	6 x 40	32 x 40	18.600	5	510
ZY 4006 6 ADW . . . M 5 V	-	-	100455	-	-	-	W 235	6 x 40	40 x 6	23.800	5	180
ZY 4010 6 ADW . . . M 5 V	-	099889	-	660072	-	-	W 236	6 x 40	40 x 10	23.800	5	252
ZY 4020 6 ADW . . . M 5 V	100028	-	100035	-	-	-	-	6 x 40	40 x 20	23.800	5	415
ZY 4040 6 ADW . . . M 5 V	097809	-	659991	-	-	-	W 238	6 x 40	40 x 40	16.200	5	770
ZY 5008 6 ADW . . . M 5 V	-	100509	-	-	-	-	-	6 x 40	50 x 8	19.000	5	290
ZY 5013 6 ADW . . . M 5 V	-	100189	-	660089	-	-	-	6 x 40	50 x 13	19.000	5	430
ZY 5025 6 ADW . . . M 5 V	-	-	100325	-	-	-	W 242	6 x 40	50 x 25	19.000	5	730
Shank ø 8 mm												
ZY 5025 8 ADW . . . M 5 V	100554	-	-	-	-	-	W 242	8 x 40	50 x 25	19.000	5	770

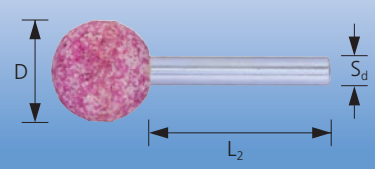
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**101261**
KU 16 6 ADW **30** M 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Hardness M, ball KU



Order No.	Grit size				S_d x L_2 [mm]	Dia. D [mm]	Max. speed [RPM]		
	24	30	46	60					g
	EAN 4007220								
KU 13 6 ADW . . . M 5 V	-	-	101209	-	6 x 40	13	73.400	10	125
KU 16 6 ADW . . . M 5 V	-	101261	-	660140	6 x 40	16	59.600	10	164
KU 20 6 ADW . . . M 5 V	-	101339	-	101346	6 x 40	20	47.700	10	230
KU 25 6 ADW . . . M 5 V	-	-	-	660164	6 x 40	25	38.100	10	340
KU 32 6 ADW . . . M 5 V	660171	-	660188	-	6 x 40	32	29.800	5	295

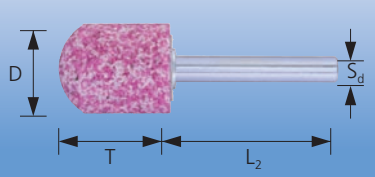
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**660119**
WR 2025 6 ADW **30** M 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Hardness M, cylindrical with radius end WR



Order No.	Grit size				S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46	60	80					g
	EAN 4007220								
WR 1320 6 ADW . . . M 5 V	-	660096	-	660102	6 x 40	13 x 20	73.400	10	165
WR 2025 6 ADW . . . M 5 V	660119	-	660126	-	6 x 40	20 x 25	47.700	10	325

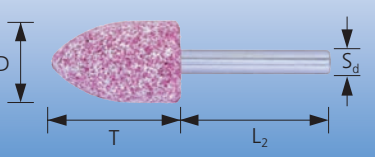
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102138**
SP 1320 6 ADW **46** M 5 V

How to order:
46 = Grit size

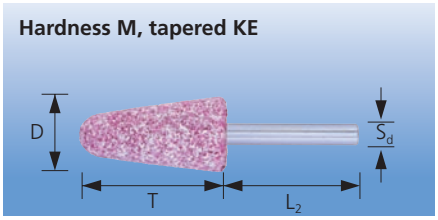
Please complete the order no. by adding the grit size.

Hardness M, tree SP



Order No.	Grit size				S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46	60	80					g
	EAN 4007220								
SP 0816 6 ADW . . . M 5 V	-	102008	-	-	6 x 40	8 x 16	119.300	10	110
SP 1320 6 ADW . . . M 5 V	-	102138	-	660249	6 x 40	13 x 20	73.400	10	160
SP 2032 6 ADW . . . M 5 V	102237	-	660256	-	6 x 40	20 x 32	47.700	10	330
SP 2050 6 ADW . . . M 5 V	102312	-	-	-	6 x 40	20 x 50	30.500	10	490
SP 2540 6 ADW . . . M 5 V	660270	-	-	-	6 x 40	25 x 40	35.000	10	550

Hardness M, tapered KE



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

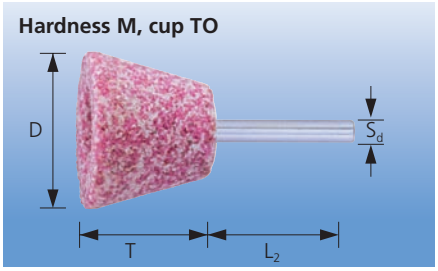
Ordering example:
EAN 4007220**102671**
KE 2032 6 ADW **30** M 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size					S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46	60	80					
	EAN 4007220									
Shank ø 6 mm										
KE 1025 6 ADW . . . M 5 V	-	-	102763	-	102770	6 x 40	10 x 25	95.400	10	130
KE 1645 6 ADW . . . M 5 V	-	-	102862	-	660300	6 x 40	16 x 45	52.000	10	250
KE 2032 6 ADW . . . M 5 V	-	102671	-	660294	-	6 x 40	20 x 32	47.700	10	230
KE 2040 6 ADW . . . M 5 V	-	102961	-	660348	-	6 x 40	20 x 40	47.700	10	325
KE 2525 6 ADW . . . M 5 V	-	102534	-	-	-	6 x 40	25 x 25	38.100	10	278
KE 2545 6 ADW . . . M 5 V	-	534687	-	660317	-	6 x 40	25 x 45	34.000	10	465
KE 2570 6 ADW . . . M 5 V	-	103043	-	-	-	6 x 40	25 x 70	20.400	10	730
KE 3232 6 ADW . . . M 5 V	660287	-	102596	-	-	6 x 40	32 x 32	29.800	5	270
Shank ø 8 mm										
KE 3250 8 ADW . . . M 5 V	660355	-	-	-	-	8 x 40	32 x 50	29.800	5	390

Hardness M, cup TO



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

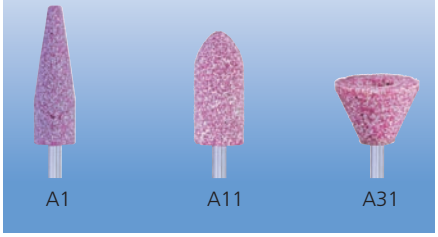
Ordering example:
EAN 4007220**660942**
TO 2016 6 ADW **60** M 5 V

How to order:
60 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	60					
	EAN 4007220						
TO 2016 6 ADW . . . M 5 V	-	660942	6 x 40	20 x 16	47.700	10	195
TO 4032 6 ADW . . . M 5 V	660959	-	6 x 40	40 x 32	23.800	5	360

Hardness M, series A



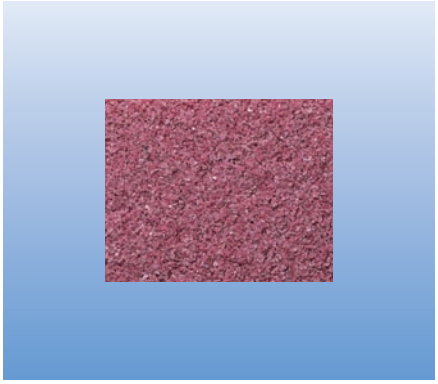
Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**114582**
A1 1/4 ADW 30 M 5 V

How to order:
A1 = Shape
1/4 = Shank dia. [inch]
ADW = Abrasive
30 = Grit size
M = Hardness grade
5 = Structure number
V = Bond type

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A1 1/4 ADW 30 M 5 V	30	114582	1/4 x 1 1/2	19 x 64	3/4 x 2 1/2	30.400	10	448
A11 1/4 ADW 30 M 5 V	30	114681	1/4 x 1 1/2	22 x 50	7/8 x 2	27.600	10	565
A31 6 ADW 30 M 5 V	30	117347	6 x 40	35 x 25	1 3/8 x 1	27.300	5	230



Mounted points in **hardness grade O** consist of pink aluminium oxide in a vitrified bond. Mounted points with a very high tool life and good stock removal rates are produced from this combination of wear-resistant grit and the hard bond.
The hardness grade O is particularly suited for use on edges and for deburring work on steel components.

Advantages

- These mounted points are dimensionally stable due to their hard bond, which characterises their long tool life and low tool wear.
- Due to their special edge stability, hardness grade O mounted points can also be used cost effectively with low RPM tool drives.

Application examples

- Deburring of steel castings.
- Chamfering in preparation for welding.
- Contour and edge grinding on forgings.

Recommendations for use

Mounted points in hardness grade O perform best at a cutting speed of 25 to 40 m/s. Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

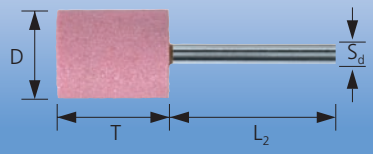
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**095638**
ZY 1013 6 AR **46** O 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

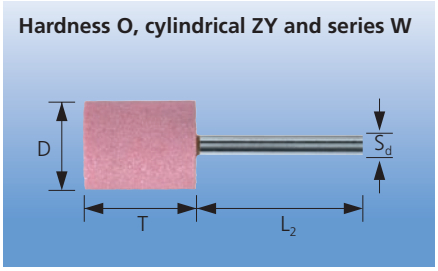
Hardness O, cylindrical ZY and series W



Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		
	24	30	46	60	80	100							g
	EAN 4007220												
Shank ø 3 mm													
ZY 0205 3 AR . . . O 5 V	-	-	-	-	-	094372	W 141	3 x 30	2 x 5	-	201.800	10	20
ZY 0306 3 AR . . . O 5 V	-	-	-	-	-	094525	W 144	3 x 30	3 x 6	-	206.100	10	20
W 145 3 AR . . . O 5 V	-	-	-	-	-	118139	-	3 x 30	3 x 10	1/8 x 3/8	131.400	10	20
W 146 3 AR . . . O 5 V	-	-	-	-	-	118146	-	3 x 30	3 x 13	1/8 x 1/2	95.400	10	22
W 149 3 AR . . . O 5 V	-	-	-	118160	-	118153	-	3 x 30	4 x 6	-	195.800	10	22
ZY 0408 3 AR . . . O 5 V	-	-	-	094693	-	094686	-	3 x 30	4 x 8	-	175.100	10	20
W 152 3 AR . . . O 5 V	-	-	-	-	-	118191	-	3 x 30	5 x 6	3/16 x 1/4	174.300	10	23
ZY 0510 3 AR . . . O 5 V	-	-	-	094891	-	094884	W 153	3 x 30	5 x 10	-	130.700	10	26
W 154 3 AR . . . O 5 V	-	-	-	118245	-	118238	-	3 x 30	5 x 13	3/16 x 1/2	114.800	10	27
ZY 0515 3 AR . . . O 5 V	-	-	-	534670	-	-	-	3 x 30	5 x 15	-	98.100	10	26
W 158 3 AR . . . O 5 V	-	-	-	-	-	118252	-	3 x 30	6 x 3	1/4 x 1/8	149.200	10	24
W 162 3 AR . . . O 5 V	-	-	-	118320	-	118313	-	3 x 30	6 x 10	1/4 x 3/8	110.500	10	28
ZY 0613 3 AR . . . O 5 V	-	-	-	095164	-	095157	W 163	3 x 30	6 x 13	-	93.600	10	30
W 164 3 AR . . . O 5 V	-	-	-	118368	-	118351	-	3 x 30	6 x 19	1/4 x 3/4	64.500	10	40
ZY 0625 3 AR . . . O 5 V	-	-	-	534656	-	-	-	3 x 30	6 x 25	-	53.100	10	38
ZY 0802 3 AR . . . O 5 V	-	-	-	-	-	098578	W 165	3 x 30	8 x 2	-	119.300	10	25
ZY 0810 3 AR . . . O 5 V	-	-	095355	-	095362	-	W 169	3 x 30	8 x 10	-	87.600	10	38
W 170 3 AR . . . O 5 V	-	-	118399	-	118405	-	-	3 x 30	8 x 13	5/16 x 1/2	74.400	10	44
ZY 0816 3 AR . . . O 5 V	-	-	095546	-	095553	-	-	3 x 30	8 x 16	-	61.000	10	50

Continued on next page.

Hardness O, cylindrical ZY and series W



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**095638**
ZY 1013 6 AR **46** O 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Continued from last page.

Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		
	24	30	46	60	80	100							
	EAN 4007220												
Shank ø 3 mm													
ZY 1002 3 AR . . . O 5 V	-	-	-	-	-	098660	W 172	3 x 30	10 x 2	-	95.400	10	27
W 173 3 AR . . . O 5 V	-	-	-	118429	-	118412	-	3 x 30	10 x 3	3/8 x 1/8	100.500	10	29
W 175 3 AR . . . O 5 V	-	-	118450	-	118467	-	-	3 x 30	10 x 10	3/8 x 3/8	77.500	10	46
ZY 1013 3 AR . . . O 5 V	-	-	095720	-	095737	-	W 176	3 x 30	10 x 13	-	58.400	10	55
ZY 1303 3 AR . . . O 5 V	-	-	-	098806	-	098790	W 182	3 x 30	13 x 3	-	73.400	10	35
ZY 1313 3 AR . . . O 5 V	-	-	096154	-	096161	-	W 185	3 x 30	13 x 13	-	45.300	10	70
W 191 3 AR . . . O 5 V	-	-	-	118580	-	118573	-	3 x 30	16 x 3	5/8 x 1/8	60.000	10	55
ZY 1604 3 AR . . . O 5 V	-	-	098974	-	098981	-	-	3 x 30	16 x 4	-	59.600	10	46
W 200 3 AR . . . O 5 V	-	-	-	118627	-	-	-	3 x 30	19 x 3	3/4 x 1/8	49.900	10	58
ZY 2006 3 AR . . . O 5 V	-	-	-	-	100424	-	W 201	3 x 30	20 x 6	-	47.700	10	84
W 215 3 AR . . . O 5 V	-	-	-	-	-	118696	-	3 x 30	25 x 3	1 x 1/8	37.500	10	78
Shank ø 6 mm													
ZY 0306 6 AR . . . O 5 V	-	-	-	-	-	094464	W 144	6 x 40	3 x 6	-	206.100	10	80
ZY 0408 6 AR . . . O 5 V	-	-	-	094594	-	094587	-	6 x 40	4 x 8	-	177.400	10	85
ZY 0510 6 AR . . . O 5 V	-	-	-	094778	-	094761	W 153	6 x 40	5 x 10	-	157.800	10	90
ZY 0613 6 AR . . . O 5 V	-	-	-	095058	-	095041	W 163	6 x 40	6 x 13	-	131.500	10	95
ZY 0625 6 AR . . . O 5 V	-	-	-	534663	-	-	-	6 x 40	6 x 25	-	62.200	10	117
ZY 0810 6 AR . . . O 5 V	-	-	095270	-	095287	-	W 169	6 x 40	8 x 10	-	119.300	10	105
ZY 0816 6 AR . . . O 5 V	-	-	095430	-	095447	-	-	6 x 40	8 x 16	-	119.300	10	112
ZY 1002 6 AR . . . O 5 V	-	-	-	-	-	098622	W 172	6 x 40	10 x 2	-	95.400	10	90
ZY 1013 6 AR . . . O 5 V	-	-	095638	-	095645	-	W 176	6 x 40	10 x 13	-	95.400	10	116
ZY 1020 6 AR . . . O 5 V	-	-	095874	-	095881	-	W 177	6 x 40	10 x 20	-	95.400	10	138
ZY 1025 6 AR . . . O 5 V	-	-	095966	-	095973	-	W 178	6 x 40	10 x 25	-	83.200	10	145
ZY 1032 6 AR . . . O 5 V	-	-	096024	-	096031	-	W 179	6 x 40	10 x 32	-	83.200	10	165
ZY 1303 6 AR . . . O 5 V	-	-	-	098745	-	098738	W 182	6 x 40	13 x 3	-	73.400	10	98
ZY 1306 6 AR . . . O 5 V	-	-	098851	-	-	-	W 183	6 x 40	13 x 6	-	73.400	10	115
ZY 1313 6 AR . . . O 5 V	-	-	096109	-	096116	-	W 185	6 x 40	13 x 13	-	73.400	10	137
ZY 1320 6 AR . . . O 5 V	-	-	096277	-	096284	-	W 186	6 x 40	13 x 20	-	73.400	10	167
ZY 1325 6 AR . . . O 5 V	-	-	096369	-	096376	-	W 187	6 x 40	13 x 25	-	73.400	10	180
ZY 1340 6 AR . . . O 5 V	-	-	098059	-	-	-	W 188	6 x 40	13 x 40	-	42.400	10	280
ZY 1604 6 AR . . . O 5 V	-	-	098929	-	098936	-	-	6 x 40	16 x 4	-	59.600	10	120
ZY 1610 6 AR . . . O 5 V	-	099063	-	-	-	-	W 193	6 x 40	16 x 10	-	59.600	10	160
ZY 1620 6 AR . . . O 5 V	-	096475	-	096482	-	-	W 195	6 x 40	16 x 20	-	59.600	10	235
ZY 1632 6 AR . . . O 5 V	-	096611	-	096628	-	-	-	6 x 40	16 x 32	-	51.200	10	290
ZY 1640 6 AR . . . O 5 V	-	096741	-	096758	-	-	-	6 x 40	16 x 40	-	40.500	10	345
ZY 1650 6 AR . . . O 5 V	-	096840	-	-	-	-	W 197	6 x 40	16 x 50	-	40.500	10	410
ZY 2006 6 AR . . . O 5 V	-	-	099124	-	099131	-	W 201	6 x 40	20 x 6	-	47.700	10	150
ZY 2010 6 AR . . . O 5 V	-	099216	-	099223	-	-	W 202	6 x 40	20 x 10	-	47.700	10	180
ZY 2013 6 AR . . . O 5 V	-	099261	-	-	-	-	W 203	6 x 40	20 x 13	-	47.700	10	225
ZY 2020 6 AR . . . O 5 V	-	096901	-	096918	-	-	W 204	6 x 40	20 x 20	-	47.700	10	295
ZY 2025 6 AR . . . O 5 V	-	097014	-	097021	-	-	W 205	6 x 40	20 x 25	-	47.700	10	330

Continued on next page.

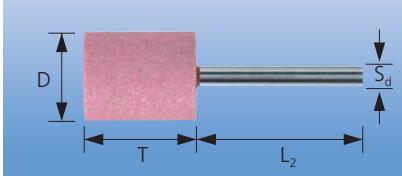
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**095638**
ZY 1013 6 AR **46** O 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Hardness O, cylindrical ZY and series W



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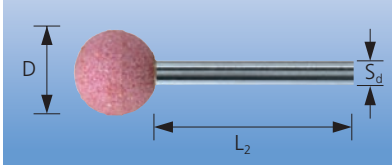
Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		
	24	30	46	60	80	100							
	EAN 4007220												
Shank ø 6 mm													
ZY 2032 6 AR . . . O 5 V	-	097113	-	097120	-	-	W 206	6 x 40	20 x 32	-	41.100	10	385
ZY 2040 6 AR . . . O 5 V	-	097236	-	097243	-	-	W 207	6 x 40	20 x 40	-	32.400	10	465
ZY 2050 6 AR . . . O 5 V	-	098080	-	-	-	-	W 208	6 x 40	20 x 50	-	25.100	10	535
ZY 2506 6 AR . . . O 5 V	-	-	099339	-	099346	-	W 214	6 x 40	25 x 6	-	38.100	10	210
ZY 2510 6 AR . . . O 5 V	-	099377	-	099384	-	-	W 217	6 x 40	25 x 10	-	38.100	10	255
ZY 2513 6 AR . . . O 5 V	-	099438	-	-	-	-	W 218	6 x 40	25 x 13	-	38.100	10	289
ZY 2516 6 AR . . . O 5 V	-	-	-	099513	-	-	-	6 x 40	25 x 16	-	38.100	10	324
ZY 2525 6 AR . . . O 5 V	-	097342	-	097359	-	-	W 220	6 x 40	25 x 25	-	38.100	10	475
ZY 2532 6 AR . . . O 5 V	-	097458	-	097465	-	-	-	6 x 40	25 x 32	-	32.900	10	545
ZY 2540 6 AR . . . O 5 V	-	098127	-	-	-	-	W 221	6 x 40	25 x 40	-	26.000	10	645
W 225 6 AR . . . O 5 V	-	-	119112	-	-	-	-	6 x 40	32 x 6	-	30.000	5	145
ZY 3208 6 AR . . . O 5 V	-	099582	-	099599	-	-	-	6 x 40	32 x 8	-	29.800	5	160
W 226 6 AR . . . O 5 V	-	119143	-	-	-	-	-	6 x 40	32 x 10	-	30.000	5	180
ZY 3216 6 AR . . . O 5 V	099674	-	099681	-	-	-	-	6 x 40	32 x 16	-	29.800	5	235
ZY 3220 6 AR . . . O 5 V	099780	-	099797	-	-	-	W 228	6 x 40	32 x 20	-	29.800	5	287
ZY 3232 6 AR . . . O 5 V	097618	-	097625	-	-	-	W 230	6 x 40	32 x 32	-	25.700	5	460
ZY 3240 6 AR . . . O 5 V	097731	-	097748	-	-	-	W 231	6 x 40	32 x 40	-	18.600	5	510
ZY 4006 6 AR . . . O 5 V	-	-	100462	-	-	-	W 235	6 x 40	40 x 6	-	23.800	5	180
ZY 4010 6 AR . . . O 5 V	-	099896	-	099902	-	-	W 236	6 x 40	40 x 10	-	23.800	5	252
ZY 4015 6 AR . . . O 5 V	-	099957	-	099964	-	-	-	6 x 40	40 x 15	-	23.800	5	320
ZY 4020 6 AR . . . O 5 V	100042	-	100059	-	-	-	-	6 x 40	40 x 20	-	23.800	5	415
ZY 4040 6 AR . . . O 5 V	097816	-	097823	-	-	-	W 238	6 x 40	40 x 40	-	16.200	5	770
ZY 5008 6 AR . . . O 5 V	-	100516	-	-	-	-	-	6 x 40	50 x 8	-	19.000	5	290
ZY 5013 6 AR . . . O 5 V	-	100202	-	100219	-	-	-	6 x 40	50 x 13	-	19.000	5	430
ZY 5025 6 AR . . . O 5 V	100332	-	100349	-	-	-	W 242	6 x 40	50 x 25	-	19.000	5	730
Shank ø 8 mm													
ZY 3240 8 AR . . . O 5 V	098196	-	-	-	-	-	W 231	8 x 40	32 x 40	-	27.200	5	550
ZY 4040 8 AR . . . O 5 V	098271	-	-	-	-	-	W 238	8 x 40	40 x 40	-	23.800	5	810
Shank ø 1/4"													
W 220 1/4 AR . . . O 5 V	-	117019	-	-	-	-	-	1/4 x 1 1/2	25 x 25	1 x 1	37.500	5	238

Hardness O, ball KU



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

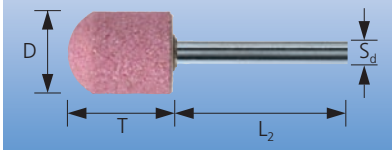
Ordering example:
EAN 4007220**101506**
KU 10 6 AR **80** O 5 V

How to order:
80 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size						S_d x L_2 [mm]	Dia. D [mm]	Max. speed [RPM]		
	24	30	46	60	80	100					
	EAN 4007220										
Shank ø 3 mm											
KU 03 3 AR . . . O 5 V	-	-	-	-	-	101018	3 x 30	3	300.200	10	18
KU 05 3 AR . . . O 5 V	-	-	-	101100	-	101094	3 x 30	5	190.900	10	20
KU 08 3 AR . . . O 5 V	-	-	101551	-	101568	-	3 x 30	8	116.200	10	30
KU 10 3 AR . . . O 5 V	-	-	101520	-	101537	-	3 x 30	10	83.300	10	41
KU 13 3 AR . . . O 5 V	-	-	101605	-	101612	-	3 x 30	13	54.000	10	55
Shank ø 6 mm											
KU 03 6 AR . . . O 5 V	-	-	-	-	-	100981	6 x 40	3	317.300	10	80
KU 05 6 AR . . . O 5 V	-	-	-	101056	-	101049	6 x 40	5	190.900	10	84
KU 08 6 AR . . . O 5 V	-	-	101148	-	101155	-	6 x 40	8	119.300	10	96
KU 10 6 AR . . . O 5 V	-	-	101490	-	101506	-	6 x 40	10	95.400	10	113
KU 13 6 AR . . . O 5 V	-	-	101216	-	101223	-	6 x 40	13	73.400	10	125
KU 16 6 AR . . . O 5 V	-	101278	-	101285	-	-	6 x 40	16	59.600	10	164
KU 20 6 AR . . . O 5 V	-	101353	-	101360	-	-	6 x 40	20	47.700	10	230
KU 25 6 AR . . . O 5 V	-	101391	-	101407	-	-	6 x 40	25	38.100	10	340
KU 32 6 AR . . . O 5 V	101445	-	101452	-	-	-	6 x 40	32	29.800	5	295

Hardness O, cylindrical with radius end WR



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**100851**
WR 0816 6 AR **46** O 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size					S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46	60	80	100					
	EAN 4007220									
Shank ø 3 mm										
WR 0306 3 AR . . . O 5 V	-	-	-	-	100745	3 x 30	3 x 6	219.800	10	20
WR 0510 3 AR . . . O 5 V	-	-	100837	-	100820	3 x 30	5 x 10	136.500	10	26
Shank ø 6 mm										
WR 0306 6 AR . . . O 5 V	-	-	-	-	100714	6 x 40	3 x 6	219.800	10	80
WR 0510 6 AR . . . O 5 V	-	-	100783	-	100776	6 x 40	5 x 10	168.400	10	90
WR 0816 6 AR . . . O 5 V	-	100851	-	100868	-	6 x 40	8 x 16	119.300	10	110
WR 1320 6 AR . . . O 5 V	-	100905	-	100912	-	6 x 40	13 x 20	73.400	10	165
WR 2025 6 AR . . . O 5 V	100943	-	100950	-	-	6 x 40	20 x 25	47.700	10	325

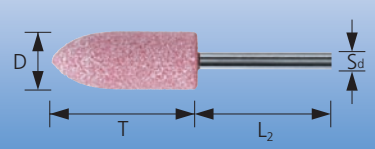
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102152**
SP 1320 6 AR **46** O 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Hardness O, tree SP



Order No.	Grit size					S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46	60	80	100					
	EAN 4007220									
Shank ø 3 mm										
SP 0306 3 AR . . . O 5 V	-	-	-	-	101810	3 x 30	3 x 6	252.000	10	20
SP 0510 3 AR . . . O 5 V	-	-	101940	-	101933	3 x 30	5 x 10	149.500	10	26
SP 0816 3 AR . . . O 5 V	-	102084	-	102091	-	3 x 30	8 x 16	72.800	10	43
Shank ø 6 mm										
SP 0306 6 AR . . . O 5 V	-	-	-	-	101773	6 x 40	3 x 6	255.500	10	80
SP 0510 6 AR . . . O 5 V	-	-	101872	-	101865	6 x 40	5 x 10	190.900	10	90
SP 0816 6 AR . . . O 5 V	-	102015	-	102022	-	6 x 40	8 x 16	119.300	10	110
SP 1320 6 AR . . . O 5 V	-	102152	-	102169	-	6 x 40	13 x 20	73.400	10	160
SP 2032 6 AR . . . O 5 V	102244	-	102251	-	-	6 x 40	20 x 32	47.700	10	330
SP 2050 6 AR . . . O 5 V	102329	-	-	-	-	6 x 40	20 x 50	30.500	10	490
SP 2540 6 AR . . . O 5 V	102350	-	-	-	-	6 x 40	25 x 40	35.000	10	550

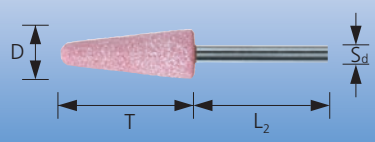
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102688**
KE 2032 6 AR **30** O 5 V

How to order:
30 = Grit size

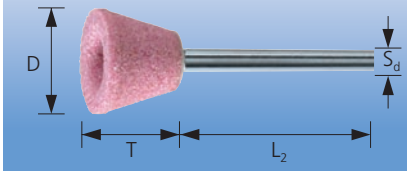
Please complete the order no. by adding the grit size.

Hardness O, tapered KE



Order No.	Grit size					S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60	80					
	EAN 4007220									
Shank ø 3 mm										
KE 1010 3 AR . . . O 5 V	-	-	102404	-	-	3 x 30	10 x 10	95.400	10	40
Shank ø 6 mm										
KE 1010 6 AR . . . O 5 V	-	-	102374	-	-	6 x 40	10 x 10	95.400	10	105
KE 1025 6 AR . . . O 5 V	-	-	102787	-	102794	6 x 40	10 x 25	95.400	10	130
KE 1313 6 AR . . . O 5 V	-	-	102428	-	-	6 x 40	13 x 13	73.400	10	120
KE 1616 6 AR . . . O 5 V	-	102466	-	102473	-	6 x 40	16 x 16	59.600	10	140
KE 1645 6 AR . . . O 5 V	-	-	102879	-	102886	6 x 40	16 x 45	52.000	10	250
KE 2020 6 AR . . . O 5 V	-	102497	-	102503	-	6 x 40	20 x 20	47.700	10	210
KE 2032 6 AR . . . O 5 V	-	102688	-	102695	-	6 x 40	20 x 32	47.700	10	230
KE 2040 6 AR . . . O 5 V	-	102978	-	102985	-	6 x 40	20 x 40	47.700	10	325
KE 2525 6 AR . . . O 5 V	-	102541	-	102558	-	6 x 40	25 x 25	38.100	10	278
KE 2545 6 AR . . . O 5 V	-	102923	-	102930	-	6 x 40	25 x 45	34.000	10	465
KE 2570 6 AR . . . O 5 V	-	103067	-	-	-	6 x 40	25 x 70	20.400	10	730
KE 3232 6 AR . . . O 5 V	102602	-	102619	-	-	6 x 40	32 x 32	29.800	5	270
Shank ø 8 mm										
KE 3250 8 AR . . . O 5 V	103098	-	-	-	-	8 x 40	32 x 50	29.800	5	390

Hardness O, cup TO



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**103173**
TO 3225 6 AR **24** O 5 V

How to order:
24 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size				S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46	60					
	EAN 4007220								
TO 2016 6 AR . . . O 5 V	-	103128	-	103135	6 x 40	20 x 16	47.700	10	195
TO 2520 6 AR . . . O 5 V	-	103142	-	-	6 x 40	25 x 20	38.100	10	280
TO 3225 6 AR . . . O 5 V	103173	-	103180	-	6 x 40	32 x 25	29.800	5	225

Hardness O, series A and B

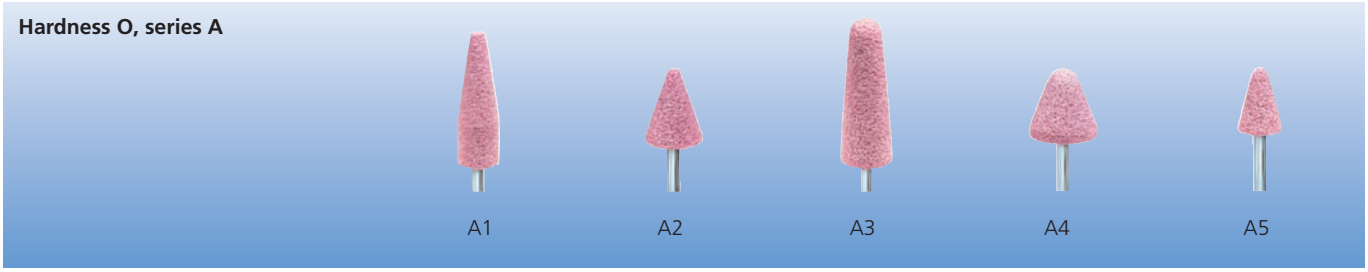
Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**117101**
A1 6 AR 30 O 5 V

How to order:
A1 = Shape
6 = Shank dia. [mm]
AR = Abrasive
30 = Grit size
O = Hardness grade
5 = Structure number
V = Bond type

Hardness O, series A



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A1 6 AR 30 O 5 V	30	117101	6 x 40	19 x 64	3/4 x 2 1/2	30.400	10	448
A1 1/4 AR 30 O 5 V	30	114599	1/4 x 1 1/2	19 x 64	3/4 x 2 1/2	30.400	10	448
A2 6 AR 30 O 5 V	30	117125	6 x 40	25 x 32	1 x 1 1/4	37.500	10	320
A2 1/4 AR 30 O 5 V	30	114612	1/4 x 1 1/2	25 x 32	1 x 1 1/4	37.500	10	320
A3 6 AR 30 O 5 V	30	117149	6 x 40	25 x 70	1 x 2 3/4	18.600	10	755
A3 1/4 AR 30 O 5 V	30	114636	1/4 x 1 1/2	25 x 70	1 x 2 3/4	18.600	10	755
A4 6 AR 30 O 5 V	30	117163	6 x 40	32 x 32	1 1/4 x 1 1/4	30.000	5	230
A4 1/4 AR 30 O 5 V	30	114650	1/4 x 1 1/2	32 x 32	1 1/4 x 1 1/4	30.000	5	230
A5 6 AR 30 O 5 V	30	117170	6 x 40	19 x 29	3/4 x 1 1/8	49.900	10	225
A5 1/4 AR 30 O 5 V	30	114667	1/4 x 1 1/2	19 x 29	3/4 x 1 1/8	49.900	10	225

Hardness O, series A

A6 A11 A12 A14 A15 A21

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A6 6 AR 30 O 5 V	30	117187	6 x 40	19 x 29	3/4 x 1 1/8	49.900	10	290
A11 6 AR 30 O 5 V	30	117200	6 x 40	22 x 50	7/8 x 2	27.600	10	565
A11 1/4 AR 30 O 5 V	30	114698	1/4 x 1 1/2	22 x 50	7/8 x 2	27.600	10	565
A12 6 AR 30 O 5 V	30	117224	6 x 40	17 x 32	1 1/16 x 1 1/4	54.500	10	265
A12 1/4 AR 30 O 5 V	30	114711	1/4 x 1 1/2	17 x 32	1 1/16 x 1 1/4	54.500	10	265
A14 6 AR 30 O 5 V	30	117248	6 x 40	17 x 22	11/16 x 7/8	54.500	10	226
A15 6 AR 60 O 5 V	60	117262	6 x 40	6 x 27	1/4 x 1 1/16	112.900	10	108
A15 6 AR 100 O 5 V	100	117255	6 x 40	6 x 27	1/4 x 1 1/16	112.900	10	108
A15 1/4 AR 60 O 5 V	60	114759	1/4 x 1 1/2	6 x 27	1/4 x 1 1/16	112.900	10	108
A21 6 AR 30 O 5 V	30	117279	6 x 40	25 x 25	1 x 1	37.500	10	410
A21 1/4 AR 30 O 5 V	30	114766	1/4 x 1 1/2	25 x 25	1 x 1	37.500	10	410

Hardness O, series A

A24 A25 A26 A34 A36 A37

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A24 6 AR 60 O 5 V	60	117316	6 x 40	6 x 19	1/4 x 3/4	117.400	10	105
A24 6 AR 100 O 5 V	100	117309	6 x 40	6 x 19	1/4 x 3/4	117.400	10	105
A24 1/4 AR 60 O 5 V	60	114803	1/4 x 1 1/2	6 x 19	1/4 x 3/4	117.400	10	105
A25 6 AR 30 O 5 V	30	117323	6 x 40	25	1	37.500	10	350
A25 1/4 AR 30 O 5 V	30	114810	1/4 x 1 1/2	25	1	37.500	10	350
A26 6 AR 30 O 5 V	30	117330	6 x 40	16	5/8	60.000	10	160
A34 6 AR 30 O 5 V	30	117385	6 x 40	38 x 10	1 1/2 x 3/8	25.000	5	210
A36 6 AR 60 O 5 V	60	117415	6 x 40	41 x 10	1 5/8 x 3/8	23.100	5	180
A36 1/4 AR 60 O 5 V	60	114902	1/4 x 1 1/2	41 x 10	1 5/8 x 3/8	23.100	5	180
A37 6 AR 60 O 5 V	60	117422	6 x 40	32 x 6	1 1/4 x 1/4	30.000	5	112
A37 1/4 AR 60 O 5 V	60	114919	1/4 x 1 1/2	32 x 6	1 1/4 x 1/4	30.000	5	112

Hardness O, series B

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
B43 3 AR 100 O 5 V	100	117453	3 x 30	6 x 8	1/4 x 5/16	149.200	10	26
B44 3 AR 100 O 5 V	100	117460	3 x 30	6 x 10	7/32 x 3/8	141.100	10	24
B45 3 AR 100 O 5 V	100	117477	3 x 30	5 x 8	3/16 x 5/16	181.900	10	23
B46 3 AR 100 O 5 V	100	117484	3 x 30	3 x 8	1/8 x 5/16	267.100	10	20
B51 3 AR 80 O 5 V	80	117507	3 x 30	11 x 19	7/16 x 3/4	63.600	10	60
B52 3 AR 46 O 5 V	46	117514	3 x 30	10 x 19	3/8 x 3/4	66.200	10	60
B52 3 AR 80 O 5 V	80	117521	3 x 30	10 x 19	3/8 x 3/4	66.200	10	60
B53 3 AR 60 O 5 V	60	117545	3 x 30	6 x 16	1/4 x 5/8	149.200	10	28
B53 3 AR 100 O 5 V	100	117538	3 x 30	6 x 16	1/4 x 5/8	149.200	10	28
B54 3 AR 60 O 5 V	60	117569	3 x 30	6 x 13	1/4 x 1/2	101.500	10	30
B54 3 AR 100 O 5 V	100	117552	3 x 30	6 x 13	1/4 x 1/2	101.500	10	30
B55 3 AR 100 O 5 V	100	117576	3 x 30	3 x 6	1/8 x 1/4	257.000	10	20
B61 3 AR 80 O 5 V	80	117590	3 x 30	19 x 8	3/4 x 5/16	45.000	10	72

Hardness O, series B

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
B63 3 AR 100 O 5 V	100	117620	3 x 30	6 x 5	1/4 x 3/16	149.200	10	24
B64 3 AR 100 O 5 V	100	117637	3 x 30	6 x 2	1/4 x 1/16	149.200	10	20
B65 3 AR 100 O 5 V	100	117644	3 x 30	3 x 3	1/8 x 1/8	277.700	10	18
B69 3 AR 100 O 5 V	100	117668	3 x 30	8 x 2	5/16 x 1/16	120.800	10	22
B70 3 AR 100 O 5 V	100	117675	3 x 30	19 x 3	3/4 x 1/8	49.900	10	43
B71 3 AR 100 O 5 V	100	117682	3 x 30	16 x 2	5/8 x 3/32	60.000	10	32
B72 3 AR 100 O 5 V	100	117699	3 x 30	13 x 3	1/2 x 1/8	75.100	10	32
B73 3 AR 100 O 5 V	100	117705	3 x 30	13 x 3	1/2 x 1/8	75.100	10	30
B81 3 AR 60 O 5 V	60	117729	3 x 30	19 x 8	3/4 x 5/16	49.900	10	43
B81 3 AR 100 O 5 V	100	117712	3 x 30	19 x 8	3/4 x 5/16	49.900	10	43
B82 3 AR 100 O 5 V	100	117736	3 x 30	13 x 6	1/2 x 1/4	75.100	10	30

Hardness O, series B

B84 B92 B95 B96 B97 B98 B102 B103 B104 B105

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
B84 3 AR 100 O 5 V	100	117750	3 x 30	8 x 5	5/16 x 3/16	120.800	10	26
B92 3 AR 100 O 5 V	100	117767	3 x 30	6 x 6	1/4 x 1/4	149.200	10	24
B95 3 AR 100 O 5 V	100	117798	3 x 30	3 x 5	1/8 x 3/16	260.300	10	20
B96 3 AR 100 O 5 V	100	117804	3 x 30	3 x 6	1/8 x 1/4	236.100	10	20
B96 1/8 AR 100 O 5 V	100	115435	1/8 x 1 1/4	3 x 6	1/8 x 1/4	236.100	10	20
B97 3 AR 100 O 5 V	100	117811	3 x 30	2 x 10	3/32 x 3/8	107.300	10	18
B98 3 AR 100 O 5 V	100	117828	3 x 30	2 x 6	3/32 x 1/4	168.300	10	18
B102 3 AR 80 O 5 V	80	117842	3 x 30	16 x 13	5/8 x 1/2	46.400	10	50
B103 3 AR 80 O 5 V	80	117866	3 x 30	16 x 5	5/8 x 3/16	60.000	10	45
B104 3 AR 80 O 5 V	80	117873	3 x 30	8 x 10	5/16 x 3/8	104.500	10	40
B105 3 AR 100 O 5 V	100	117880	3 x 30	6 x 6	1/4 x 1/4	149.200	10	22

Hardness O, series B

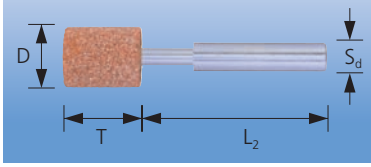
B106 B111 B114 B115 B121 B122 B123 B124 B125

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
B106 3 AR 100 O 5 V	100	117897	3 x 30	3 x 2	1/8 x 7/64	295.600	10	18
B111 3 AR 80 O 5 V	80	117910	3 x 30	11 x 17	7/16 x 11/16	47.700	10	60
B114 3 AR 100 O 5 V	100	117958	3 x 30	6 x 10	7/32 x 3/8	136.900	10	26
B115 3 AR 100 O 5 V	100	117965	3 x 30	2 x 3	3/32 x 1/8	299.400	10	18
B121 3 AR 46 O 5 V	46	117972	3 x 30	13	1/2	56.200	10	54
B122 3 AR 46 O 5 V	46	117996	3 x 30	10	3/8	90.200	10	34
B122 3 AR 80 O 5 V	80	118009	3 x 30	10	3/8	90.200	10	34
B123 3 AR 100 O 5 V	100	118016	3 x 30	5	3/16	198.900	10	20
B123 1/8 AR 100 O 5 V	100	115701	1/8 x 1 1/4	5	3/16	198.900	10	20
B124 3 AR 100 O 5 V	100	118023	3 x 30	3	1/8	291.800	10	18
B125 3 AR 100 O 5 V	100	118030	3 x 30	6	1/4	149.200	10	40
B125 1/8 AR 100 O 5 V	100	115732	1/8 x 1 1/4	6	1/4	149.200	10	40

Mounted Points

Hardness O

Mounted points for grinding threading dies



Tool mounted points are eminently suitable for general sharpening of all HSS cutting tools. Tool mounted points with a vitrified bond and an aluminium oxide base have a hardness grade and grit that complements the diameter. The mounted points are supplied with an offset dia. 6 mm shank.

Application examples:
- Re-sharpening of threading dies.
- Grinding of HSS shape cutting tools.
- Reduction of drill cutting edges.
- Re-sharpening of step chip breakers on HSS tools.

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

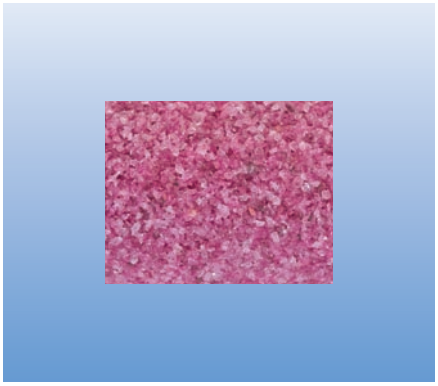
Ordering example:
EAN 4007220**098370**
702 6 AR **100** MO V

How to order:
100 = Grit size

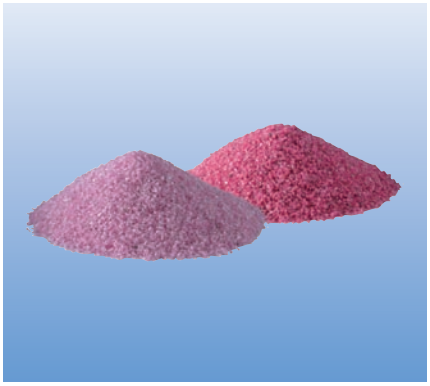
Please complete the order no. by including the grit size.

Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	80	100					
	EAN 4007220						
702 6 AR . . . MO V	-	098370	6 x 40	2 x 5	201.800	10	80
703 6 AR . . . MO V	-	098387	6 x 40	3 x 8	152.500	10	80
704 6 AR . . . MO V	-	098394	6 x 40	4 x 8	177.400	10	80
705 6 AR . . . MO V	098400	-	6 x 40	5 x 8	190.900	10	80
706 6 AR . . . MO V	098417	-	6 x 40	6 x 10	159.100	10	80
707 6 AR . . . MO V	098424	-	6 x 40	7 x 10	136.400	10	90
708 6 AR . . . MO V	098431	-	6 x 40	8 x 12	119.300	10	97
709 6 AR . . . MO V	098448	-	6 x 40	9 x 12	106.100	10	100
710 6 AR . . . M V	098455	-	6 x 40	10 x 12	95.400	10	105
712 6 AR . . . M V	098479	-	6 x 40	12 x 15	79.500	10	130

Hardness O for Foundries



Special mounted points in **hardness grade O for foundries** are manufactured from a mix of pink and red aluminium oxide in an optimised vitrified bond.
This grit combination gives a good balance of stock removal rate and tool life, especially when working on steel castings.
The hardness grade O for foundries is particularly suitable for tough work on cast steel.



Advantages

- Very aggressive mounted points with quick cutting action.
- High stock removal in combination with long tool life.
- Practical and environmentally friendly industrial packaging.

Application examples

- Removal of burrs on steel castings.
- Grinding of intersections after separating risers.

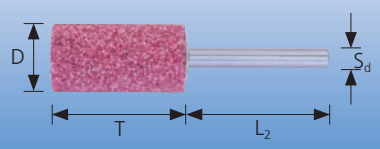
Recommendations for use

Mounted points in hardness grade O perform best at a cutting speed of 25 to 40 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802953**
ZY 2040 6 ADR 30 O 5 V na

Hardness O, cylindrical ZY

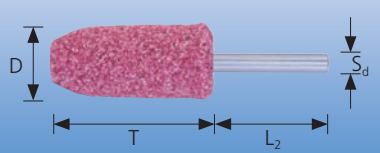


Order No.	Grit size	EAN 4007220	Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
ZY 2040 6 ADR 30 O 5 V na	30	802953	W 207	6 x 40	20 x 40	47.700	50	2,500
ZY 2532 6 ADR 30 O 5 V na	30	802960	-	6 x 40	25 x 32	32.900	50	2,750

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802977**
SP 2050 6 ADR 30 O 5 V na

Hardness O, tree SP



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
SP 2050 6 ADR 30 O 5 V na	30	802977	6 x 40	20 x 50	14.100	50	2,350

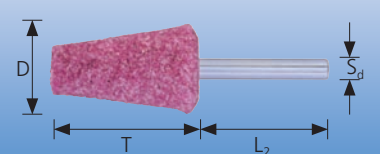
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802991**
KE 1645 6 AR **46** O 5 V na

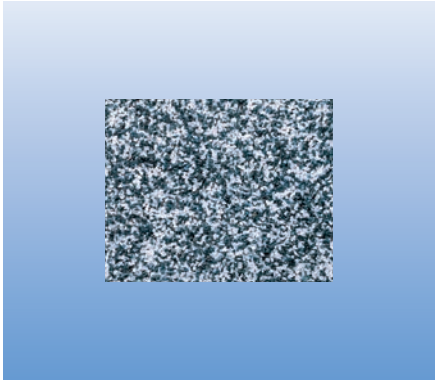
How to order:
46 = Grit size

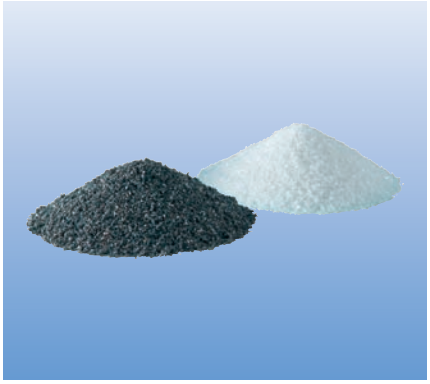
Please complete the order no. by adding the grit size.

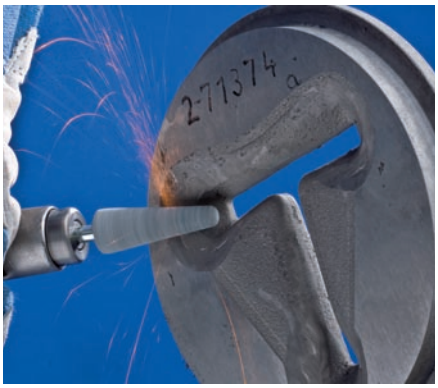
Hardness O, tapered KE



Order No.	Grit size			S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46					
	EAN 4007220							
Shank ø 6 mm								
KE 1645 6 ADR ... O 5 V na	-	-	802991	6 x 40	16 x 45	24.000	50	1,100
KE 2040 6 ADR ... O 5 V na	-	803011	-	6 x 40	20 x 40	20.900	50	2,200
Shank ø 8 mm								
KE 3550 8 ADR ... O 5 V na	642672	-	-	8 x 40	35 x 50	15.600	50	4,850







Mounted points in **hardness grade H** are manufactured from a mix of regular and white aluminium oxide in a vitrified bond.
The relatively soft bonding of the grit achieves a high stock removal rate during grinding.
The hardness grade H combined with high peripheral speeds is particularly suitable for use on hard and tough steel surfaces.

Advantages

- Excellent smooth grinding and high abrasive cutting properties.
- Easy to break down, sharp-edged white aluminium oxide gives high stock removal rates on hardened steel components.
- The open structure allows excellent heat dissipation.
- The use of tough regular aluminium oxide in the grit mix maintains a satisfactory tool life in spite of the soft bond.

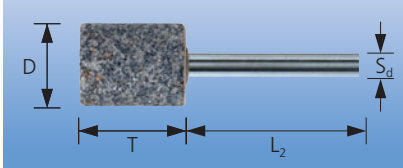
Application examples

- Grinding on heat-treated tools and dies (e.g. of presses, metalforming or punching machines).
- Grinding on hardened injection moulds.

Recommendations for use

Mounted points in hardness grade H perform best at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness H, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**096550**
ZY 1632 6 AWN **30** H 5 V

How to order:
30 = Grit size

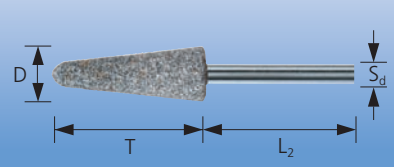
Please complete the order no. by adding the grit size.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60						
	EAN 4007220									
Shank ø 3 mm										
ZY 0306 3 AWN . . . H 5 V	-	-	-	094495	W 144	3 x 30	3 x 6	206.100	10	20
ZY 0408 3 AWN . . . H 5 V	-	-	-	094648	-	3 x 30	4 x 8	175.100	10	20
ZY 0510 3 AWN . . . H 5 V	-	-	-	094846	W 153	3 x 30	5 x 10	130.700	10	26
ZY 0613 3 AWN . . . H 5 V	-	-	-	095102	W 163	3 x 30	6 x 13	93.600	10	30
ZY 0810 3 AWN . . . H 5 V	-	-	095317	-	W 169	3 x 30	8 x 10	87.600	10	38
ZY 0816 3 AWN . . . H 5 V	-	-	095508	-	-	3 x 30	8 x 16	61.000	10	50
Shank ø 6 mm										
ZY 0816 6 AWN . . . H 5 V	-	-	095393	-	-	6 x 40	8 x 16	119.300	10	112
ZY 1020 6 AWN . . . H 5 V	-	-	095836	-	W 177	6 x 40	10 x 20	95.400	10	138
ZY 1325 6 AWN . . . H 5 V	-	-	096314	-	W 187	6 x 40	13 x 25	73.400	10	180
ZY 1632 6 AWN . . . H 5 V	-	096550	-	-	-	6 x 40	16 x 32	51.200	10	290
ZY 2025 6 AWN . . . H 5 V	-	096956	-	-	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 AWN . . . H 5 V	-	097182	-	-	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2525 6 AWN . . . H 5 V	-	097311	-	-	W 220	6 x 40	25 x 25	38.100	10	475
ZY 3232 6 AWN . . . H 5 V	097557	-	-	-	W 230	6 x 40	32 x 32	25.700	5	460
ZY 5013 6 AWN . . . H 5 V	-	100141	-	-	-	6 x 40	50 x 13	19.000	5	430
Shank ø 8 mm										
ZY 5040 8 AWN . . . H 5 V	100646	-	-	-	W 243	8 x 40	50 x 40	19.000	5	980

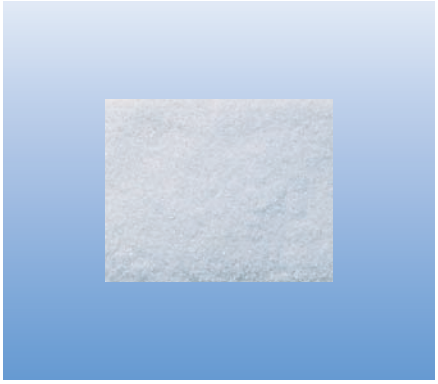
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102831**
KE 1645 6 AWN 46 H 5 V

Hardness H, tapered KE



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		9
KE 1025 6 AWN 46 H 5 V	46	102732	6 x 40	10 x 25	95.400	10	130
KE 1645 6 AWN 46 H 5 V	46	102831	6 x 40	16 x 45	52.000	10	250



Mounted points in **hardness grade I** are manufactured from white aluminium oxide in a vitrified bond.
The hardness grade I is a soft and very aggressive abrasive bond, giving very high stock removal rates.
The hardness grade I is particularly good for use on hard steel surfaces.

Advantages

- Easy to break down, sharp-edged white aluminium oxide allows high stock removal rates on hardened steel.
- The open structure allows good heat dissipation and cool grinding.

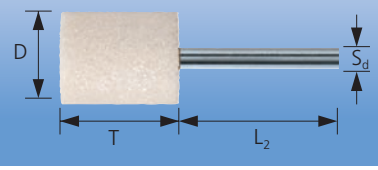
Application examples

- Grinding of heat treated steel components.
- Dressing of hard deposit-welded claddings.
- Grinding of titanium and titanium alloy workpieces.

Recommendations for use

Mounted points in hardness grade I perform best at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness I, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097205**
ZY 2040 6 AW **30** I 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60	80	100						
	EAN 4007220											
Shank ø 3 mm												
ZY 0205 3 AW . . . I 5 V	-	-	-	-	-	094358	W 141	3 x 30	2 x 5	201.800	10	20
ZY 0306 3 AW . . . I 5 V	-	-	-	-	-	094501	W 144	3 x 30	3 x 6	206.100	10	20
ZY 0408 3 AW . . . I 5 V	-	-	-	-	-	094655	-	3 x 30	4 x 8	175.100	10	20
ZY 0510 3 AW . . . I 5 V	-	-	-	-	-	094853	W 153	3 x 30	5 x 10	130.700	10	26
ZY 0613 3 AW . . . I 5 V	-	-	-	095126	-	095119	W 163	3 x 30	6 x 13	93.600	10	30
ZY 1303 3 AW . . . I 5 V	-	-	-	098769	-	-	W 182	3 x 30	13 x 3	73.400	10	35
ZY 2006 3 AW . . . I 5 V	-	-	100400	-	-	-	W 201	3 x 30	20 x 6	47.700	10	84
Shank ø 6 mm												
ZY 0816 6 AW . . . I 5 V	-	-	-	-	095409	-	-	6 x 40	8 x 16	119.300	10	112
ZY 1013 6 AW . . . I 5 V	-	-	-	-	095607	-	W 176	6 x 40	10 x 13	95.400	10	116
ZY 1020 6 AW . . . I 5 V	-	-	-	-	095843	-	W 177	6 x 40	10 x 20	95.400	10	138
ZY 1325 6 AW . . . I 5 V	-	-	096321	-	-	-	W 187	6 x 40	13 x 25	73.400	10	180
ZY 1620 6 AW . . . I 5 V	-	096444	-	-	-	-	W 195	6 x 40	16 x 20	59.600	10	235
ZY 1632 6 AW . . . I 5 V	-	096581	-	-	-	-	-	6 x 40	16 x 32	51.200	10	290
ZY 2025 6 AW . . . I 5 V	-	096970	-	096987	-	-	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 AW . . . I 5 V	-	097205	-	-	-	-	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2532 6 AW . . . I 5 V	-	097427	-	-	-	-	-	6 x 40	25 x 32	32.900	10	545
ZY 3216 6 AW . . . I 5 V	-	-	099650	-	-	-	-	6 x 40	32 x 16	29.800	5	235
ZY 3232 6 AW . . . I 5 V	-	-	097588	-	-	-	W 230	6 x 40	32 x 32	25.700	5	460

Continued on next page.

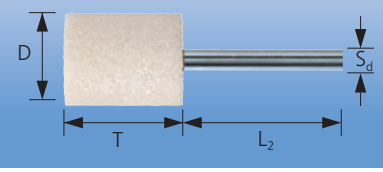
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097205**
ZY 2040 6 AW **30** I 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Hardness I, cylindrical ZY



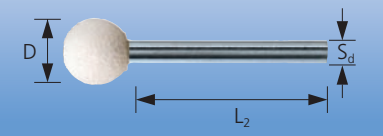
Continued from last page.

Order No.	Grit size						Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46	60	80	100						
	EAN 4007220											
ZY 4010 6 AW . . . I 5 V	-	-	-	099872	-	-	W 236	6 x 40	40 x 10	23.800	5	252
ZY 4020 6 AW . . . I 5 V	-	-	100011	-	-	-	-	6 x 40	40 x 20	23.800	5	415
ZY 5013 6 AW . . . I 5 V	-	-	-	100172	-	-	-	6 x 40	50 x 13	19.000	5	430
ZY 5025 6 AW . . . I 5 V	100301	-	-	-	-	-	W 242	6 x 40	50 x 25	19.000	5	730

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**101544**
KU 08 3 AW 80 I 5 V

Hardness I, ball KU



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	Dia. D [mm]	Max. speed [RPM]		g
KU 08 3 AW 80 I 5 V	80	101544	3 x 30	8	116.200	10	30

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102749**
KE 1025 6 AW 46 I 5 V

Hardness I, tapered KE

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
KE 1025 6 AW 46 I 5 V	46	102749	6 x 40	10 x 25	95.400	10	130
KE 1645 6 AW 46I 5 V	46	102855	6 x 40	16 x 45	52.000	10	250

Mounted points in **hardness grade T** are manufactured from white aluminium oxide in a vitrified bond.
The hardness grade T is one of the hardest bonds for small-diameter mounted points. The particularly strong grit bond gives very long tool life.
The hardness grade T is particularly good for edge applications on hard steel.

Advantages

- Easy to break down, sharp-edged white aluminium oxide allows high stock removal on steel components.
- Due to the high bond content, the mounted points are extremely dimensionally stable.
- The particularly high edge-holding properties of mounted points, hardness grade T also make them efficient on low RPM tool drives.

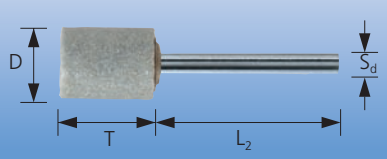
Application examples

- Deburring of workpieces made from heat-treated steel.
- Very fine chamfering of hard components in tool, die and mouldmaking applications.

Recommendations for use

Mounted points in hardness grade T perform best at a cutting speed of 15 to 20 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness T, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**095201**
ZY 0613 3 AW **60** T 5 V

How to order:
60 = Grit size

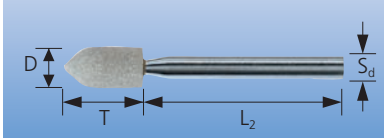
Please complete the order no. by adding the grit size.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	60	80	100	320						
	EAN 4007220									
Shank ø 3 mm										
ZY 0105 3 AW . . . T 5 V	-	-	-	098349	-	3 x 30	1 x 5	140.200	10	18
ZY 1,508 3 AW . . . T 5 V	-	-	-	098356	-	3 x 30	1,5 x 8	104.700	10	20
ZY 1,708 3 AW . . . T 5 V	-	-	-	098363	-	3 x 30	1,7 x 8	112.300	10	20
ZY 0205 3 AW . . . T 5 V	-	-	094396	-	W 141	3 x 30	2 x 5	201.800	10	20
ZY 0306 3 AW . . . T 5 V	-	-	094549	-	W 144	3 x 30	3 x 6	206.100	10	20
ZY 0408 3 AW . . . T 5 V	-	-	094723	-	-	3 x 30	4 x 8	175.100	10	20
ZY 0510 3 AW . . . T 5 V	-	-	094921	-	W 153	3 x 30	5 x 10	130.700	10	26
ZY 0613 3 AW . . . T 5 V	095201	-	095195	-	W 163	3 x 30	6 x 13	93.600	10	30
ZY 0816 3 AW . . . T 5 V	-	095584	-	-	-	3 x 30	8 x 16	61.000	10	50
ZY 1013 3 AW . . . T 5 V	-	095768	-	-	W 176	3 x 30	10 x 13	58.400	10	55
Shank ø 6 mm										
ZY 0510 6 AW . . . T 5 V	-	-	094808	-	W 153	6 x 40	5 x 10	157.800	10	90

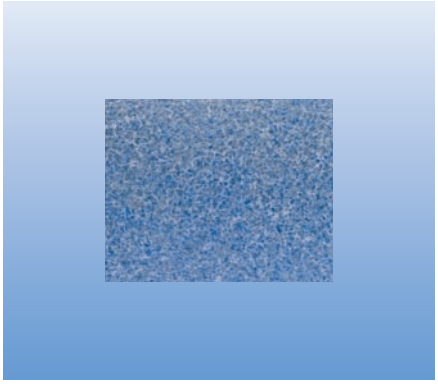
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**101971**
SP 0510 3 AW 100 T 5 V

Hardness T, tree SP



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
SP 0306 3 AW 100 T 5 V	100	101834	3 x 30	3 x 6	252.000	10	20
SP 0510 3 AW 100 T 5 V	100	101971	3 x 30	5 x 10	149.500	10	26



Mounted points in **hardness grade J** are manufactured from a mix of white aluminium oxide and blue ceramic sintered aluminium oxide in a vitrified bond.
The soft bond in combination with the easy to break down, sharp-edged white aluminium oxide and the self-sharpening effect of the microcrystalline sintered aluminium oxide allows extremely high stock removal rates with excellent tool life.
The hardness grade J is perfectly suited for surface work on titanium materials, nickel and cobalt based alloys, steel components and build-up weld deposits.

Advantages

- Cool grinding due to the easy to break down grit mix.
- High stock removal and excellent tool life.
- The self-sharpening qualities of the sintered aluminium oxide guarantee consistent stock removal.

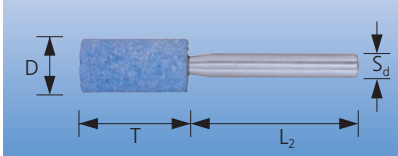
Application examples

- Re-finishing of turbine blades during aeroplane maintenance work.
- Follow-up repair welding in tool and mould construction.
- Grinding of repair welds and turbine blades.

Recommendations for use

Mounted points in hardness grade J perform best at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness J, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802106**
ZY 0306 3 AWCO **80** J 5 V

How to order:
80 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	46	60	80	100						
	EAN 4007220									
Shank ø 3 mm										
ZY 0306 3 AWCO . . . J 5 V	-	-	802106	802120	W 144	3 x 30	3 x 6	206.100	10	20
ZY 0408 3 AWCO . . . J 5 V	-	-	802137	802144	-	3 x 30	4 x 8	175.100	10	20
ZY 0510 3 AWCO . . . J 5 V	-	-	802151	802168	W 153	3 x 30	5 x 10	130.700	10	26
ZY 0613 3 AWCO . . . J 5 V	-	802175	802182	802199	W 163	3 x 30	6 x 13	93.600	10	30
Shank ø 6 mm										
ZY 0816 6 AWCO . . . J 5 V	802205	-	802212	-	-	6 x 40	8 x 16	119.300	10	116
ZY 1013 6 AWCO . . . J 5 V	802229	-	802274	-	W 176	6 x 40	10 x 13	95.400	10	137
ZY 1325 6 AWCO . . . J 5 V	802304	-	802311	-	W 187	6 x 40	13 x 25	73.400	10	180
ZY 1620 6 AWCO . . . J 5 V	802328	802335	-	-	W 195	6 x 40	16 x 20	59.600	10	235
ZY 1632 6 AWCO . . . J 5 V	802342	802366	-	-	-	6 x 40	16 x 32	51.200	10	290
ZY 2025 6 AWCO . . . J 5 V	802373	802397	-	-	W 205	6 x 40	20 x 25	47.700	10	330
ZY 3232 6 AWCO . . . J 5 V	802427	-	-	-	W 230	6 x 40	32 x 32	25.700	10	460
ZY 4020 6 AWCO . . . J 5 V	802434	-	-	-	-	6 x 40	40 x 20	23.800	10	415

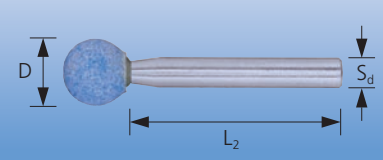
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802465**
KU 06 3 AWCO **80** J 5 V

How to order:
80 = Grit size

Please complete the order no. by adding the grit size.

Hardness J, ball KU



Order No.	Grit size				S_d x L_2 [mm]	Dia. D [mm]	Max. speed [RPM]		g
	46	60	80	100					
	EAN 4007220								
Shank ø 3 mm									
KU 06 3 AWCO . . . J 5 V	-	-	802465	802472	3 x 30	6	149.200	10	25
KU 08 3 AWCO . . . J 5 V	-	-	802489	802519	3 x 30	8	116.200	10	30
Shank ø 6 mm									
KU 13 6 AWCO . . . J 5 V	802533	802557	802595	-	6 x 40	13	73.400	10	125

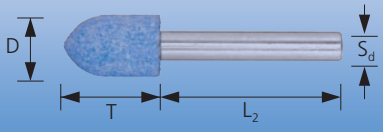
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802663**
SP 0613 3 AWCO**80** J 5 V

How to order:
80 = Grit size

Please complete the order no. by adding the grit size.

Hardness J, tree SP



Order No.	Grit size				S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	46	60	80	100					
	EAN 4007220								
Shank ø 3 mm									
SP 0613 3 AWCO . . . J 5 V	-	-	802663	802670	3 x 30	6 x 13	107.900	10	30
SP 0816 3 AWCO . . . J 5 V	-	802687	802694	802700	3 x 30	8 x 16	72.800	10	43
Shank ø 6 mm									
SP 1320 6 AWCO . . . J 5 V	802717	802724	802731	-	6 x 40	13 x 20	73.400	10	160

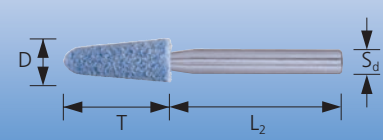
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**802601**
KE 1025 6 AWCO **46** J 5 V

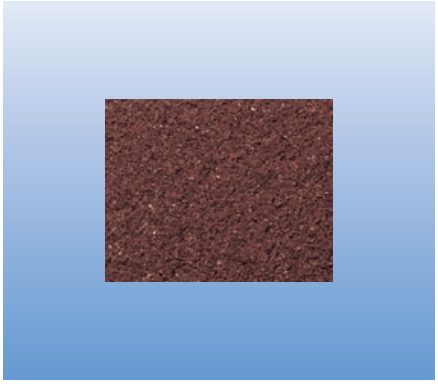
How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Hardness J, tapered KE



Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	46	60					
	EAN 4007220						
KE 1025 6 AWCO . . . J 5 V	802601	802618	6 x 40	10 x 25	95.400	10	130
KE 1645 6 AWCO . . . J 5 V	802625	802656	6 x 40	16 x 45	52.000	10	250



Mounted points in **hardness grade L** are manufactured from a mix of white and dark red aluminium oxide in a high-quality resinoid bond.
This relatively soft bond contains grinding additives and, in combination with the grit mix, leads to exceptionally high stock removal rates and a long tool life.
The hardness grade L is particularly suited for surface applications on stainless steel (INOX) and for general use applications on non-ferrous metals and bronze.

Advantages

- Cool grinding on temperature-sensitive materials.
- High grinding comfort due to low-vibration grinding.

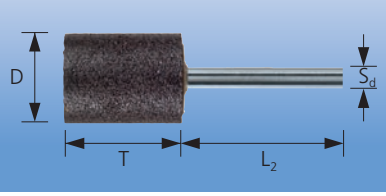
Application examples

- Grinding on high-temperature alloy components.
- Rough grinding of high-grade steel (INOX) castings.
- Grinding of workpieces made of non-ferrous metals.

Recommendations for use

Mounted points in hardness grade L perform best at a cutting speed of 35 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness L, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**099742**
ZY 3216 6 ADW **24** L 6 B

How to order:
24 = Grit size

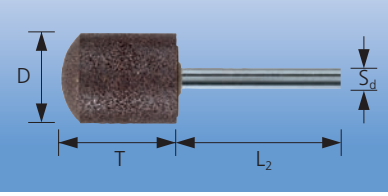
Please complete the order no. by adding the grit size.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46	60						
	EAN 4007220									
Shank ø 6 mm										
ZY 0816 6 ADW . . . L 6 B	-	-	346877	-	-	6 x 40	8 x 16	119.300	10	112
ZY 1020 6 ADW . . . L 6 B	-	-	346891	-	W 177	6 x 40	10 x 20	95.400	10	138
ZY 1032 6 ADW . . . L 6 B	-	-	346907	-	W 179	6 x 40	10 x 32	83.200	10	165
ZY 1632 6 ADW . . . L 6 B	-	096697	-	-	-	6 x 40	16 x 32	51.200	10	290
ZY 2025 6 ADW . . . L 6 B	-	097083	-	346914	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 ADW . . . L 6 B	-	097304	-	-	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2513 6 ADW . . . L 6 B	-	099483	-	-	W 218	6 x 40	25 x 13	38.100	10	289
ZY 2525 6 ADW . . . L 6 B	-	346938	-	-	W 220	6 x 40	25 x 25	38.100	10	475
ZY 2532 6 ADW . . . L 6 B	-	097533	-	-	-	6 x 40	25 x 32	32.900	10	545
ZY 3216 6 ADW . . . L 6 B	099742	-	-	-	-	6 x 40	32 x 16	29.800	5	235
ZY 3240 6 ADW . . . L 6 B	097793	-	-	-	W 231	6 x 40	32 x 40	18.600	5	510
ZY 4006 6 ADW . . . L 6 B	-	-	-	346976	W 235	6 x 40	40 x 6	23.800	5	180
ZY 4010 6 ADW . . . L 6 B	-	099940	-	-	W 236	6 x 40	40 x 10	23.800	5	252
ZY 4020 6 ADW . . . L 6 B	100127	-	-	-	-	6 x 40	40 x 20	23.800	5	415
ZY 5013 6 ADW . . . L 6 B	-	100271	-	-	-	6 x 40	50 x 13	19.000	5	430
ZY 5025 6 ADW . . . L 6 B	100394	-	-	-	W 242	6 x 40	50 x 25	19.000	5	730
Shank ø 8 mm										
ZY 3240 8 ADW . . . L 6 B	098257	-	-	-	W 231	8 x 40	32 x 40	27.200	5	550
ZY 5040 8 ADW . . . L 6 B	100653	-	-	-	W 243	8 x 40	50 x 40	19.000	5	980

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**353813**
WR 2532 6 ADW 30 L 6 B

Hardness L, cylindrical with radius end WR

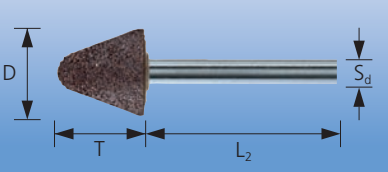


Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
WR 2532 6 ADW 30 L 6 B	30	353813	6 x 40	25 x 32	37.300	10	515

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**660331**
KE 2545 6 ADW 30 L 6 B

Hardness L, tapered KE



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
KE 2020 6 ADW 30 L 6 B	30	347034	6 x 40	20 x 20	47.700	10	210
KE 2545 6 ADW 30 L 6 B	30	660331	6 x 40	25 x 45	34.000	10	465

Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**347096**
A1 6 ADW 60 L 6 B

How to order:
A1 = Shape
6 = Shank dia. [mm]
ADW = Abrasive
60 = Grit size
L = Hardness grade
6 = Structure number
B = Bond type

Hardness L, series A

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A1 6 ADW 60 L 6 B	60	347096	6 x 40	19 x 64	3/4 x 2 1/2	30.400	10	448
A3 6 ADW 60 L 6 B	60	347119	6 x 40	25 x 70	1 x 2 3/4	18.600	10	755
A11 6 ADW 60 L 6 B	60	347133	6 x 40	22 x 50	7/8 x 2	27.600	10	565

Mounted points in **hardness grade N** are manufactured from regular aluminium oxide in a high-quality resinoid bond.
This relatively hard bond contains grinding additives, which in combination with tough regular aluminium oxide and the hard bond allows high stock removal rates and excellent tool life.
The hardness grade N is particularly suited for use on stainless steel (INOX) edges. It is characterised by cool grinding and high dimensional stability.

Advantages

- Cool grinding on materials of poor thermal conductivity.
- High grinding quality due to low-vibration grinding.
- The good edgeholding properties of the mounted points in hardness grade N mean that they can also be used effectively on low RPM power sources.

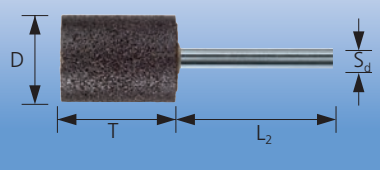
Application examples

- Dressing of fillet welds on high-grade steel components.
- Deburring of high-temperature alloy parts.
- Deburring stainless steel cast iron parts.
- Chamfering of stainless steel profiles in preparation of welding.

Recommendations for use

Mounted points in hardness grade N perform best at a cutting speed of 35 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness N, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**096673**
ZY 1632 6 AN **30** N 5 B

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46	60						
	EAN 4007220									
Shank ø 6 mm										
ZY 0816 6 AN . . . N 5 B	-	-	346860	-	-	6 x 40	8 x 16	119.300	10	112
ZY 1020 6 AN . . . N 5 B	-	-	346884	-	W 177	6 x 40	10 x 20	95.400	10	138
ZY 1032 6 AN . . . N 5 B	-	-	096062	-	W 179	6 x 40	10 x 32	83.200	10	165
ZY 1325 6 AN . . . N 5 B	-	-	096420	-	W 187	6 x 40	13 x 25	73.400	10	180
ZY 1632 6 AN . . . N 5 B	-	096673	-	096680	-	6 x 40	16 x 32	51.200	10	290
ZY 1650 6 AN . . . N 5 B	-	096871	-	-	W 197	6 x 40	16 x 50	40.500	10	410
ZY 2008 6 AN . . . N 5 B	-	346952	-	-	W 202	6 x 40	20 x 8	47.700	10	170
ZY 2025 6 AN . . . N 5 B	-	097076	-	-	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 AN . . . N 5 B	-	097298	-	-	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2506 6 AN . . . N 5 B	-	-	346969	-	W 216	6 x 40	25 x 6	38.100	10	210
ZY 2513 6 AN . . . N 5 B	-	099476	-	-	W 218	6 x 40	25 x 13	38.100	10	289
ZY 2532 6 AN . . . N 5 B	-	097526	-	-	-	6 x 40	25 x 32	32.900	10	545
ZY 2540 6 AN . . . N 5 B	-	098141	-	-	W 221	6 x 40	25 x 40	26.000	10	645
ZY 3208 6 AN . . . N 5 B	-	099629	-	-	W 226	6 x 40	32 x 8	29.800	5	160
ZY 3216 6 AN . . . N 5 B	099735	-	-	-	-	6 x 40	32 x 16	29.800	5	235
ZY 3220 6 AN . . . N 5 B	099834	-	-	-	W 228	6 x 40	32 x 20	29.800	5	287
ZY 3232 6 AN . . . N 5 B	097670	-	-	-	W 230	6 x 40	32 x 32	25.700	5	460
ZY 3240 6 AN . . . N 5 B	097786	-	-	-	W 231	6 x 40	32 x 40	18.600	5	510
ZY 4006 6 AN . . . N 5 B	-	-	100479	-	W 235	6 x 40	40 x 6	23.800	5	180

Continued on next page.

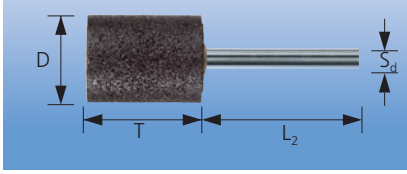
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**096673**
ZY 1632 6 AN **30** N 5 B

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Hardness N, cylindrical ZY



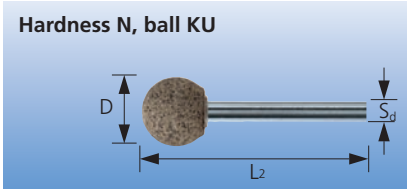
Continued from last page.

Order No.	Grit size				Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46	60						
	EAN 4007220									
Shank ø 6 mm										
ZY 4010 6 AN . . . N 5 B	-	099933	-	-	-	6 x 40	40 x 10	23.800	5	252
ZY 4020 6 AN . . . N 5 B	100110	-	-	-	-	6 x 40	40 x 20	23.800	5	415
ZY 4040 6 AN . . . N 5 B	346945	-	-	-	W 238	6 x 40	40 x 40	16.200	5	770
ZY 5008 6 AN . . . N 5 B	-	100523	-	-	-	6 x 40	50 x 8	19.000	5	290
ZY 5013 6 AN . . . N 5 B	-	100264	-	-	-	6 x 40	50 x 13	19.000	5	430
ZY 5025 6 AN . . . N 5 B	100387	-	-	-	W 242	6 x 40	50 x 25	19.000	5	730
Shank ø 8 mm										
ZY 3240 8 AN . . . N 5 B	098240	-	-	-	W 231	8 x 40	32 x 40	27.200	5	550

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**347010**
KU 20 6 AN 30 N 5 B

Hardness N, ball KU



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	Dia. D [mm]	Max. speed [RPM]		g
KU 16 6 AN 30 N 5 B	30	347003	6 x 40	16	59.600	10	164
KU 20 6 AN 30 N 5 B	30	347010	6 x 40	20	47.700	10	230
KU 25 6 AN 30 N 5 B	30	347027	6 x 40	25	38.100	10	340

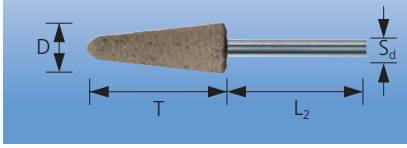
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**347065**
KE 1645 6 AN **46** N 5 B

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Hardness N, tapered KE

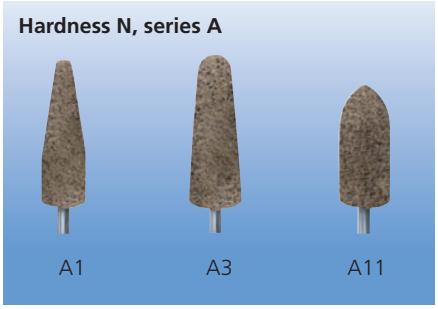


Order No.	Grit size			S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	30	46					
	EAN 4007220							
KE 1025 6 AN . . . N 5 B	-	-	347041	6 x 40	10 x 25	95.400	10	130
KE 1645 6 AN . . . N 5 B	-	-	347065	6 x 40	16 x 45	52.000	10	250
KE 2545 6 AN . . . N 5 B	-	660324	-	6 x 40	25 x 45	34.000	10	465
KE 3232 6 AN . . . N 5 B	347072	-	-	6 x 40	32 x 32	29.800	5	270

Mounted Points

Hardness N

Hardness N, series A



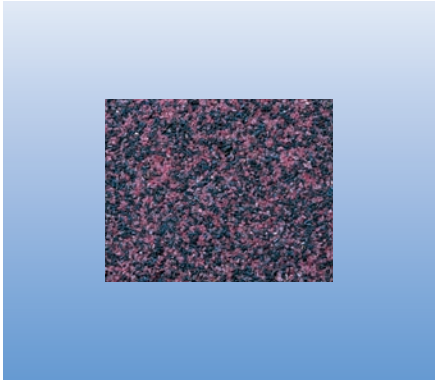
Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

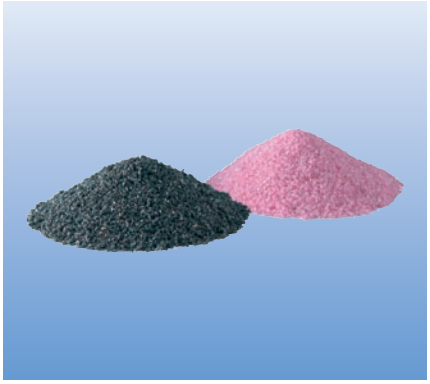
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

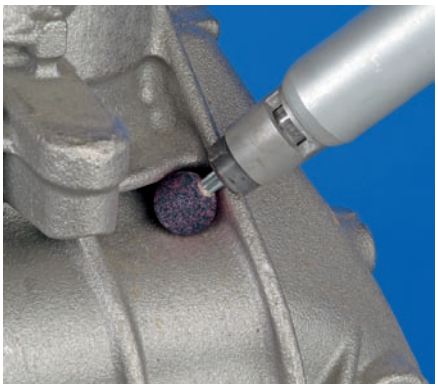
Ordering example:
EAN 4007220**347089**
A1 6 AN 30 N 5 B

How to order:
A1 = Shape
6 = Shank dia. [mm]
AN = Abrasive
30 = Grit size
N = Hardness grade
5 = Structure number
B = Bond type

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A1 6 AN 30 N 5 B	30	347089	6 x 40	19 x 64	3/4 x 2 1/2	30.400	10	448
A3 6 AN 30 N 5 B	30	347102	6 x 40	25 x 70	1 x 2 3/4	18.600	10	755
A11 6 AN 30 N 5 B	30	347126	6 x 40	22 x 50	7/8 x 2	27.600	10	565
A11 1/4 AN 30 N 5 B	30	347157	1/4 x 1 1/2	22 x 50	7/8 x 2	27.600	10	565







Mounted points in **hardness grade K** are manufactured from a mix of pink aluminium oxide and regular aluminium oxide in a vitrified bond.
In a medium-hard bond, this abrasive grit combination leads to a good stock removal rate and a high tool life.
The hardness grade K is particularly suitable for general use on cast iron parts when used with high peripheral speeds.

Advantages

- The mix of sharp pink aluminium oxide and tough regular aluminium oxide allows it to be used on surfaces and edges.
- High grinding capabilities and long tool life.
- Coarse grit sizes give a good stock removal rate.

Application examples

- Fettling of castings (grey or nodular cast iron).
- Grinding out shrinkage holes in grey or nodular cast iron parts.

Recommendations for use

Mounted points in hardness grade K perform best at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

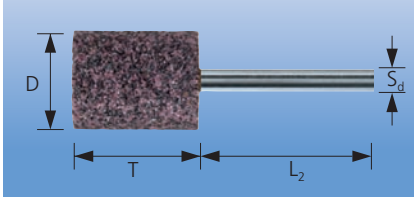
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097564**
ZY 3232 6 ARN **24** K 5 V

How to order:
24 = Grit size

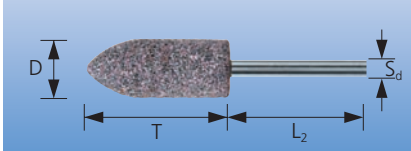
Please complete the order no. by adding the grit size.

Hardness K, cylindrical ZY



Order No.	Grit size		Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30						
	EAN 4007220							
Shank ø 6 mm								
ZY 1632 6 ARN . . . K 5 V	-	096567	-	6 x 40	16 x 32	51.200	10	290
ZY 1650 6 ARN . . . K 5 V	-	096819	W 197	6 x 40	16 x 50	40.500	10	410
ZY 2025 6 ARN . . . K 5 V	-	096963	W 205	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 ARN . . . K 5 V	-	097199	W 207	6 x 40	20 x 40	32.400	10	465
ZY 2532 6 ARN . . . K 5 V	-	097410	-	6 x 40	25 x 32	32.900	10	545
ZY 3232 6 ARN . . . K 5 V	097564	-	W 230	6 x 40	32 x 32	25.700	5	460
ZY 3240 6 ARN . . . K 5 V	097694	-	W 231	6 x 40	32 x 40	18.600	5	510
ZY 4010 6 ARN . . . K 5 V	-	099865	W 236	6 x 40	40 x 10	23.800	5	252
ZY 4020 6 ARN . . . K 5 V	100004	-	-	6 x 40	40 x 20	23.800	5	415
ZY 5008 6 ARN . . . K 5 V	-	100493	-	6 x 40	50 x 8	19.000	5	290
ZY 5013 6 ARN . . . K 5 V	-	100165	-	6 x 40	50 x 13	19.000	5	430
Shank ø 8 mm								
ZY 3240 8 ARN . . . K 5 V	098158	-	W 231	8 x 40	32 x 40	27.200	5	550
ZY 5025 8 ARN . . . K 5 V	100530	-	W 242	8 x 40	50 x 25	19.000	5	770

Hardness K, tree SP

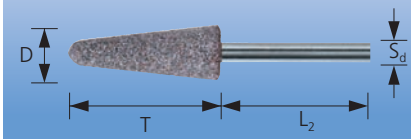


Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**102305**
SP 2050 6 ARN 30 K 5 V

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
SP 2050 6 ARN 30 K 5 V	30	102305	6 x 40	20 x 50	30.500	10	490

Hardness K, tapered KE



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**534649**
KE 1025 6 ARN **46** K 5 V

How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
	24	46					
	EAN 4007220						
Shank ø 6 mm							
KE 1025 6 ARN . . . K 5 V	-	534649	6 x 40	10 x 25	95.400	10	130
KE 1645 6 ARN . . . K 5 V	-	102848	6 x 40	16 x 45	52.000	10	250
KE 2040 6 ARN . . . K 5 V	534694	-	6 x 40	20 x 40	47.700	10	325
Shank ø 8 mm							
KE 3250 8 ARN . . . K 5 V	103081	-	8 x 40	32 x 50	29.800	5	390

Hardness K, series A

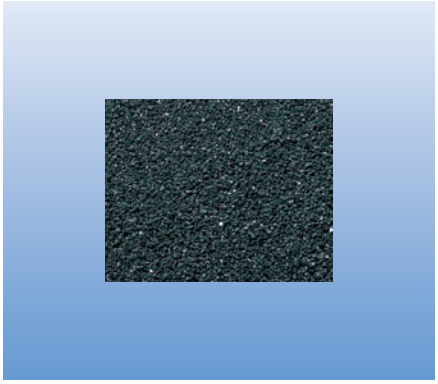
Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

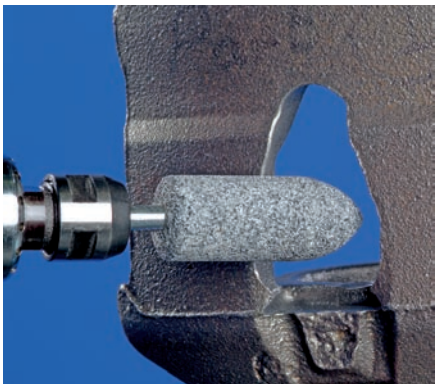
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**534700**
A11 6 ARN 30 K 5 V

How to order:
A11 = Shape
6 = Shank dia. [mm]
ARN = Abrasive
30 = Grit size
K = Hardness grade
5 = Structure number
V = Bond type

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		g
A11 6 ARN 30 K 5 V	30	534700	6 x 40	22 x 50	7/8 x 2	27.600	10	565





Mounted points in **hardness grade R** are manufactured from grey silicon carbide in a vitrified bond.
The combination of extremely hard abrasive grit and high bond content means that extremely good tool life is achieved when grinding.
The hardness grade R is particularly suitable for use on edges and for grinding out metal contamination on grey and nodular cast iron at high cutting speeds.

Advantages

- The mounted points are highly dimensionally stable due to their high bond share.
- The excellent special edgeholding properties also allow mounted points in hardness grade R to be used effectively on low RPM tool drives.

Application examples

- Removal of sharp burrs on grey and nodular cast iron parts.
- Grinding out of sand and metal contamination on cast iron parts.

Recommendations for use

Mounted points in hardness grade R perform best at a cutting speed of 30 to 50 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

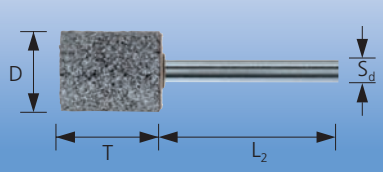
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097069**
ZY 2025 6 CU **30** R 5 V

How to order:
30 = Grit size

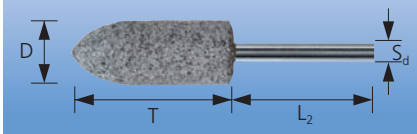
Please complete the order no. by adding the grit size.

Hardness R, cylindrical ZY



Order No.	Grit size		Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30						
	EAN 4007220							
Shank ø 6 mm								
ZY 1632 6 CU . . . R 5 V	-	096666	-	6 x 40	16 x 32	51.200	10	290
ZY 2025 6 CU . . . R 5 V	-	097069	-	6 x 40	20 x 25	47.700	10	330
ZY 2040 6 CU . . . R 5 V	-	097281	W 205	6 x 40	20 x 40	32.400	10	465
ZY 2050 6 CU . . . R 5 V	-	098097	W 208	6 x 40	20 x 50	25.100	10	535
ZY 3232 6 CU . . . R 5 V	097663	-	W 230	6 x 40	32 x 32	25.700	5	460
ZY 4020 6 CU . . . R 5 V	100103	-	-	6 x 40	40 x 20	23.800	5	415
Shank ø 8 mm								
ZY 3240 8 CU . . . R 5 V	098233	-	W 231	8 x 40	32 x 40	27.200	5	550
ZY 4040 8 CU . . . R 5 V	098301	-	W 238	8 x 40	40 x 40	23.800	5	810

Hardness R, tree SP



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

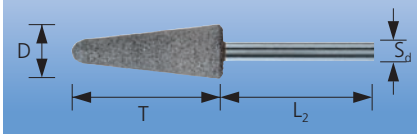
Ordering example:
EAN 4007220**102282**
SP 2032 6 CU **30** R 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46					
	EAN 4007220						
SP 0816 6 CU . . . R 5 V	-	102053	6 x 40	8 x 16	119.300	10	110
SP 2032 6 CU . . . R 5 V	102282	-	6 x 40	20 x 32	47.700	10	330
SP 2050 6 CU . . . R 5 V	102336	-	6 x 40	20 x 50	30.500	10	490

Hardness R, tapered KE



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

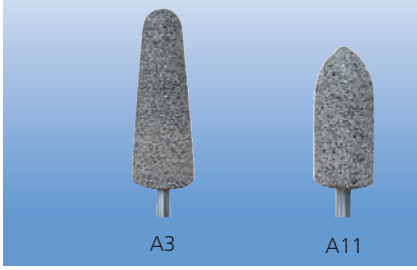
Ordering example:
EAN 4007220**102725**
KE 2032 6 CU **30** R 5 V

How to order:
30 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size		S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	30	46					
	EAN 4007220						
KE 1025 6 CU . . . R 5 V	-	102824	6 x 40	10 x 25	95.400	10	130
KE 1645 6 CU . . . R 5 V	-	102916	6 x 40	16 x 45	52.000	10	250
KE 2032 6 CU . . . R 5 V	102725	-	6 x 40	20 x 32	47.700	10	230
KE 2545 6 CU . . . R 5 V	102947	-	6 x 40	25 x 45	34.000	10	465

Hardness R, series A



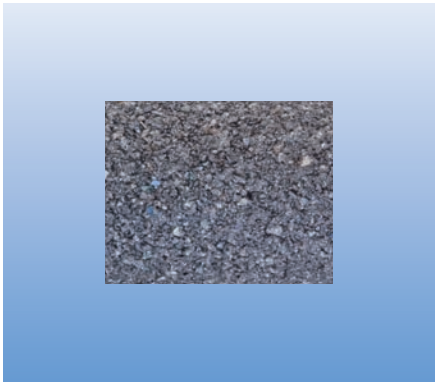
Explanation of the code system:
D = Mounted point dia.
T = Mounted point width
S_d = Shank dia.
L_2 = Shank length

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**114582**
A3 6 CU 30 R 5 V

How to order:
A3 = Shape
6 = Shank dia. [mm]
CU = Abrasive
30 = Grit size
R = Hardness grade
5 = Structure number
6 = Bond type

Order No.	Grit size	EAN 4007220	S_d x L_2 [mm] [Inch]	D x T [mm]	D x T [inch]	Max. speed [RPM]		
A3 6 CU 30 R 5 V	30	117156	6 x 40	25 x 70	1 x 2 3/4	18.600	10	755
A11 6 CU 30 R 5 V	30	117217	6 x 40	22 x 50	7/8 x 2	27.600	10	565



Special mounted points in **hardness grade R for foundries** are manufactured from grey silicon carbide and an adapted vitrified bond. The combination of extremely hard, sharp abrasive grit and the complementary bond gives long tool life with tough aggressive grinding.
The hardness grade R for foundries is particularly suitable for general use and for grinding off metal contamination in grey and nodular iron at high cutting speeds.

Advantages

- Immediate cutting action and highly-abrasive mounted points.
- High stock removal in combination with long tool life.
- Practical and environmentally friendly industrial packaging.

Application examples

- Grinding out contamination on grey and nodular cast parts.
- Removing sand and metal contaminations on cast parts.

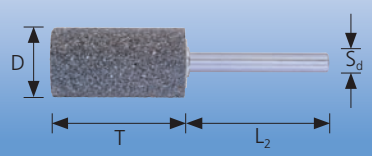
Recommendations for use

Mounted points in hardness grade R perform best at a cutting speed of 30 to 50 m/s. Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**803028**
ZY 2040 6 CU 30 R 5 V na

Hardness R, cylindrical ZY

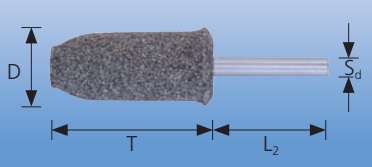


Order No.	Grit size	EAN 4007220	Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
ZY 2040 6 CU 30 R 5 V na	30	803028	W 205	6 x 40	20 x 40	47.700	50	2,500
ZY 2532 6 CU 30 R 5 V na	30	803035	-	6 x 40	25 x 32	32.900	50	2,750

Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

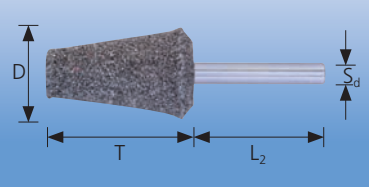
Ordering example:
EAN 4007220**803042**
SP 2050 6 CU 30 R 5 V na

Hardness R, tree SP



Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
SP 2050 6 CU 30 R 5 V na	30	803042	6 x 40	20 x 50	14.100	50	2,350

Hardness R, tapered KE



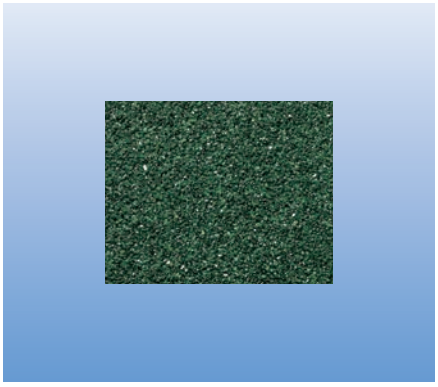
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

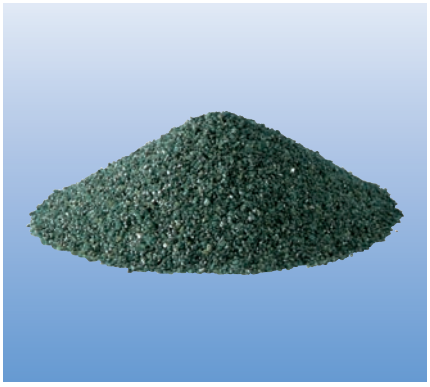
Ordering example:
EAN 4007220**803059**
KE 1645 6 CU **46** R 5 V na

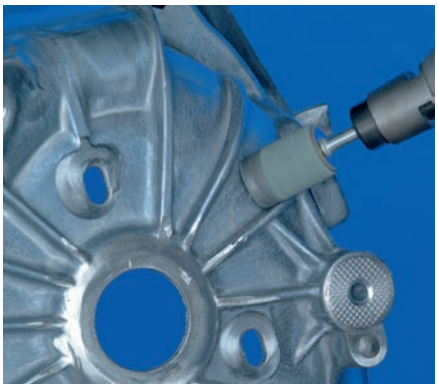
How to order:
46 = Grit size

Please complete the order no. by adding the grit size.

Order No.	Grit size			S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		
	24	30	46					
	EAN 4007220							
Shank ø 6 mm								
KE 1645 6 CU 46 R 5 V na	-	-	803059	6 x 40	16 x 45	24.000	50	1,100
KE 2040 6 CU 30 R 5 V na	-	803066	-	6 x 40	20 x 40	20.900	50	2,200
Shank ø 8 mm								
KE 3550 8 CU 24 R 5 V na	642665	-	-	8 x 40	35 x 50	15.600	50	4,850







Mounted points in **hardness grade F-ALU** are manufactured from green silicon carbide in a vitrified bond.
The extremely open microstructure and a special impregnation allow extremely high stock removal rates when working on cloying materials.
The hardness grade F-ALU is produced especially for general use on aluminium and non-ferrous metals and is characterised by its high abrasive qualities and stock removal.

Advantages

- The special impregnation prevents soft, cloying or tough materials from clogging up the tool.
- High abrasive qualities and stock removal.

Application examples

- Removals of burrs on aluminium cast iron parts.
- Grinding of brass, zinc and copper.
- Chamfering of aluminium profiles in preparation for welding.

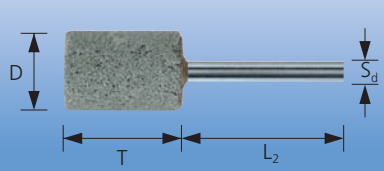
Recommendations for use

Mounted points in hardness grade F-ALU perform best at a cutting speed of 20 to 40 m/s. Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

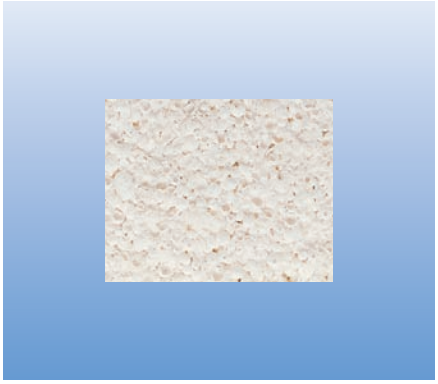
Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**097151**
ZY 2032 6 CN 80 F 10 V ALU

Hardness F-ALU, cylindrical ZY



Order No.	Grit size	EAN 4007220	Acc. to US shape	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
ZY 1013 6 CN 80 F 10 V ALU	80	802908	W 176	6 x 40	10 x 13	95.400	10	116
ZY 1320 6 CN 80 F 10 V ALU	80	802915	W 186	6 x 40	13 x 20	73.400	10	167
ZY 1620 6 CN 80 F 10 V ALU	80	096512	W 195	6 x 40	16 x 20	59.600	10	235
ZY 1632 6 CN 80 F 10 V ALU	80	802939	-	6 x 40	16 x 32	51.200	10	290
ZY 2032 6 CN 80 F 10 V ALU	80	097151	W 206	6 x 40	20 x 32	41.100	10	385
ZY 3232 6 CN 80 F 10 V ALU	80	802946	W 230	6 x 40	32 x 32	25.700	10	460
ZY 4020 6 CN 80 F 10 V ALU	80	100080	-	6 x 40	40 x 20	23.800	5	415



Mounted points in **hardness grade D** are manufactured from a special vitrified bond and bubble grain aluminium oxide (HKK).
The low bond volume in combination with the easy to break down bubble grain produces the softest mounted points in the PFERD programme.
The hardness grade D is particularly suitable for work on soft materials such as plastic, rubber and wood, and is characterised by its high abrasiveness.

Advantages

- The use of bubble grain aluminium oxide gives the mounted points a very open structure.
- The open structure allows the grinding of temperature-sensitive materials without requiring cooling lubricants.
- The open structure prevents the mounted points from clogging up.

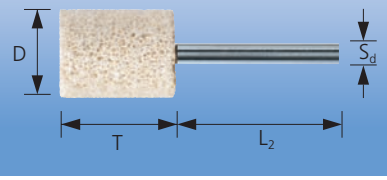
Application examples

- Removal of burrs on plastic injection parts.
- Trimming up rubber moulded parts and moulded parts made of polyurethane.
- Grinding of wooden cores and wooden shapes in foundry model construction workshops.
- Grinding of glass fibre reinforced plastics (GRP).

Recommendations for use

Mounted points in hardness grade D perform best at a cutting speed of 5 to 20 m/s.
Suitable tool drives include flexible shafts and electric or air-powered straight grinders.

Hardness D, cylindrical ZY



Safety note:
The maximum permissible tool speed [RPM] relates to the specified unsupported shank length of 10 mm.

Ordering example:
EAN 4007220**096703**
ZY 1632 6 AH 1 D 12 V HKK

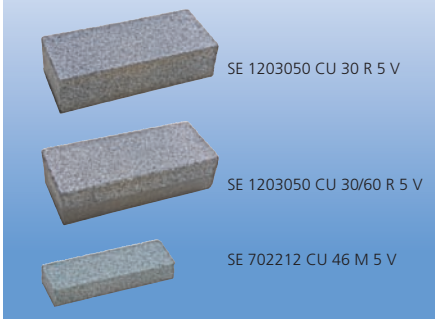
Order No.	Grit size	EAN 4007220	S_d x L_2 [mm]	D x T [mm]	Max. speed [RPM]		g
ZY 1632 6 AH 1 D 12 V HKK	1	096703	6 x 40	16 x 32	51.200	10	190
ZY 2532 6 AH 1 D 12 V HKK	1	097540	6 x 40	25 x 32	32.900	10	295
ZY 4020 6 AH 2 D 12 V HKK	2	100134	6 x 40	40 x 20	23.800	5	230

Dressing stone SE 1203050 CU 30 R 5 V
This coarse dressing stone (grit 30) is ideal for coarse dressing work.
Its anti-slip rubber backing provides a firm grip and protects the support surfaces.

Dressing stone SE 1203050 CU 30/60 R 5 V
Dressing stone with two different grit sizes.
- Upper side (coarse):
  Profiling and sharpening of large mounted points with coarse bonds and grit sizes.
- Underside (fine):
  Profiling and dressing of mounted points with fine bonds and grit sizes.

Dressing stone SE 702212 CU 46 M 5 V
This small dressing stone in finer grit is suited for profiling and dressing smaller mounted points.

Dressing stones



Order No.	EAN 4007220	Dimension [mm]		g
SE 1203050 CU 30 R 5 V	103500	120 x 30 x 50	5	2.400
SE 1203050 CU 30/60 R 5 V	505687	120 x 30 x 50	5	2.200
SE 702212 CU 46 M 5 V	114445	70 x 22 x 12	5	220

The wedge-shaped abrasive segments are ideally suitable for work on sand moulds and cores in foundries.

Using the abrasive segments, the intersections and separators on sand moulds and cores can be re-finished and dressed.

The wedge-shaped design allows work in both narrow areas and on large surfaces.

Abrasive segments

Order No.	EAN 4007220	Dimension [mm]		g
SE 235424 AN 46 N 5 B	800034	235 x 42 x 4	10	530
SE 246325 AN 46 N 5 B	800041	246 x 32 x 5	10	560

Long-life diamond dresser with large single grit diamond for profiling and dressing mounted points, grinding discs and Poliflex®-mounted points (see catalogue 204).

Using this diamond dresser, blunt grit and metal particles can be removed from the grinding tool, and the required grinding wheel shapes can be produced.

Recommended use:
- Protect the diamond dresser from impact and impact-type loads.
- Clamp deeply and ensure it is well tightened.
- Insert at an angle of 5-15 degrees, just below the mounted points or the disc centre.

Ordering note:
If you wish to use the diamond dresser as a manual dresser for bench grinding discs, we recommend the use of a file handle e.g. FH 3. Please refer to catalogue 201 for information and order data on file handles.

Diamond dresser

Order No.	EAN 4007220	Dimension [mm]		g
400 B	103494	81 x 6	1	20

Mounted points, set 2001

Mounted points, set 2001
The mounted points, hardness grade O with shank dia. 6 mm are for general use and have high dimensional and edge stability. The selection includes the most common shapes and dimensions.

Contains 10 mounted points of different shapes and dimensions.

Contents:
1 piece each:
ZY 1013, ZY 1320, ZY 2006, ZY 2013, ZY 2025, KU 16, WR 2025, KE 2032, SP 1320, KE 2020.

Recommendation for use:
Recommended cutting speed 25 - 40 m/s.

Order No.	EAN 4007220	Hardness	Grit size	Shank dia. [mm]		g
2001	114469	O	coarse	6	1	390

Mounted points, set 2002

Mounted points, set 2002
Small mounted points, hardness grade O, with shank dia. 3 mm, are suitable for fine work and general use. The selection includes the most common shapes and dimensions.

Contains 15 mounted points of different shapes and dimensions.

Contents:
2 pcs. each:
ZY 0510, ZY 0810, ZY 1604
1 piece each:
ZY 0408, ZY 0613, ZY 0802, ZY 1013, ZY 1303, WR 0510, KU 05, SP 0306, SP 0816.

Recommendation for use:
Recommended cutting speed 25 - 40 m/s.

Order No.	EAN 4007220	Hardness	Grit size	Shank dia. [mm]		g
2002	114476	O	fine	3	1	100

Mounted points, set SSO 5300

Mounted points, set SSO 5300
Extremely abrasive mounted points in hardness grade M, coarse grit, with shank dia. 6 mm in sales-promoting display boxes for shops (self-service packed). PFERD has based the selection on most common applications.

Contains 100 mounted points in different shapes and dimensions.

Contents:
10 pcs. each:
ZY 1620, ZY 2025, ZY 2506, ZY 2532, ZY 3216, ZY 3232, ZY 4020, SP 2032, KE 2032, KE 2570.

Recommendation for use:
Recommended cutting speed 30 - 50 m/s.

Order No.	EAN 4007220	Hardness	Grit size	Shank dia. [mm]		g
SSO 5300	114513	M	coarse	6	1	5.200