Technical Information

Quality
LUKAS carbide burrs are manufactured using high quality types of carbide and modern CNC automatic grinding machines in order to guarantee precision and repeatability of angle, profile and twist. Carbide burrs manufactured to your drawings or details assist in solving your particular stock removal problem.

Application
The best results are obtained by selecting the recommended cut and speed. Please refer to the cutting speeds in the table on page **21** or to the table illustrating the various cuts on page **21**.

Power tools
Electric and pneumatic power tools are used; the bearings should be in good condition and the collets running true. Vibration and chatter will cause premature wear and tooth breakage. High pressure will reduce tool life and decrease tool efficiency.

Shanks
For safety reasons the largest possible shank diameter should always be selected from the table. Other shank diameters and lengths are available on request. A selection of burrs with extra long shanks appears on page **37** and **38**.

Robot application
LUKAS tungsten carbide burrs are precision tools, and have produced excellent results when used in conjunction with industrial robots. We can also develop the optimal burr for your particular application.

Coatings
The reasons for producing cutting tools with hard coatings such as TiN, TiCN, TiALN and LTE are as follows:

- to increase tool life
- to reduce machining forces
- to improve chip removal

The increase in tool life is mainly the result of the considerably higher surface hardness of the coating in comparison to the base material of the tool itself. In addition, due to the high chemical stability, it minimizes the reaction between the cutting edge of the tool and the chip to be removed. The reduction of machining forces and the improvement in chip removal are achieved through a reduction in the friction between the free cutting zone of the tool and workpiece on the one hand, and the cutting edge of the tool and the chip removed on the other. The reduction in friction depends on the coating improving the surface finish and as previously described by largely avoiding any chemical reaction. Our engineers would be pleased to help you in the selection of the correct coating. Please note the different possibilities on page **22**.

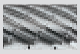
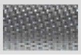
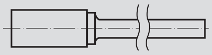
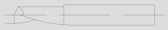
Special tools
Tungsten carbide burrs manufactured to your design or drawing guarantee the LUKAS high quality standard, and can therefore assist in solving your particular machining problem.

Packaging
We use plastics-packaging; please select the respective packing unit from our product lists.

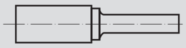
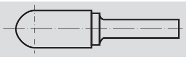
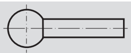
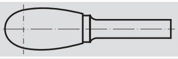
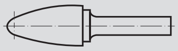
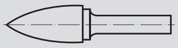
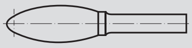
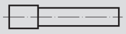
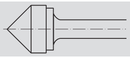
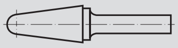
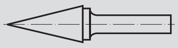
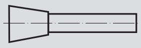
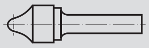
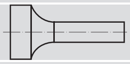
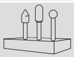
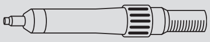
Recommendations for use
Select the cut to suit the material to be machined. Please kindly follow the principle: **The harder the material, the finer the cut!**
The correct selection of speed is the basis of achieving optimum machining results and long tool-life; please refer to the adjoning table. On the following pages you will find some assistance to choose the right speed for your process. Use the highest possible speed within the indicated area. Too low a speed results in vibration, chipping and premature wear! Reduce the speed of the burrs only when using in large arc angles or when using on low heat conducting materials.
Never let the shank and head change their colour to blue. For safety reasons, extended shanks should also be run at low speed. The power of your machine should be compatible with the machining process. A reduction in RPM due to lack of power – particularly common with pneumactic tools – should be avoided.
Collets must run true. Run-out and vibration will result in chipping and premature wear.
For the same reasons, take care that the machine bearings are in perfect condition. To avoid vibration and shank breakage, select the shortest shank overhang possible.

Materials and shapes

Tungsten-carbide burrs for the use on:

Application	Cut			Page
Stationary machines		Z7	TiAlN coating	23
Inox and Steel		Z42	**Inox/Steel**	24
Steel		Z7	**Steel**	25
Aluminium		Z9	**Alu**	27
Grey cast iron			**Cast**	28
Lightweight construction and plastic materials			**Composite**	30
Wood and pattern construction materials			**Wood**	32
Fine surfaces		ZF 1–3	Rotery files	33
Precision components		–	Miniature Burrs	34
Pattern construction materials		Z5	Small Burrs	35
difficult to access areas		–	extra-long shank	37
High-Speed-Cutting		–	Single cutting edge	39

Tungsten-carbide burrs with the shape:

Shape		Shape		Page
Cylindrical		ZYA	7755/2	40
Cylindrical round nose		WRC	7755/3	43
Spherical		KUD	7755/4	46
Oval		TRE	7755/5	49
Arch round nose		RBF	7755/6	50
Arch pointed nose		SPG	7755/7	52
Flame		–	7755/8	54
Internal		–	–	54
Counter sink		KSJ	7755/9	55
Conical round nose		KEL	7755/10	55
Conical pointed nose		SKM	7755/11	57
Inverted cone		WKN	7755/12	58
Burrs for radius trimming (external)		–	–	59
Burrs for radius trimming (internal)		–	–	60
Tool-Set		–	–	61
Power Tools		–	–	369

Three steps to your optimum burr:

❶ Select the **material** and **machining mode** (coarse to fine) from the table and
❷ read off the recommended **cut** and **cutting speed**.
❸ Determine the appropriate speed for your power tool in the second table.

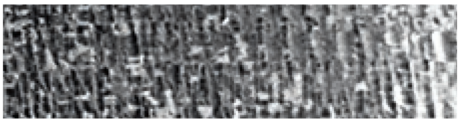
Recommendations for use of tungsten carbide burrs

❶				❷	
Material	**LUKAS material group** (see also fold-out tab)	**Strength [N/mm2]**	**Machining**	**Cut**	**Recommended cutting speed vc [m/min]**
Steel, cast steel	**1** Steel and cast steel	< 800	coarse	Z3, Z7 Steel, ZX	500–700
			medium	Z5, Z42 Inox/Steel	300–500
			fine	ZF3	500–700
	2 Alloyed / hardened & tempered steels	800 to 1200	coarse	Z7 Steel, ZX	400–600
			medium	Z5	300–400
			fine	ZF3	400–600
	3 Tool Steels	> 1200	coarse	Z7 Steel, Z4	300–500
			medium	Z5	300–400
			fine	ZF3	400–600
Stainless steel	**4** Rust / acid / heat-resistant steel and cast steel	to 800	coarse	Z2, Z6	400–500
			medium	Z3, Z7 Steel, Z4, Z5, Z42 Inox/Steel	300–500
			fine	ZF3	400–600
Cast metal	**5** Cast iron	150 to 300	coarse	Cast, Z6	400–600
			medium	Z7 Steel	300–500
		300 to 450	coarse	Cast, Z7 Steel	300–500
			medium	Z5	300–500
			fine	ZF3	400–700
Non-ferrous metal 1	**6** Aluminium, magnesium and copper alloys	to 450	coarse	Z9 Alu	600–1000
			medium	Z1	500–900
	Brass, bronze, titanium	to 450	coarse	Z9 Alu, Z1	400–800
		up to 450	medium	Z2	400–600
			fine	ZF3	500–600
Non-ferrous metal 2	**7** Titanium and nickel alloys	to 900	coarse	Z6	300–500
			medium	Z7 Steel	300–400
			fine	ZF3	500–700
		900 to 1500	coarse	Z4	300–400
			medium	Z5	400–500
			fine	ZF3	400–600
Plastics and wood	**8** Plastic / wood / rubber	20 to 400	coarse	Composite, Z1, Z9 Alu	600–1000
			fine	Composite, Wood	500–900
		400 to 1000	coarse	Composite, Z1	500–800
			fine	Composite, Z2, Wood	400–800

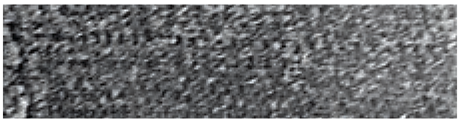
Tip: Page 19 contains a complete overview of the shapes for your chosen milling tool.

Machining

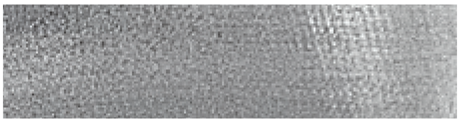
coarse



medium



fine



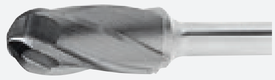
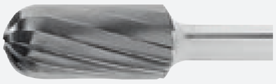
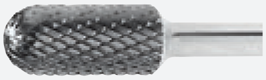
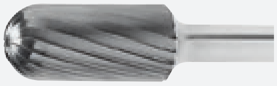
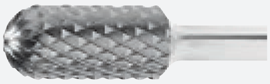
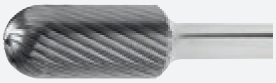
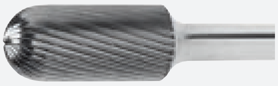
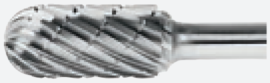
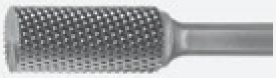
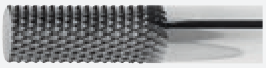
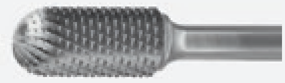
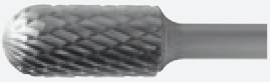
Rotational speeds for milling tools

based on the tool diameter and cutting speed

③

		Recommended cutting speed vc [m/min]							
		300	400	500	600	700	800	900	1000
		Rotational speed [min-1]							
Tool diameter [mm]	2	48.000	64.000	80.000	95.000	111.000	127.000	143.000	159.000
	3	32.000	42.000	53.000	64.000	74.000	85.000	95.000	106.000
	4	24.000	32.000	40.000	48.000	56.000	64.000	72.000	80.000
	6	16.000	21.000	27.000	32.000	37.000	42.000	48.000	53.000
	8	12.000	16.000	20.000	24.000	28.000	32.000	36.000	40.000
	10	10.000	13.000	16.000	19.000	22.000	25.000	29.000	32.000
	12	8.000	11.000	13.000	16.000	19.000	21.000	24.000	27.000
	16	6.000	8.000	10.000	12.000	14.000	16.000	18.000	20.000
	20	5.000	6.000	8.000	10.000	11.000	13.000	14.000	16.000

Cuts

	**Z 9 Alu**	Very coarse single cut with faceting for soft materials		**Z 42 Inox/ Steel**	Robust faceted toothing for steel and stainless steel
	**Z 1**	Coarse cut for soft materials		**Z 4**	Fine cross cut for hard materials
	**Z 2**	Robust single cut for high stock removal		**Z 6**	Fine cross cut for hard materials
	**Z 3**	Medium single cut		**Z 7 Steel**	Medium cross cut
	**Z 5**	Very fine single cut for high-quality surfaces		**Cast**	Fine cross cut especially to machine the inside of the bore
	**Z F**	Very fine cross cut		**Com-posite**	Cross cut for machining plastic
	**Wood**	Rasp cut for pattern construction		**Z X**	Universal cross cut for practically every application

Coatings

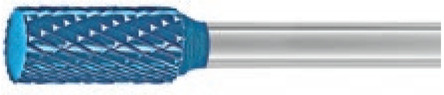
Coatings	Specification (LUKAS)	Properties	Friction on steel (dry)
	TiN **(Titanium nitride)**	general purpose coating for steel and cast iron, high toughness	0,65–0,70 µm
	TiCN **(Titanium carbon nitride)**	wear-resistant coating for fine deburing process. Suited to applications with higher thermal and shock loads.	0,10–0,20 µm
	TiAlN **(Titanium aluminium nitride** (see page 23)	high performance coating with a high degree of hardness and low heat conductivity; therefore suitable for high thermal and mechanical applications	0,30–0,35 µm
	LTE **(hard coating carbon-based)**	Special coating with lotus-effect for long chip and smearing non-ferrous metals, particularly aluminium alloys. Excellent sliding friction properties reducing loading on cutting edges.	0,10–0,20 µm

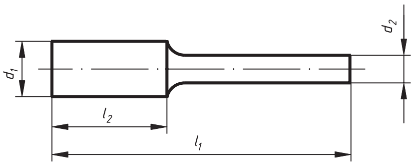
The reasons for producing cutting tools with hard coatings are as follows:

- to increase tool life
- to reduce machining forces
- to improve chip removal

Tungsten-carbide burrs with TiAlN-coating*

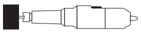
● ● ● ● ★★★



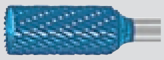
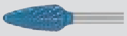


Ordering example: A10010616608TIAL1

Further dimensions, cuts and shank lengths on request.



PG 1

Product number	Description	Shape	Cut	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										📦
A10010616608TIALN	HFA 0616.06		Z7 Steel	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A10010820608TIALN	HFA 0820.06		Z7 Steel	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10011020608TIALN	HFA 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10010616608TIAL1	HFAS 0616.06		Z7 Steel	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A10010820608TIAL1	HFAS 0820.06		Z7 Steel	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10011020608TIAL1	HFAS 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10011225608TIAL1	HFAS 1225.06		Z7 Steel	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10020616608TIALN	HFC 0616.06		Z7 Steel	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A10020820608TIALN	HFC 0820.06		Z7 Steel	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10021020608TIALN	HFC 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10021225608TIALN	HFC 1225.06		Z7 Steel	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10030606608TIALN	HFD 0605.06		Z7 Steel	6	5	6	50	❶	❷	❸		❺		⑦			■	1
A10030808608TIALN	HFD 0807.06		Z7 Steel	8	7	6	47	❶	❷	❸		❺		⑦			■	1
A10031010608TIALN	HFD 1009.06		Z7 Steel	10	9	6	49	❶	❷	❸		❺		⑦			■	1
A10031210608TIALN	HFD 1210.06		Z7 Steel	12	10	6	50	❶	❷	❸		❺		⑦			■	1
A10031614608TIALN	HFD 1614.06		Z7 Steel	16	14	6	54	❶	❷	❸		❺		⑦			■	1
A10100618608TIALN	HFF 0618.06		Z7 Steel	6	18	6	50	❶	❷	❸		❺		⑦			■	1
A10101225608TIALN	HFF 1225.06		Z7 Steel	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10101630608TIALN	HFF 1630.06		Z7 Steel	16	30	6	70	❶	❷	❸		❺		⑦			■	1
A10040618608TIALN	HFG 0618.06		Z7 Steel	6	18	6	50	❶	❷	❸		❺		⑦			■	1
A10041020608TIALN	HFG 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10041225608TIALN	HFG 1225.06		Z7 Steel	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10041630608TIALN	HFG 1630.06		Z7 Steel	16	30	6	70	❶	❷	❸		❺		⑦			■	1
A10090820608TIALN	HFH 0820.06		Z7 Steel	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10091230608TIALN	HFH 1230.06		Z7 Steel	12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10071020608TIALN	HFL 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10071230608TIALN	HFL 1230.06		Z7 Steel	12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10051020608TIALN	HFM 1020.06		Z7 Steel	10	20	6	60	❶	❷	❸		❺		⑦			■	1

*High performance coating with a high degree of hardness and low heat conductivity; therefore suitable for high thermal and mechanical applications; very low friction value.

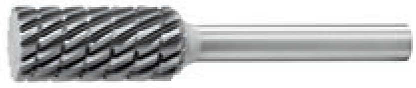
The reasons for producing Tungsten-carbide burrs with AlN-coating are as follows:

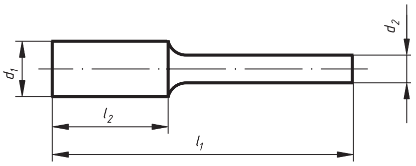
- to increase tool life
- to reduce machining forces
- to improve chip removal

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Tungsten-carbide burrs, Z42 Inox/Steel

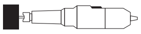
● ● ★★☆



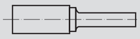
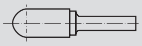
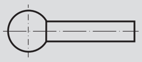
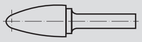
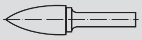
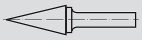


Ordering example: A10010616620

Further dimensions, cuts and shank lengths on request

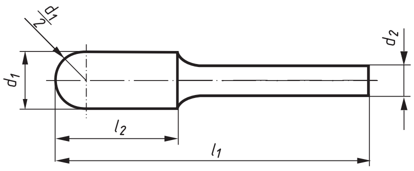


PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438	PG 1	📦
A10010616620	HFA 0616.06		Z42 Inox/Steel	ZYA 0616	6	16	6	50	❶ ② ③ ❹	■	1
A10010820620	HFA 0820.06		Z42 Inox/Steel	ZYA 0820	8	20	6	60	❶ ② ③ ❹	■	1
A10011020620	HFA 1020.06		Z42 Inox/Steel	ZYA 1020	10	20	6	60	❶ ② ③ ❹	■	1
A10011225620	HFA 1225.06		Z42 Inox/Steel	ZYA 1225	12	25	6	65	❶ ② ③ ❹	■	1
A10020616620	HFC 0616.06		Z42 Inox/Steel	WRC 0616	6	16	6	50	❶ ② ③ ❹	■	1
A10020820620	HFC 0820.06		Z42 Inox/Steel	WRC 0820	8	20	6	60	❶ ② ③ ❹	■	1
A10021020620	HFC 1020.06		Z42 Inox/Steel	WRC 1020	10	20	6	60	❶ ② ③ ❹	■	1
A10021225620	HFC 1225.06		Z42 Inox/Steel	WRC 1225	12	25	6	65	❶ ② ③ ❹	■	1
A10030605620	HFD 0605.06		Z42 Inox/Steel	KUD 0605	6	5	6	50	❶ ② ③ ❹	■	1
A10030807620	HFD 0807.06		Z42 Inox/Steel	KUD 0807	8	7	6	47	❶ ② ③ ❹	■	1
A10031009620	HFD 1009.06		Z42 Inox/Steel	KUD 1009	10	9	6	49	❶ ② ③ ❹	■	1
A10031210620	HFD 1210.06		Z42 Inox/Steel	KUD 1210	12	10	6	51	❶ ② ③ ❹	■	1
A10100618620	HFF 0618.06		Z42 Inox/Steel	RBF 0618	6	18	6	50	❶ ② ③ ❹	■	1
A10100820620	HFF 0820.06		Z42 Inox/Steel	—	8	20	6	60	❶ ② ③ ❹	■	1
A10101020620	HFF 1020.06		Z42 Inox/Steel	RBF 1020	10	20	6	60	❶ ② ③ ❹	■	1
A10101225620	HFF 1225.06		Z42 Inox/Steel	RBF 1225	12	25	6	65	❶ ② ③ ❹	■	1
A10040618620	HFG 0618.06		Z42 Inox/Steel	SPG 0618	6	18	6	50	❶ ② ③ ❹	■	1
A10040820620	HFG 0820.06		Z42 Inox/Steel	—	8	20	6	60	❶ ② ③ ❹	■	1
A10041020620	HFG 1020.06		Z42 Inox/Steel	SPG 1020	10	20	6	60	❶ ② ③ ❹	■	1
A10041225620	HFG 1225.06		Z42 Inox/Steel	SPG 1225	12	25	6	65	❶ ② ③ ❹	■	1
A10050618620	HFM 0618.06		Z42 Inox/Steel	SKM 0618	6	18	6	50	❶ ② ③ ❹	■	1
A10050820620	HFM 0820.06		Z42 Inox/Steel	—	8	20	6	60	❶ ② ③ ❹	■	1
A10051020620	HFM 1020.06		Z42 Inox/Steel	SKM 1020	10	20	6	60	❶ ② ③ ❹	■	1
A10051225620	HFM 1225.06		Z42 Inox/Steel	SKM 1225	12	25	6	65	❶ ② ③ ❹	■	1

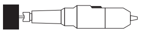
- The new Z42 inox/steel tungsten carbide burr quickly and reliably removes the two important materials, stainless steel and steel.
- The robust tooth geometry with facet profile prevents eruptions and guarantees high material removal rates in the long run.
  This saves you time and setup costs.
- Thanks to the optimised chip breaker, you can now cut even more ergonomically, at the same time achieving a better finish than before.
- You can now reduce your expenditure for stockkeeping and logistics. Prevent incorrect use through unequivocal tool marking and the use of only few variants.

Tungsten-carbide burrs Steel ● ★★☆

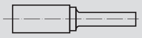
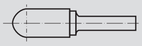
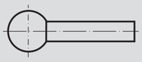
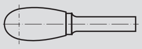
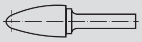
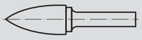


Ordering example: A10010616608

Further dimensions, cuts and shank lengths on request



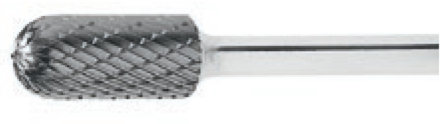
PG 1

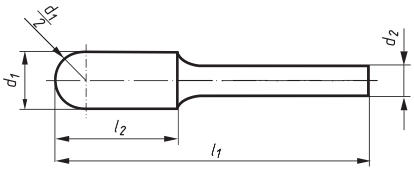
Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		📦
A10010616608	HFA 0616.06		Z7 Steel	ZYA 0616	6	16	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10010820608	HFA 0820.06		Z7 Steel	ZYA 0820	8	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10011013608	HFA 1013.06		Z7 Steel	ZYA 1013	10	13	6	53	❶ ❷ ❸ ❺ ⑦	■	1
A10011020608	HFA 1020.06		Z7 Steel	ZYA 1020	10	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10011025608	HFA 1025.06		Z7 Steel	ZYA 1025	10	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10011225608	HFA 1225.06		Z7 Steel	ZYA 1225	12	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10011625608	HFA 1625.06		Z7 Steel	ZYA 1625	16	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10020616608	HFC 0616.06		Z7 Steel	WRC 0616	6	16	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10020820608	HFC 0820.06		Z7 Steel	WRC 0820	8	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10021020608	HFC 1020.06		Z7 Steel	WRC 1020	10	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10021020808	HFC 1020.08		Z7 Steel	WRC 1020	10	20	8	60	❶ ❷ ❸ ❺ ⑦	■	1
A10021025608	HFC 1025.06		Z7 Steel	WRC 1025	10	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10021225608	HFC 1225.06		Z7 Steel	WRC 1225	12	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10021225808	HFC 1225.08		Z7 Steel	WRC 1225	12	25	8	65	❶ ❷ ❸ ❺ ⑦	■	1
A10021625608	HFC 1625.06		Z7 Steel	WRC 1625	16	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10030606608	HFD 0605.06		Z7 Steel	KUD 0605	6	5	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10030808608	HFD 0807.06		Z7 Steel	KUD 0807	8	7	6	47	❶ ❷ ❸ ❺ ⑦	■	1
A10031010608	HFD 1009.06		Z7 Steel	KUD 1009	10	9	6	49	❶ ❷ ❸ ❺ ⑦	■	1
A10031212608	HFD 1210.06		Z7 Steel	KUD 1210	12	10	6	51	❶ ❷ ❸ ❺ ⑦	■	1
A10031210808	HFD 1210.08		Z7 Steel	KUD 1210	12	10	8	51	❶ ❷ ❸ ❺ ⑦	■	1
A10031616608	HFD 1614.06		Z7 Steel	KUD 1614	16	14	6	54	❶ ❷ ❸ ❺ ⑦	■	1
A10032020608	HFD 2018.06		Z7 Steel	KUD 2018	20	18	6	58	❶ ❷ ❸ ❺ ⑦	■	1
A10060610608	HFE 0610.06		Z7 Steel	TRE 0610	6	10	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10060813608	HFE 0813.06		Z7 Steel	TRE 0813	8	13	6	53	❶ ❷ ❸ ❺ ⑦	■	1
A10061220608	HFE 1220.06		Z7 Steel	TRE 1220	12	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10061625608	HFE 1625.06		Z7 Steel	TRE 1625	16	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10100618608	HFF 0618.06		Z7 Steel	RBF 0618	6	18	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10100820608	HFF 0820.06		Z7 Steel	---	8	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10101020608	HFF 1020.06		Z7 Steel	RBF 1020	10	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10101225608	HFF 1225.06		Z7 Steel	RBF 1225	12	25	6	65	❶ ❷ ❸ ❺ ⑦	■	1
A10101225808	HFF 1225.08		Z7 Steel	RBF 1225	12	25	8	65	❶ ❷ ❸ ❺ ⑦	■	1
A10101230608	HFF 1230.06		Z7 Steel	RBF 1230	12	30	6	70	❶ ❷ ❸ ❺ ⑦	■	1
A10101630608	HFF 1630.06		Z7 Steel	RBF 1630	16	30	6	70	❶ ❷ ❸ ❺ ⑦	■	1
A10040618608	HFG 0618.06		Z7 Steel	SPG 0618	6	18	6	50	❶ ❷ ❸ ❺ ⑦	■	1
A10040820608	HFG 0820.06		Z7 Steel	---	8	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1
A10041020608	HFG 1020.06		Z7 Steel	SPG 1020	10	20	6	60	❶ ❷ ❸ ❺ ⑦	■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Tungsten-carbide burrs Steel

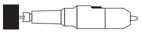
● ★★☆



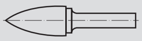
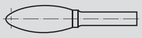
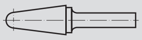
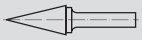


Ordering example: A10010616608

Further dimensions, cuts and shank lengths on request



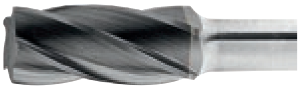
PG 1

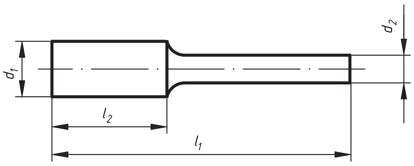
Product number	**Description**	**Shape**	**Cut**	**similar to DIN 8033**	**d_1 mm**	**l_2 mm**	**d_2 mm**	**l_1 mm**	**recommended for** Information on page 438										📦
A10041220608	HFG 1220.06		Z7 Steel	SPG 1220	12	20	6	60	❶	❷	❸		❺		⑦			■	1
A10041225608	HFG 1225.06		Z7 Steel	SPG 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10041230608	HFG 1230.06		Z7 Steel	SPG 1230	12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10041630608	HFG 1630.06		Z7 Steel	SPG 1630	16	30	6	70	❶	❷	❸		❺		⑦			■	1
A10090820608	HFH 0820.06		Z7 Steel		8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10091230608	HFH 1230.06		Z7 Steel		12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10091635608	HFH 1635.06		Z7 Steel		16	35	6	75	❶	❷	❸		❺		⑦			■	1
A10070820608	HFL 0820.06		Z7 Steel	- - -	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10071020608	HFL 1020.06		Z7 Steel	KEL 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10071225608	HFL 1225.06		Z7 Steel	KEL 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10071230608	HFL 1230.06		Z7 Steel	KEL 1230	12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10071630608	HFL 1630.06		Z7 Steel	KEL 1630	16	30	6	70	❶	❷	❸		❺		⑦			■	1
A10050618608	HFM 0618.06		Z7 Steel	SKM 0618	6	18	6	50	❶	❷	❸		❺		⑦			■	1
A10050820608	HFM 0820.06		Z7 Steel	- - -	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10051020608	HFM 1020.06		Z7 Steel	SKM 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10051225608	HFM 1225.06		Z7 Steel	SKM 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1

Further shapes and dimensions in the tables from page 40.

Burrs for machining non-ferrous metals, Z9 Alu

● ● ★★☆

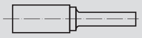
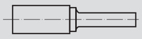
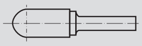
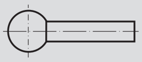
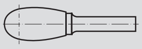
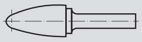
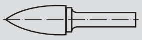




Ordering example: A10010313309

Further dimensions, cuts and shank lengths on request

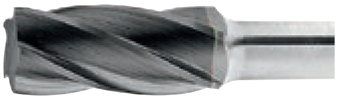
PG 1

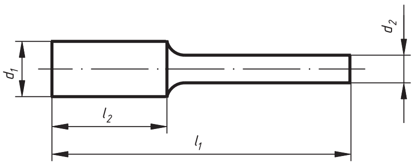
Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		
A10010313309	HFA 0313.03		Z9 Alu	ZYA 0313	3	13	3	40	❻ ❽	■	1
A10010616609	HFA 0616.06		Z9 Alu	ZYA 0616	6	16	6	50	❻ ❽	■	1
A10011225609	HFA 1225.06		Z9 Alu	ZYA 1225	12	25	6	65	❻ ❽	■	1
A10011225809	HFA 1225.08		Z9 Alu	ZYA 1225	12	25	8	65	❻ ❽	■	1
A10011625609	HFA 1625.06		Z9 Alu	ZYA 1625	16	25	6	65	❻ ❽	■	1
A10011625809	HFA 1625.08		Z9 Alu	ZYA 1625	16	25	8	65	❻ ❽	■	1
A10020313309	HFC 0313.03		Z9 Alu	WRC 0313	3	13	3	40	❻ ❽	■	1
A10020616609	HFC 0616.06		Z9 Alu	WRC 0616	6	16	6	50	❻ ❽	■	1
A10020820609	HFC 0820.06		Z9 Alu	WRC 0820	8	20	6	60	❻ ❽	■	1
A10021225609	HFC 1225.06		Z9 Alu	WRC 1225	12	25	6	65	❻ ❽	■	1
A10021225809	HFC 1225.08		Z9 Alu	WRC 1225	12	25	8	65	❻ ❽	■	1
A10021625609	HFC 1625.06		Z9 Alu	WRC 1625	16	25	6	65	❻ ❽	■	1
A10030403309	HFD 0403.03		Z9 Alu	KUD 0403	4	3	3	34	❻ ❽	■	1
A10030605609	HFD 0605.06		Z9 Alu	KUD 0605	6	5	6	50	❻ ❽	■	1
A10031212609	HFD 1210.06		Z9 Alu	KUD 1210	12	10	6	50	❻ ❽	■	1
A10031616609	HFD 1614.06		Z9 Alu	KUD 1614	16	14	6	54	❻ ❽	■	1
A10031616809	HFD 1614.08		Z9 Alu	KUD 1614	16	14	8	54	❻ ❽	■	1
A10061225809	HFE 1225.08		Z9 Alu	TRE 1225	12	25	8	65	❻ ❽	■	1
A10061625809	HFE 1625.08		Z9 Alu	TRE 1625	16	25	8	65	❻ ❽	■	1
A10100313309	HFF 0313.03		Z9 Alu	RBF 0313	3	13	3	40	❻ ❽	■	1
A10100618609	HFF 0618.06		Z9 Alu	RBF 0618	6	18	6	50	❻ ❽	■	1
A10101225609	HFF 1225.06		Z9 Alu	RBF 1225	12	25	6	65	❻ ❽	■	1
A10101225809	HFF 1225.08		Z9 Alu	RBF 1225	12	25	8	65	❻ ❽	■	1
A10101630609	HFF 1630.06		Z9 Alu	RBF 1630	16	30	6	70	❻ ❽	■	1
A10101630809	HFF 1630.08		Z9 Alu	RBF 1630	16	30	8	70	❻ ❽	■	1
A10040313309	HFG 0313.03		Z9 Alu	SPG 0313	3	13	3	40	❻ ❽	■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Burrs for machining non-ferrous metals, Z9 Alu

● ● ★★☆

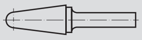
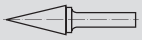




Ordering example: A10010313309

Further dimensions, cuts and shank lengths on request

PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		
A10070820609	HFL 0820.06		Z9 Alu	- - -	8	20	6	60	❻ ❽	■	1
A10071020609	HFL 1020.06		Z9 Alu	KEL 1020	10	20	6	60	❻ ❽	■	1
A10071225609	HFL 1225.06		Z9 Alu	KEL 1225	12	25	6	65	❻ ❽	■	1
A10071230609	HFL 1230.06		Z9 Alu	KEL 1230	12	30	6	70	❻ ❽	■	1
A10071230809	HFL 1230.08		Z9 Alu	KEL 1230	12	30	8	70	❻ ❽	■	1
A10072040809	HFL 2040.08		Z9 Alu	KEL 2040	20	40	8	80	❻ ❽	■	1
A10050618609	HFM 0618.06		Z9 Alu	SKM 0618	6	18	6	50	❻ ❽	■	1

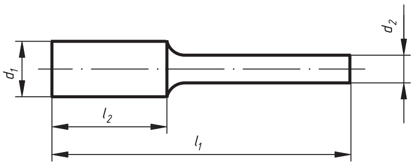
Z9 Alu – the burr for aluminium and non-ferrous metals

Ideal for
- Machining
- Chamfering
- Deburring

Advantages:
- High removal rate
- No clogging
- Long tool life

Tungsten-carbide burrs Cast

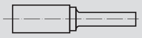
● ★★☆



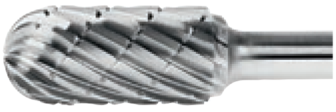
Ordering example: A10010616621

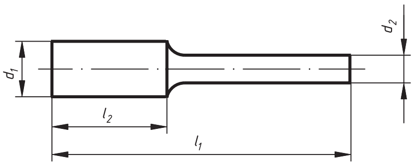
Further dimensions, cuts and shank lengths on request

PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		
A10010616621	HFA 0616.06		Cast	ZYA 0616	6	16	6	50	❺	■	1
A10010820621	HFA 0820.06		Cast	ZYA 0820	8	20	6	60	❺	■	1
A10011020621	HFA 1020.06		Cast	ZYA 1020	10	20	6	60	❺	■	1

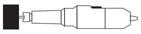
Tungsten-carbide burrs Cast ● ★★☆



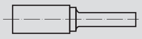
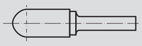
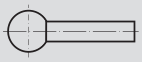
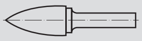
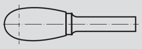
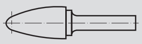


Ordering example: A10010616621

Further dimensions, cuts and shank lengths on request



PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		📦
A10011225621	HFA 1225.06		Cast	ZYA 1225	12	25	6	65	⑤	■	1
A10020616621	HFC 0616.06		Cast	WRC 0616	6	16	6	50	⑤	■	1
A10020820621	HFC 0820.06		Cast	WRC 0820	8	20	6	60	⑤	■	1
A10021020621	HFC 1020.06		Cast	WRC 1020	10	20	6	60	⑤	■	1
A10021225621	HFC 1225.06		Cast	WRC 1225	12	25	6	65	⑤	■	1
A10030605621	HFD 0605.06		Cast	KUD 0605	6	5	6	50	⑤	■	1
A10030807621	HFD 0807.06		Cast	KUD 0807	8	7	6	47	⑤	■	1
A10031009621	HFD 1009.06		Cast	KUD 1009	10	9	6	49	⑤	■	1
A10031210621	HFD 1210.06		Cast	KUD 1210	12	10	6	51	⑤	■	1
A10040618621	HFG 0618.06		Cast	SPG 0618	6	18	6	50	⑤	■	1
A10040820621	HFG 0820.06		Cast	---	8	20	6	60	⑤	■	1
A10041020621	HFG 1020.06		Cast	SPG 1020	10	20	6	60	⑤	■	1
A10041225621	HFG 1225.06		Cast	SPG 1225	12	25	6	65	⑤	■	1
A10060610621	HFE 0610.06		Cast	TRE 0610	6	10	6	50	⑤	■	1
A10060813621	HFE 0813.06		Cast	TRE 0813	8	13	6	53	⑤	■	1
A10061016621	HFE 1016.06		Cast	TRE 1016	10	16	6		⑤	■	1
A10061220621	HFE 1220.06		Cast	TRE 1220	12	20	6	60	⑤	■	1
A10100618621	HFF 0618.06		Cast	RBF 0618	6	18	6	50	⑤	■	1
A10100820621	HFF 0820.06		Cast	---	8	20	6	60	⑤	■	1
A10101020621	HFF 1020.06		Cast	RBF 1020	10	20	6	60	⑤	■	1
A10101225621	HFF 1225.06		Cast	RBF 1225	12	25	6	65	⑤	■	1

Cast – the burr for cast material

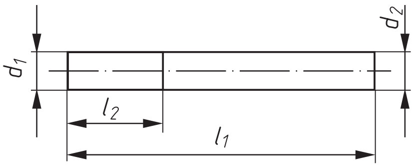
Ideal for
- Fettling
- Deburring
- Bevelling

Advantages:
- High stock removal capability
- Long tool life
- Smooth running and ergonomical

HM-burr Compisite Coarse

● ★★☆

Ordering example: A10180315323



PG 1

Product number	Description	Cut	l_1 mm	d_1 mm	l_2 mm	d_2 mm	recommended for Information on page 438		📦
A10180315323	HFAS 0315.0	Composite Coarse	42	3	15	3	❽	■	1
A10180625623	HFAS 0625.0	Composite Coarse	64	6	25	6	❽	■	1
A10180828823	HFAS 0828.0	Composite Coarse	73	8	28	8	❽	■	1

Composite – the burr for fibre-reinforced materials

Thanks to the special fish-tail toothing the burrs can also be used for drilling and face milling. Due to the extra-long cutting element sawing operations will be possible and tool life will increase. The coarse cut (coarse) is perfectly suited for stationary use.

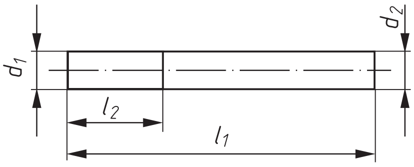
Ideal for
- Drilling
- Milling
- Sawing

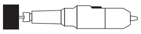
Advantages:
- Extra-long cutting element
- Long tool life
- High profitability

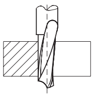
HM-burr Composite Fine

● ★★☆

Ordering example: A10180625624







PG 1

Product number	Description	Cut	l_1 mm	d_1 mm	l_2 mm	d_2 mm	recommended for Information on page 438										📦
A10180625624	HFAS 0625.06	Composite Fine	64	6	25	6								❽		■	1
A10180828824	HFAS 0828.08	Composite Fine	73	8	28	8								❽		■	1
A101810301024	HFAS 1030.10	Composite Fine	77	10	30	10								❽		■	1

Composite – the burr for fibre-reinforced materials

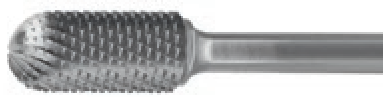
Thanks to the special fish-tail toothing the burrs can also be used for drilling and face milling. Due to the extra-long cutting element sawing operations will be possible and tool life will increase. The coarse cut (coarse) is perfectly suited for stationary use.

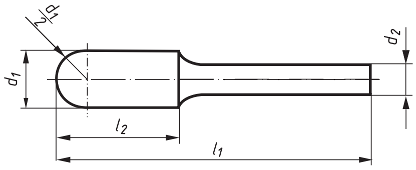
Ideal for
- Drilling
- Milling
- Sawing

Advantages:
- Extra-long cutting element
- Long tool-life
- High profitability

Tungsten-carbide Rasp burrs wood

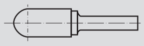
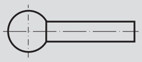
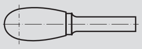
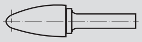
★★★





Ordering example: A10021225618

PG 1

Product number	Description	Shape	Cut	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A10021225618	HFC 1225.06		Wood	12	25	6	65	①							❽		■	1
A10031210618	HFD 1210.06		Wood	12	10	6	50	①							❽		■	1
A10061220618	HFE 1220.06		Wood	12	20	6	60	①							❽		■	1
A10100618618	HFF 0618.06		Wood	6	18	6	58	①							❽		■	1
A10100820618	HFF 0820.06		Wood	8	20	6	60	①							❽		■	1

Wood – the milling cutter for wood and light-weight materials

Rasp burrs for wood are manufactured from fine grit tungsten carbide and achieve a service life far exceeding that of comparable HSS or stippled burrs. A rough cutting geometry means that, even where only light force is applied, the burrs are very efficient during cutting, achieving a high level of stock removal. In particular when working on wood and other materials for pattern construction the desired shapes can be achieved fast and accurately. Burrs and material remain cool and do not overheat.

Ideal for
- chamfering
- modelling
- smoothing

Advantages:
- very fast due to large rake angle
- long tool tilfe thanks to carbide
- quiet, vibration-free running

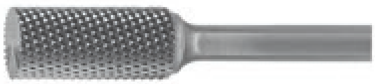
Range of application:
- pattern construction and wood
- mold and cores
- soft materials

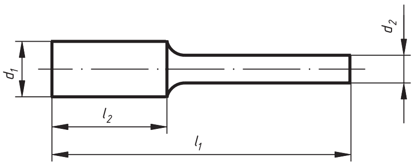
Example using Rasp burr for wood

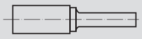
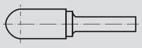
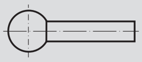
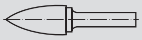
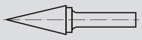
Tungsten-carbide rotary files

● ● ● ● ★★★

Ordering example: A100106166140001





Product number	Description	Shape	Cut	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438									PG 1	📦
A100106166150001	HFAS 0616.06		ZF2	6	16	6	50	❶	❷	❸	❹	❺		❼			■	1
A100106166140001	HFAS 0616.06		ZF3	6	16	6	50	❶	❷	❸	❹	❺		❼			■	1
A100112256160001	HFAS 1225.06		ZF1	12	25	6	65	❶	❷	③	④	❺		❼			■	1
A100112256150001	HFAS 1225.06		ZF2	12	25	6	65	❶	❷	❸	❹	❺		❼			■	1
A10020616614	HFC 0616.06		ZF3	6	16	6	50	❶	❷	❸	❹	❺		❼			■	1
A10021225616	HFC 1225.06		ZF1	12	25	6	65	❶	❷	③	④	❺		❼			■	1
A10021225615	HFC 1225.06		ZF2	12	25	6	65	❶	❷	❸	❹	❺		❼			■	1
A10031009615	HFD 1009.06		ZF2	10	9	6	49	❶	❷	❸	❹	❺		❼			■	1
A10040618615	HFG 0618.06		ZF2	6	18	6	50	❶	❷	❸	❹	❺		❼			■	1
A10040618614	HFG 0618.06		ZF3	6	18	6	50	❶	❷	❸	❹	❺		❼			■	1
A10041230616	HFG 1230.06		ZF1	12	30	6	70	❶	❷	③	④	❺		❼			■	1
A10041230615	HFG 1230.06		ZF2	12	30	6	70	❶	❷	❸	❹	❺		❼			■	1
A10041230614	HFG 1230.06		ZF3	12	30	6	70	❶	❷	❸	❹	❺		❼			■	1
A10051225615	HFM 1225.06		ZF2	12	25	6	65	❶	❷	❸	❹	❺		❼			■	1

The micro-serration of the new tungsten carbide rotary files is based on the cutting geometry of a file and thus prevents clogging, even when removing soft materials.

The precision cut is achieved on CNC grinding machines, thus ensuring perfect concentricity and chatter-free working. The burrs remain sharp for a long time as a result, achieving a clean surface finish free of chatter marks. Rotary files are available in numerous sizes and shapes and three different cuts ranging from ZF1 (coarse) to ZF3 (fine). This means that the conditions of use can be optimised for each application with the result of the best surface finish. This means that the conditions of use can be optimised for each application with the result of the best surface finish.

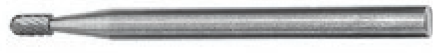
Properties:
- Optimum surface finishes, owing to fine serration
- Long service life, owing to tungsten carbide
- No clogging

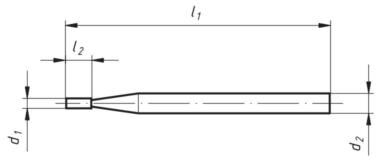
Particularly suitable for:
- Perfect surface finishes
- Composite materials
- Bores

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Miniature burrs with multi-purpose cut

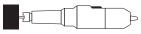
● ● ● ★★☆



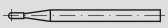
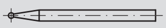
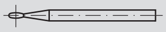


Ordering example: A10010104312

Further dimensions, cuts and shank lengths on request



PG 1

Product number	Description	Shape	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										
A10010104312	HFA 01004.03		1	4	3	40		❷	❸	❹			❼			■	1
A100101043120001	HFA 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1
A10010204312	HFA 02004.03		2	4	3	40		❷	❸	❹			❼			■	1
A10020104312	HFC 01004.03		1	4	3	40		❷	❸	❹			❼			■	1
A100201043120001	HFC 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1
A10020204312	HFC 02004.03		2	4	3	40		❷	❸	❹			❼			■	1
A10030101312	HFD 01001.03		1	0,9	3	40		❷	❸	❹			❼			■	1
A100301013120001	HFD 01501.03		1,5	1,35	3	40		❷	❸	❹			❼			■	1
A10030202312	HFD 02002.03		2	1,8	3	40		❷	❸	❹			❼			■	1
A10060104312	HFE 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1
A10100104312	HFF 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1
A10040104312	HFG 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1
A10050104312	HFM 01504.03		1,5	4	3	40		❷	❸	❹			❼			■	1

Application:
- tool manufacture
- precision engineering
- jewellery industry
- turbine manufacture

Materials to be processed:
- stainless steel
- non-ferrous metals
- zinc die casting
- soft ceramics
- titanium alloys

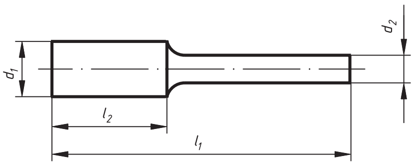
Useful hints:
- choose shortest overhang
- concentric running of the collet chuck is very important
- recommended speed: 70.000 rpm

Advantages:
- high dimensional accuracy
- minimal runout
- multi-purpose cut
- micro grain carbide
- precision ground cutting edges

Power Tool:
- We recommend our pneumatic grinder AMIN 72-013 GD, page 381

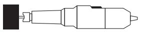
Miniature burrs in cut 5, shank 3 mm

● ● ● ★★☆



Ordering example: A10010204300

Further dimensions, cuts and shank lengths on request



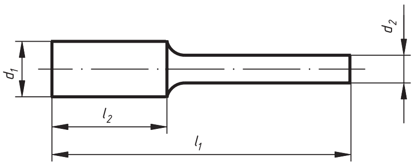
PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A10010210305	HFA 0210.03		Z5	ZYA 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A10010313305	HFA 0313.03		Z5	ZYA 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10010607305	HFA 0607.03		Z5	ZYA 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1
A10010613305	HFA 0613.03		Z5	ZYA 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A100102103050001	HFAS 0210.03		Z5	ZYA-S 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A100103133050001	HFAS 0313.03		Z5	ZYA-S 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A100106073050001	HFAS 0607.03		Z5	ZYA-S 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1
A100106133050001	HFAS 0613.03		Z5	ZYA-S 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10020210305	HFC 0210.03		Z5	WRC 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A10020313305	HFC 0313.03		Z5	WRC 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10020613305	HFC 0613.03		Z5	WRC 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10030303305	HFD 0302.03		Z5	KUD 0302	3	2	3	40	❶	❷	❸	④			⑦			■	1
A100304043050001	HFD 0403.03		Z5	KUD 0403	4	3	3	34	❶	❷	❸	④			⑦			■	1
A10030606305	HFD 0605.03		Z5	KUD 0605	6	5	3	35	❶	❷	❸	④			⑦			■	1
A10060307305	HFE 0307.03		Z5	TRE 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10060610305	HFE 0610.03		Z5	TRE 0610	6	10	3	40	❶	❷	❸	④			⑦			■	1
A10100307305	HFF 0307.03		Z5	RBF 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10100313305	HFF 0313.03		Z5	RBF 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10100613305	HFF 0613.03		Z5	RBF 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10040307305	HFG 0307.03		Z5	SPG 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10040313305	HFG 0313.03		Z5	SPG 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10040613305	HFG 0613.03		Z5	SPG 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10090307305	HFH 0307.03		Z5		3	7	3	40	❶	❷	❸	④			⑦			■	1

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

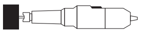
Miniature burrs in cut 5, shank 3 mm

● ● ● ★★☆



Ordering example: A10010204300

Further dimensions, cuts and shank lengths on request

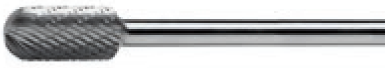


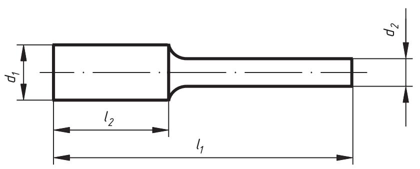
PG 1

Product number	Description	Shape	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10090613305	HFH 0613.03		Z5		6	13	3	43	❶	❷	❸	④			⑦			■	1
A10010204300	HFI 0204.03		ZI		2,5	4	3	40			❸	❹			❼			■	1
A10010408300	HFI 0408.03		ZI		4	8	3	50			❸	❹			❼			■	1
A10050307305	HFM 0307.03		Z5	SKM 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10050311305	HFM 0311.03		Z5	SKM 0311	3	11	3	40	❶	❷	❸	④			⑦			■	1
A10050613305	HFM 0613.03		Z5	SKM 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10120307305	HFN 0307.03		Z5	WKN 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10120607305	HFN 0607.03		Z5	WKN 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1
A101203073050001	HFNS 0307.03		Z5	WKN-S 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A101206073050001	HFNS 0607.03		Z5	WKN-S 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1

Burrs with extended shank length (shank length 200 mm)

● ● ● ● ★★☆

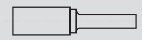
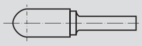
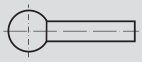
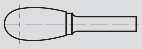
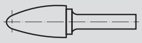
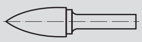
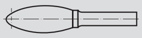




Ordering example: A10011225603200

Further dimensions, cuts and shank lengths on request

PG 1

Product number	Description	Shape	Cut	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										
A10011225603200	HFA 1225.06 L		Z3	12	25	6	225	❶	❷	❸	④			⑦			■	1
A10011225608200	HFA 1225.06 L		Z7 Steel	12	25	6	225	❶	❷	❸	④			⑦			■	1
A10020616603200	HFC 0616.06 L		Z3	6	16	6	216	❶	❷	❸	④			⑦			■	1
A10020616608200	HFC 0616.06 L		Z7 Steel	6	16	6	216	❶	❷	❸		❺		⑦			■	1
A10020820603200	HFC 0820.06 L		Z3	8	20	6	220	❶	❷	❸	④			⑦			■	1
A10020820608200	HFC 0820.06 L		Z7 Steel	8	20	6	220	❶	❷	❸		❺		⑦			■	1
A10021020608200	HFC 1020.06 L		Z7 Steel	10	20	6	220	❶	❷	❸		❺		⑦			■	1
A10021225608200	HFC 1225.06 L		Z7 Steel	12	25	6	225	❶	❷	❸		❺		⑦			■	1
A10030605603200	HFD 0605.06 L		Z3	6	5	6	205	❶	❷	❸	④			⑦			■	1
A10030605608200	HFD 0605.06 L		Z7 Steel	6	5	6	205	❶	❷	❸		❺		⑦			■	1
A10030807603200	HFD 0807.06 L		Z3	8	7	6	207	❶	❷	❸	④			⑦			■	1
A10030807608200	HFD 0807.06 L		Z7 Steel	8	7	6	207	❶	❷	❸		❺		⑦			■	1
A10031009603200	HFD 1009.06 L		Z3	10	9	6	209	❶	❷	❸	④			⑦			■	1
A10031009608200	HFD 1009.06 L		Z7 Steel	10	9	6	209	❶	❷	❸		❺		⑦			■	1
A10031210603200	HFD 1210.06 L		Z3	12	10	6	210	❶	❷	❸	④			⑦			■	1
A10031210608200	HFD 1210.06 L		Z7 Steel	12	10	6	210	❶	❷	❸		❺		⑦			■	1
A10031210803200	HFD 1210.08 L		Z3	12	10	8	210	❶	❷	❸	④			⑦			■	1
A10031210808200	HFD 1210.08 L		Z7 Steel	12	10	8	210	❶	❷	❸		❺		⑦			■	1
A10061220603200	HFE 1220.06 L		Z3	12	20	6	220	❶	❷	❸	④			⑦			■	1
A10061220608200	HFE 1220.06 L		Z7 Steel	12	20	6	220	❶	❷	❸		❺		⑦			■	1
A10061220808200	HFE 1220.08 L		Z7 Steel	12	20	8	220	❶	❷	❸		❺		⑦			■	1
A10100618603200	HFF 0618.06 L		Z3	6	18	6	218	❶	❷	❸	④			⑦			■	1
A10100618608200	HFF 0618.06 L		Z7 Steel	6	18	6	218	❶	❷	❸		❺		⑦			■	1
A10101230808200	HFF 1230.08 L		Z7 Steel	12	30	8	230	❶	❷	❸		❺		⑦			■	1
A10040618603200	HFG 0618.06 L		Z3	6	18	6	218	❶	❷	❸	④			⑦			■	1
A10040618608200	HFG 0618.06 L		Z7 Steel	6	18	6	218	❶	❷	❸		❺		⑦			■	1
A10041230808200	HFG 1230.08 L		Z7 Steel	12	30	8	230	❶	❷	❸		❺		⑦			■	1
A10091020603200	HFH 1020.06 L		Z3	10	20	6	220	❶	❷	❸	④			⑦			■	1
A10091020608200	HFH 1020.06 L		Z7 Steel	10	20	6	220	❶	❷	❸		❺		⑦			■	1

Safety instructions: Recommended operating speed for major exposed shank lengths

For a safe use it will be necessary to hold the tool to the workpiece before starting the machine and/or insert it into the boreholes or ducts. Contact with the workpiece must be ensured until the machine is deactivated. If permanent contact with the workpiece cannot be ensured, the machine should run at idling speed..

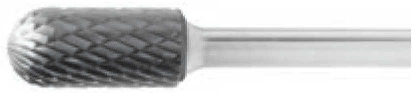
Reduced speeds for Tungsten-carbide burrs with extra long shank (150/200 mm)

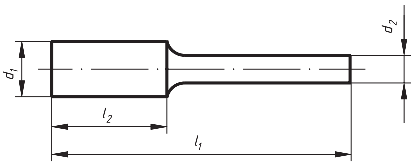
Tool diameter d1 mm	6	8	10	12	12
Shank diameter d2 mm	6	6	6	6	8
Permitted idling speed without workpiece contact (1/min)	4.000	3.200	2.800	2.200	3.600
Permitted reduced operating speed with workpiece contact (1/min)	13.000	10.000	8.000	7.000	7.000

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Burrs with extended shank length (shank length 150 mm)

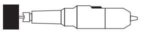
● ● ● ★☆☆



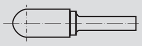
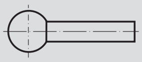
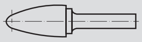


Ordering example: A10020820622150

Further dimensions, cuts and shank lengths on request



PG 1

Product number	**Description**	**Shape**	**Cut**	**d$_1$** **mm**	**l$_2$** **mm**	**d$_2$** **mm**	**l$_1$** **mm**	**recommended for** Information on page 438										
A10020820622150	HFC 0820.06 BASE-X		ZX	8	20	6	170	❶	❷	❸	④	❺		⑦			■	1
A10021020622150	HFC 1020.06 BASE-X		ZX	10	20	6	170	❶	❷	❸	④	❺		⑦			■	1
A10021225622150	HFC 1225.06 BASE-X		ZX	12	25	6	175	❶	❷	❸	④	❺		⑦			■	1
A10030807622150	HFD 0807.06 BASE-X		ZX	8	7	6	157	❶	❷	❸	④	❺		⑦			■	1
A10031009622150	HFD 1009.06 BASE-X		ZX	10	9	6	159	❶	❷	❸	④	❺		⑦			■	1
A10100820622150	HFF 0820.06 BASE-X		ZX	8	20	6	170	❶	❷	❸	④	❺		⑦			■	1
A10101225622150	HFF 1225.06 BASE-X		ZX	12	25	6	175	❶	❷	❸	④	❺		⑦			■	1

Safety instructions: Recommended operating speed for major exposed shank lengths

For a safe use it will be necessary to hold the tool to the workpiece before starting the machine and/or insert it into the boreholes or ducts. Contact with the workpiece must be ensured until the machine is deactivated. If permanent contact with the workpiece cannot be ensured, the machine should run at idling speed.

Reduced speeds for Tungsten-carbide burrs with extra long shank (150/200 mm)					
Tool diameter d1 mm	6	8	10	12	12
Shank diameter d2 mm	6	6	6	6	8
Permitted idling speed without workpiece contact (1/min)	4.000	3.200	2.800	2.200	3.600
Permitted reduced operating speed with workpiece contact (1/min)	13.000	10.000	8.000	7.000	7.000

Tools for stationary use

● ● ● ● ● ● ★★☆

PG 1

Differential drill, radius mill, shank-end mill, die mill, profile mill	delivery on request

Range of application:

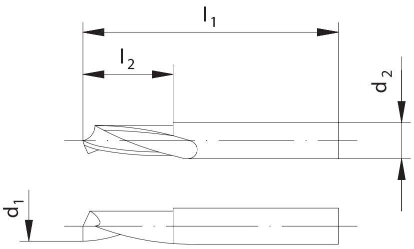
- Tool construction
- Turbine construction
- Aerospace industry
- General machine building

In addition to rotary burrs, we also produce tungsten carbide milling tools in special shapes and sizes for stationary application.

We supply these milling cutters with a diameter **of 20 mm** maximum diameter and with a maximum length **of 250 mm**; they differ from our extensive standard range by the shape, tool material and geometry (rake, clearance and helix angles).

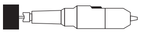
Engraving cutters of solid carbide single flute type

● ● ★★☆



Ordering example: A13150030337102

Further dimensions, cuts and shank lengths on request.



Unless otherwise specified, the tolerances are as DIN 7468

PG 1

Product number	Description	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A13150030337102	HGE 0207.03	2	7	3	40						❻		❽		■	1
A13150030337103	HGE 0307.03	3	7	3	40						❻		❽		■	1

Application:
Very well suited for the machining of light metals, non-ferrous metals, plastics and for high-speed-machining of aluminium parts.
Cutters with mirror finished flute allow for ideal chip removal and avoid clogging.

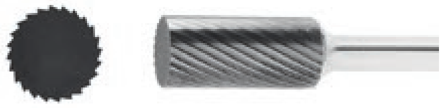
Recommended cutting speeds

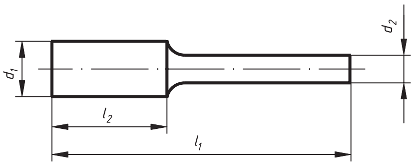
Main group of materials	Sub-group	Hardness (HB)	Strength (N/mm2)	Optimal cutting speed (m/min)
Aluminium, Magnesium	Al, Mg non alloyed	≤ 100	≤ 350	≤ 400
	Al alloyed Si < 0,5%	≤ 150	≤ 500	≤ 400
	Al alloyed Si ≥ 0,5 < 10 %	≤ 120	≤ 400	≤ 100
	Al alloyed Si ≥ 10 %, Mg-all., Al-Whisker	≤ 120	≤ 400	≤ 70
Plastics	Thermoplastics	–	–	≤ 150
	Thermo-setting plastics	–	–	–

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Shape A, Cylindrical

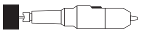
●●●●●● ★★☆

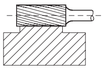




Ordering example: A10010210305

Further dimensions, cuts and shank lengths on request



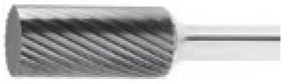


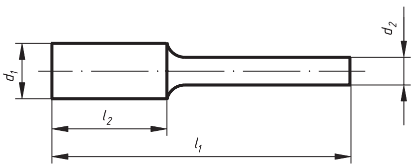
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10010210305	HFA 0210.03	Z5	ZYA 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A10010313303	HFA 0313.03	Z3	ZYA 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10010313304	HFA 0313.03	Z4	ZYA 0313	3	13	3	40		❷	❸	❹			❼	⑧		■	1
A10010313305	HFA 0313.03	Z5	ZYA 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10010313308	HFA 0313.03	Z7 Steel	ZYA 0313	3	13	3	40	❶	❷	❸		❺		⑦			■	1
A10010313309	HFA 0313.03	Z9 Alu	ZYA 0313	3	13	3	40						❻		❽		■	1
A10010413603	HFA 0413.06	Z3	ZYA 0413	4	13	6	50	❶	❷	❸	④			⑦			■	1
A10010413608	HFA 0413.06	Z7 Steel	ZYA 0413	4	13	6	50	❶	❷	❸		❺		⑦			■	1
A10010607305	HFA 0607.03	Z5	ZYA 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1
A10010613305	HFA 0613.03	Z5	ZYA 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10010613308	HFA 0613.03	Z7 Steel	ZYA 0613	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A10010616602	HFA 0616.06	Z2	ZYA 0616	6	16	6	50	①				❺	⑥		❽		■	1
A10010616603	HFA 0616.06	Z3	ZYA 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A10010616604	HFA 0616.06	Z4	ZYA 0616	6	16	6	50		❷	❸	❹			❼	⑧		■	1
A10010616605	HFA 0616.06	Z5	ZYA 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A10010616608	HFA 0616.06	Z7 Steel	ZYA 0616	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A10010616609	HFA 0616.06	Z9 Alu	ZYA 0616	6	16	6	50						❻		❽		■	1
A10010616620	HFA 0616.06	Z42 Inox/Steel	ZYA 0616	6	16	6	50	❶	②	③	❹						■	1
A10010616621	HFA 0616.06	Cast	ZYA 0616	6	16	6	50					❺					■	1
A10010820603	HFA 0820.06	Z3	ZYA 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10010820604	HFA 0820.06	Z4	ZYA 0820	8	20	6	60		❷	❸	❹			❼	⑧		■	1
A10010820605	HFA 0820.06	Z5	ZYA 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10010820608	HFA 0820.06	Z7 Steel	ZYA 0820	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10010820620	HFA 0820.06	Z42 Inox/Steel	ZYA 0820	8	20	6	60	❶	②	③	❹						■	1
A10010820621	HFA 0820.06	Cast	ZYA 0820	8	20	6	60					❺					■	1
A10011013603	HFA 1013.06	Z3	ZYA 1013	10	13	6	53	❶	❷	❸	④			⑦			■	1
A10011013608	HFA 1013.06	Z7 Steel	ZYA 1013	10	13	6	53	❶	❷	❸		❺		⑦			■	1
A10011020603	HFA 1020.06	Z3	ZYA 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10011020604	HFA 1020.06	Z4	ZYA 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10011020608	HFA 1020.06	Z7 Steel	ZYA 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10011020620	HFA 1020.06	Z42 Inox/Steel	ZYA 1020	10	20	6	60	❶	②	③	❹						■	1
A10011020621	HFA 1020.06	Cast	ZYA 1020	10	20	6	60					❺					■	1
A10011025604	HFA 1025.06	Z4	ZYA 1025	10	25	6	65		❷	❸	❹			❼	⑧		■	1
A10011025608	HFA 1025.06	Z7 Steel	ZYA 1025	10	25	6	65	❶	❷	❸		❺		⑦			■	1
A10011025803	HFA 1025.08	Z3	ZYA 1025	10	25	8	65	❶	❷	❸	④			⑦			■	1
A10011225603	HFA 1225.06	Z3	ZYA 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10011225604	HFA 1225.06	Z4	ZYA 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1

Shape A, Cylindrical

● ● ● ● ● ● ★★☆





Ordering example: A10010210305

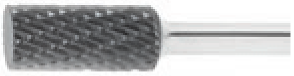
Further dimensions, cuts and shank lengths on request

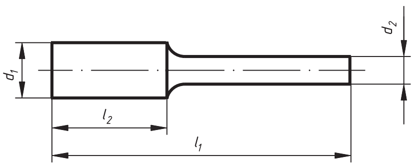
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10011225605	HFA 1225.06	Z5	ZYA 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10011225608	HFA 1225.06	Z7 Steel	ZYA 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10011225609	HFA 1225.06	Z9 Alu	ZYA 1225	12	25	6	65						❻		❽		■	1
A10011225620	HFA 1225.06	Z42 Inox/Steel	ZYA 1225	12	25	6	65	❶	②	③	❹						■	1
A10011225621	HFA 1225.06	Cast	ZYA 1225	12	25	6	65					❺					■	1
A10011225804	HFA 1225.08	Z4	ZYA 1225	12	25	8	65		❷	❸	❹			❼	⑧		■	1
A10011225809	HFA 1225.08	Z9 Alu	ZYA 1225	12	25	8	65						❻		❽		■	1
A10011625603	HFA 1625.06	Z3	ZYA 1625	16	25	6	65	❶	❷	❸	④			⑦			■	1
A10011625608	HFA 1625.06	Z7 Steel	ZYA 1625	16	25	6	65	❶	❷	❸		❺		⑦			■	1
A10011625609	HFA 1625.06	Z9 Alu	ZYA 1625	16	25	6	65						❻		❽		■	1
A10011625809	HFA 1625.08	Z9 Alu	ZYA 1625	16	25	8	65						❻		❽		■	1

Shape A, Cylindrical BASE-X

● ● ● ★☆☆





Ordering example: A10010313322

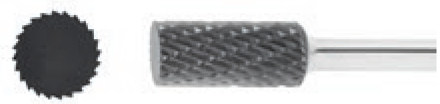
PG 1

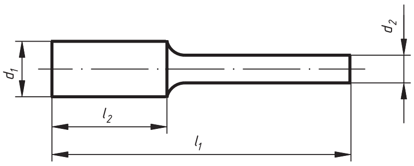
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10010313322	HFA 0313.03 BASE-X	ZX	ZYA 0313	3	13	3	40	❶	❷	❸	④	❺		⑦			■	10
A10010616622	HFA 0616.06 BASE-X	ZX	ZYA 0616	6	16	6	50	❶	❷	❸	④	❺		⑦			■	10
A10010820622	HFA 0820.06 BASE-X	ZX	ZYA 0820	8	20	6	60	❶	❷	❸	④	❺		⑦			■	10
A5001082062214	HFA 0820.06 BASE-X	ZX	ZYA 8020	8	20	1/4"	60	❶	❷	❸	④	❺		⑦			■	10
A10011020622	HFA 1020.06 BASE-X	ZX	ZYA 1020	10	20	6	60	❶	❷	❸	④	❺		⑦			■	10
A5001102062214	HFA 1020.06 BASE-X	ZX	ZYA 1020	10	20	1/4"	60	❶	❷	❸	④	❺		⑦			■	10

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

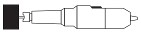
Shape A, Cylindrical BASE-X

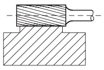
● ● ● ★☆☆





Ordering example: A10010313322



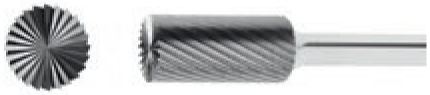


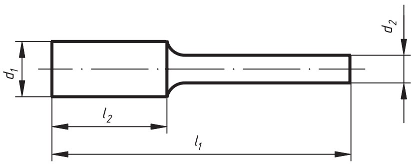
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A10011225622	HFA 1225.06 BASE-X	ZX	ZYA 1225	12	25	6	65	❶	❷	❸	④	❺		⑦			■	5
A5001122562214	HFA 1225.06 BASE-X	ZX	ZYA 1225	12	25	1/4"	65	❶	❷	❸	④	❺		⑦			■	5

Shape A, Cylindrical, with end cut

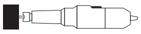
● ● ● ● ● ● ★★☆

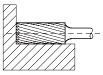




Ordering example: A100102103050001

Further dimensions, cuts and shank lengths on request



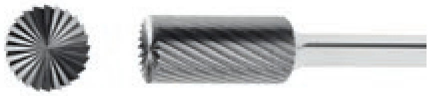


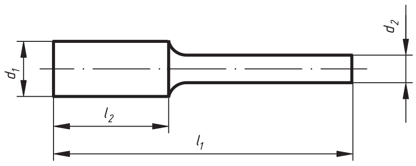
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A100102103050001	HFAS 0210.03	Z5	ZYA-S 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A100103133030001	HFAS 0313.03	Z3	ZYA-S 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A100103133040001	HFAS 0313.03	Z4	ZYA-S 0313	3	13	3	40		❷	❸	❹			❼	⑧		■	1
A100103133050001	HFAS 0313.03	Z5	ZYA-S 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A100103133080001	HFAS 0313.03	Z7 Steel	ZYA-S 0313	3	13	3	40	❶	❷	❸		❺		⑦			■	1
A100104136030001	HFAS 0413.06	Z3	ZYA-S 0413	4	13	6	50	❶	❷	❸	④			⑦			■	1
A100104136080001	HFAS 0413.06	Z7 Steel	ZYA-S 0413	4	13	6	50	❶	❷	❸		❺		⑦			■	1
A100106073050001	HFAS 0607.03	Z5	ZYA-S 0607	6	7	3	37	❶	❷	❸	④			⑦			■	1
A100106133050001	HFAS 0613.03	Z5	ZYA-S 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A100106133080001	HFAS 0613.03	Z7 Steel	ZYA-S 0613	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A100106166030001	HFAS 0616.06	Z3	ZYA-S 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A100106166040001	HFAS 0616.06	Z4	ZYA-S 0616	6	16	6	50		❷	❸	❹			❼	⑧		■	1
A100106166050001	HFAS 0616.06	Z5	ZYA-S 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A100106166080001	HFAS 0616.06	Z7 Steel	ZYA-S 0616	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A100108206030001	HFAS 0820.06	Z3	ZYA-S 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A100108206040001	HFAS 0820.06	Z4	ZYA-S 0820	8	20	6	60		❷	❸	❹			❼	⑧		■	1
A100108206050001	HFAS 0820.06	Z5	ZYA-S 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A100108206080001	HFAS 0820.06	Z7 Steel	ZYA-S 0820	8	20	6	60	❶	❷	❸		❺		⑦			■	1

Shape A, Cylindrical, with end cut

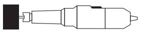
● ● ● ● ● ● ★★☆

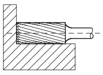




Ordering example: A100102103050001

Further dimensions, cuts and shank lengths on request



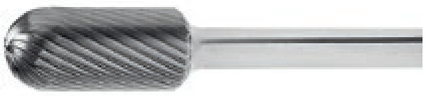


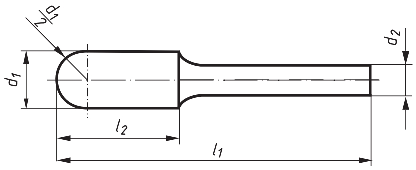
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A100110136030001	HFAS 1013.06	Z3	ZYA-S 1013	10	13	6	53	❶	❷	❸	④			⑦			■	1
A100110136080001	HFAS 1013.06	Z7 Steel	ZYA-S 1013	10	13	6	53	❶	❷	❸		❺		⑦			■	1
A100110206030001	HFAS 1020.06	Z3	ZYA-S 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A100110206040001	HFAS 1020.06	Z4	ZYA-S 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A100110206080001	HFAS 1020.06	Z7 Steel	ZYA-S 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A100110256040001	HFAS 1025.06	Z4	ZYA-S 1025	10	25	6	65		❷	❸	❹			❼	⑧		■	1
A100110256080001	HFAS 1025.06	Z7 Steel	ZYA-S 1025	10	25	6	65	❶	❷	❸		❺		⑦			■	1
A100112256030001	HFAS 1225.06	Z3	ZYA-S 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A100112256040001	HFAS 1225.06	Z4	ZYA-S 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1
A100112256050001	HFAS 1225.06	Z5	ZYA-S 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A100112256080001	HFAS 1225.06	Z7 Steel	ZYA-S 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A100112258040001	HFAS 1225.08	Z4	ZYA-S 1225	12	25	8	65		❷	❸	❹			❼	⑧		■	1
A100112258080001	HFAS 1225.08	Z7 Steel	ZYA-S 1225	12	25	8	65	❶	❷	❸		❺		⑦			■	1
A100116256030001	HFAS 1625.06	Z3	ZYA-S 1625	16	25	6	65	❶	❷	❸	④			⑦			■	1
A100116256080001	HFAS 1625.06	Z7 Steel	ZYA-S 1625	16	25	6	65	❶	❷	❸		❺		⑦			■	1

Shape C, Cylindrical round nose

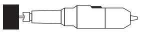
● ● ● ● ● ● ★★☆

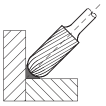




Ordering example: A10020210305

Further dimensions, cuts and shank lengths on request





PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A10020210305	HFC 0210.03	Z5	WRC 0210	2	10	3	40	❶	❷	❸	④			⑦			■	1
A10020210308	HFC 0210.03	Z7 Steel	WRC 0210	2	10	3	40	❶	❷	❸		❺		⑦			■	1
A10020313302	HFC 0313.03	Z2	WRC 0313	3	13	3	40	①				❺	⑥		❽		■	1
A10020313303	HFC 0313.03	Z3	WRC 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10020313304	HFC 0313.03	Z4	WRC 0313	3	13	3	40		❷	❸	❹			❼	⑧		■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Shape C, Cylindrical round nose

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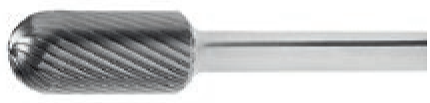
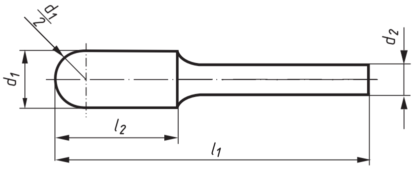
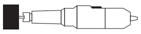
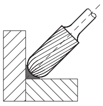




Ordering example: A10020210305

Further dimensions, cuts and shank lengths on request





PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										📦
A10020313305	HFC 0313.03	Z5	WRC 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10020313308	HFC 0313.03	Z7 Steel	WRC 0313	3	13	3	40	❶	❷	❸		❺		⑦			■	1
A10020313309	HFC 0313.03	Z9 Alu	WRC 0313	3	13	3	40						❻		❽		■	1
A10020413603	HFC 0413.06	Z3	WRC 0413	4	13	6	50	❶	❷	❸	④			⑦			■	1
A10020413604	HFC 0413.06	Z4	WRC 0413	4	13	6	50		❷	❸	❹			❼	⑧		■	1
A10020413608	HFC 0413.06	Z7 Steel	WRC 0413	4	13	6	50	❶	❷	❸		❺		⑦			■	1
A10020613305	HFC 0613.03	Z5	WRC 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10020613308	HFC 0613.03	Z7 Steel	WRC 0613	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A10020616601	HFC 0616.06	Z1	WRC 0616	6	16	6	50						⑥		❽		■	1
A10020616602	HFC 0616.06	Z2	WRC 0616	6	16	6	50	①				❺	⑥		❽		■	1
A10020616603	HFC 0616.06	Z3	WRC 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A10020616604	HFC 0616.06	Z4	WRC 0616	6	16	6	50		❷	❸	❹			❼	⑧		■	1
A10020616605	HFC 0616.06	Z5	WRC 0616	6	16	6	50	❶	❷	❸	④			⑦			■	1
A10020616608	HFC 0616.06	Z7 Steel	WRC 0616	6	16	6	50	❶	❷	❸		❺		⑦			■	1
A10020616609	HFC 0616.06	Z9 Alu	WRC 0616	6	16	6	50						❻		❽		■	1
A10020616620	HFC 0616.06	Z42 Inox/Steel	WRC 0616	6	16	6	50	❶	②	③	❹						■	1
A10020616621	HFC 0616.06	Cast	WRC 0616	6	16	6	50					❺					■	1
A10020820603	HFC 0820.06	Z3	WRC 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10020820604	HFC 0820.06	Z4	WRC 0820	8	20	6	60		❷	❸	❹			❼	⑧		■	1
A10020820605	HFC 0820.06	Z5	WRC 0820	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10020820606	HFC 0820.06	Z6	WRC 0820	8	20	6	60		❷	❸	❹			❼	⑧		■	1
A10020820608	HFC 0820.06	Z7 Steel	WRC 0820	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10020820609	HFC 0820.06	Z9 Alu	WRC 0820	8	20	6	60						❻		❽		■	1
A10020820620	HFC 0820.06	Z42 Inox/Steel	WRC 0820	8	20	6	60	❶	②	③	❹						■	1
A10020820621	HFC 0820.06	Cast	WRC 0820	8	20	6	60					❺					■	1
A10021020603	HFC 1020.06	Z3	WRC 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10021020604	HFC 1020.06	Z4	WRC 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10021020605	HFC 1020.06	Z5	WRC 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10021020606	HFC 1020.06	Z6	WRC 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10021020608	HFC 1020.06	Z7 Steel	WRC 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10021020620	HFC 1020.06	Z42 Inox/Steel	WRC 1020	10	20	6	60	❶	②	③	❹						■	1
A10021020621	HFC 1020.06	Cast	WRC 1020	10	20	6	60					❺					■	1
A10021020804	HFC 1020.08	Z4	WRC 1020	10	20	8	60		❷	❸	❹			❼	⑧		■	1
A10021020808	HFC 1020.08	Z7 Steel	WRC 1020	10	20	8	60	❶	❷	❸		❺		⑦			■	1
A10021025608	HFC 1025.06	Z7 Steel	WRC 1025	10	25	6	65	❶	❷	❸		❺		⑦			■	1
A10021225601	HFC 1225.06	Z1	WRC 1225	12	25	6	65						⑥		❽		■	1
A10021225602	HFC 1225.06	Z2	WRC 1225	12	25	6	65	①				❺	⑥		❽		■	1

Shape C, Cylindrical round nose

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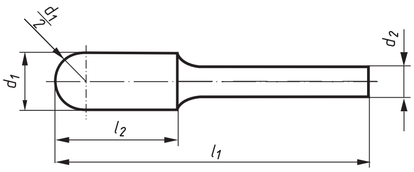
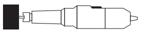
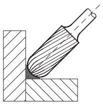


Ordering example: A10020210305

Further dimensions, cuts and shank lengths on request





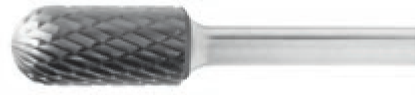
PG 1

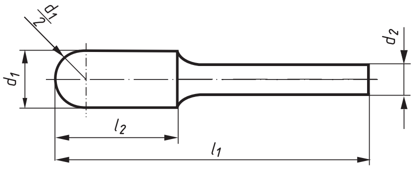
Product number	**Description**	**Cut**	**similar to DIN 8033**	**d$_1$ mm**	**l$_2$ mm**	**d$_2$ mm**	**l$_1$ mm**	**recommended for** Information on page 438										📦
A10021225603	HFC 1225.06	Z3	WRC 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10021225604	HFC 1225.06	Z4	WRC 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1
A10021225605	HFC 1225.06	Z5	WRC 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10021225606	HFC 1225.06	Z6	WRC 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1
A10021225608	HFC 1225.06	Z7 Steel	WRC 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10021225609	HFC 1225.06	Z9 Alu	WRC 1225	12	25	6	65						❻		❽		■	1
A10021225620	HFC 1225.06	Z42 Inox/Steel	WRC 1225	12	25	6	65	❶	②	③	❹						■	1
A10021225621	HFC 1225.06	Cast	WRC 1225	12	25	6	65					❺					■	1
A10021225803	HFC 1225.08	Z3	WRC 1225	12	25	8	65	❶	❷	❸	④			⑦			■	1
A10021225808	HFC 1225.08	Z7 Steel	WRC 1225	12	25	8	65	❶	❷	❸		❺		⑦			■	1
A10021225809	HFC 1225.08	Z9 Alu	WRC 1225	12	25	8	65						❻		❽		■	1
A10021625603	HFC 1625.06	Z3	WRC 1625	16	25	6	65	❶	❷	❸	④			⑦			■	1
A10021625608	HFC 1625.06	Z7 Steel	WRC 1625	16	25	6	65	❶	❷	❸		❺		⑦			■	1
A10021625609	HFC 1625.06	Z9 Alu	WRC 1625	16	25	6	65						❻		❽		■	1
A10021625803	HFC 1625.08	Z3	WRC 1625	16	25	8	65	❶	❷	❸	④			⑦			■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

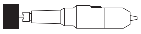
Shape C, Cylindrical round nose BASE-X

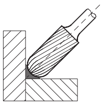
● ● ● ★☆☆





Ordering example: A10020313322



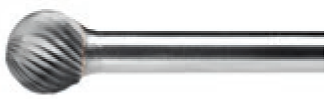


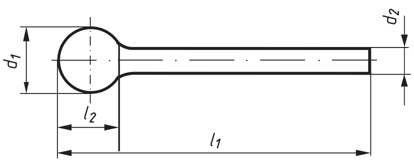
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										
A10020313322	HFC 0313.03 BASE-X	ZX	WRC 0313	3	13	3	40	❶	❷	❸	④	❺		⑦			■	10
A10020613322	HFC 0613.03 BASE-X	ZX	WRC 0613	6	13	3	43	❶	❷	❸	④	❺		⑦			■	10
A10020616622	HFC 0616.06 BASE-X	ZX	WRC 0616	6	16	6	50	❶	❷	❸	④	❺		⑦			■	10
A5002061662214	HFC 0616.06 BASE-X	ZX	WRC 0616	6	16	1/4"	50	❶	❷	❸	④	❺		⑦			■	10
A10020820622	HFC 0820.06 BASE-X	ZX	WRC 0820	8	20	6	60	❶	❷	❸	④	❺		⑦			■	10
A5002082062214	HFC 0820.06 BASE-X	ZX	WRC 0820	8	20	1/4"	60	❶	❷	❸	④	❺		⑦			■	10
A10020820622150	HFC 0820.06 BASE-X	ZX	WRC 0820	8	20	6	170	❶	❷	❸	④	❺		⑦			■	1
A10021020622	HFC 1020.06 BASE-X	ZX	WRC 1020	10	20	6	60	❶	❷	❸	④	❺		⑦			■	10
A5002102062214	HFC 1020.06 BASE-X	ZX	WRC 1020	10	20	1/4"	60	❶	❷	❸	④	❺		⑦			■	10
A10021020622150	HFC 1020.06 BASE-X	ZX	WRC 1020	10	20	6	170	❶	❷	❸	④	❺		⑦			■	1
A10021225622	HFC 1225.06 BASE-X	ZX	WRC 1225	12	25	6	65	❶	❷	❸	④	❺		⑦			■	5
A5002122562214	HFC 1225.06 BASE-X	ZX	WRC 1225	12	25	1/4"	65	❶	❷	❸	④	❺		⑦			■	5
A10021225622150	HFC 1225.06 BASE-X	ZX	WRC 1225	12	25	6	175	❶	❷	❸	④	❺					■	1

Shape D, Spherical

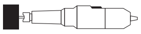
● ● ● ● ● ● ★★☆

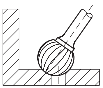




Ordering example: A10030303302

Further dimensions, cuts and shank lengths on request



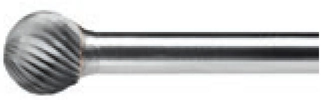


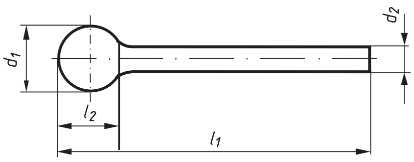
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										
A10030303302	HFD 0302.03	Z2	KUD 0302	3	2	3	40	①				❺	⑥		❽		■	1
A10030303303	HFD 0302.03	Z3	KUD 0302	3	2	3	40	❶	❷	❸	④			⑦			■	1
A10030303304	HFD 0302.03	Z4	KUD 0302	3	2	3	40		❷	❸	❹			❼	⑧		■	1
A10030303305	HFD 0302.03	Z5	KUD 0302	3	2	3	40	❶	❷	❸	④			⑦			■	1
A10030303308	HFD 0302.03	Z7 Steel	KUD 0302	3	2	3	40	❶	❷	❸		❺		⑦			■	1
A10030403309	HFD 0403.03	Z9 Alu	KUD 0403	4	3	3	34						❻		❽		■	1
A100304043050001	HFD 0403.03	Z5	KUD 0403	4	3	3	34	❶	❷	❸	④			⑦			■	1
A100304043080001	HFD 0403.03	Z7 Steel	KUD 0403	4	3	3	34	❶	❷	❸		❺		⑦			■	1
A10030404603	HFD 0403.06	Z3	KUD 0403	4	3	6	50	❶	❷	❸	④			⑦			■	1

Shape D, Spherical

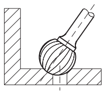
● ● ● ● ● ● ★★☆





Ordering example: A10030303302

Further dimensions, cuts and shank lengths on request



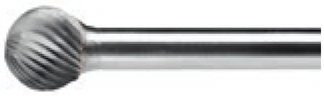
PG 1

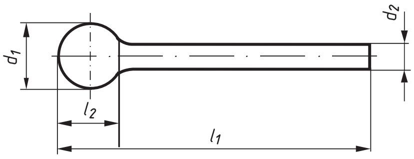
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										📦
A10030404604	HFD 0403.06	Z4	KUD 0403	4	3	6	50		❷	❸	❹			❼	⑧		■	1
A10030404608	HFD 0403.06	Z7 Steel	KUD 0403	4	3	6	50	❶	❷	❸		❺		⑦			■	1
A10030605609	HFD 0605.06	Z9 Alu	KUD 0605	6	5	6	50						❻		❽		■	1
A10030605620	HFD 0605.06	Z42 Inox/Steel	KUD 0605	6	5	6	50	❶	②	③	❹						■	1
A10030605621	HFD 0605.06	Cast	KUD 0605	6	5	6	50					❺					■	1
A10030606305	HFD 0605.03	Z5	KUD 0605	6	5	3	35	❶	❷	❸	④			⑦			■	1
A10030606308	HFD 0605.03	Z7 Steel	KUD 0605	6	5	3	35	❶	❷	❸		❺		⑦			■	1
A10030606603	HFD 0605.06	Z3	KUD 0605	6	5	6	50	❶	❷	❸	④			⑦			■	1
A10030606604	HFD 0605.06	Z4	KUD 0605	6	5	6	50		❷	❸	❹			❼	⑧		■	1
A10030606605	HFD 0605.06	Z5	KUD 0605	6	5	6	50	❶	❷	❸	④			⑦			■	1
A10030606608	HFD 0605.06	Z7 Steel	KUD 0605	6	5	6	50	❶	❷	❸		❺		⑦			■	1
A10030807620	HFD 0807.06	Z42 Inox/Steel	KUD 0807	8	7	6	47	❶	②	③	❹						■	1
A10030807621	HFD 0807.06	Cast	KUD 0807	8	7	6	47					❺					■	1
A10030808603	HFD 0807.06	Z3	KUD 0807	8	7	6	47	❶	❷	❸	④			⑦			■	1
A10030808604	HFD 0807.06	Z4	KUD 0807	8	7	6	47		❷	❸	❹			❼	⑧		■	1
A10030808605	HFD 0807.06	Z5	KUD 0807	8	7	6	47	❶	❷	❸	④			⑦			■	1
A10030808608	HFD 0807.06	Z7 Steel	KUD 0807	8	7	6	47	❶	❷	❸		❺		⑦			■	1
A10031009620	HFD 1009.06	Z42 Inox/Steel	KUD 1009	10	9	6	49	❶	②	③	❹						■	1
A10031009621	HFD 1009.06	Cast	KUD 1009	10	9	6	49					❺					■	1
A10031010603	HFD 1009.06	Z3	KUD 1009	10	9	6	49	❶	❷	❸	④			⑦			■	1
A10031010604	HFD 1009.06	Z4	KUD 1009	10	9	6	49		❷	❸	❹			❼	⑧		■	1
A10031010605	HFD 1009.06	Z5	KUD 1009	10	9	6	49	❶	❷	❸	④			⑦			■	1
A10031010608	HFD 1009.06	Z7 Steel	KUD 1009	10	9	6	49	❶	❷	❸		❺		⑦			■	1
A10031210620	HFD 1210.06	Z42 Inox/Steel	KUD 1210	12	10	6	51	❶	②	③	❹						■	1
A10031210621	HFD 1210.06	Cast	KUD 1210	12	10	6	51					❺					■	1
A10031210808	HFD 1210.08	Z7 Steel	KUD 1210	12	10	8	51	❶	❷	❸		❺		⑦			■	1
A10031212603	HFD 1210.06	Z3	KUD 1210	12	10	6	51	❶	❷	❸	④			⑦			■	1
A10031212604	HFD 1210.06	Z4	KUD 1210	12	10	6	51		❷	❸	❹			❼	⑧		■	1
A10031212605	HFD 1210.06	Z5	KUD 1210	12	10	6	51	❶	❷	❸	④			⑦			■	1
A10031212608	HFD 1210.06	Z7 Steel	KUD 1210	12	10	6	51	❶	❷	❸		❺		⑦			■	1
A10031212609	HFD 1210.06	Z9 Alu	KUD 1210	12	10	6	50						❻		❽		■	1
A10031212804	HFD 1210.08	Z4	KUD 1210	12	10	8	51		❷	❸	❹			❼	⑧		■	1
A10031616603	HFD 1614.06	Z3	KUD 1614	16	14	6	54	❶	❷	❸	④			⑦			■	1
A10031616604	HFD 1614.06	Z4	KUD 1614	16	14	6	54		❷	❸	❹			❼	⑧		■	1
A10031616608	HFD 1614.06	Z7 Steel	KUD 1614	16	14	6	54	❶	❷	❸		❺		⑦			■	1
A10031616609	HFD 1614.06	Z9 Alu	KUD 1614	16	14	6	54						❻		❽		■	1
A10031616803	HFD 1614.08	Z3	KUD 1614	16	14	8	54	❶	❷	❸	④			⑦			■	1

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Shape D, Spherical

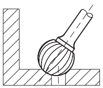
● ● ● ● ● ● ★★☆





Ordering example: A10030303302

Further dimensions, cuts and shank lengths on request

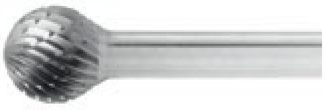


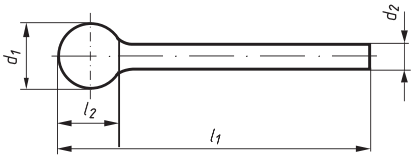
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10031616809	HFD 1614.08	Z9 Alu	KUD 1614	16	14	8	54						❻		❽		■	1
A10032020603	HFD 2018.06	Z3	KUD 2018	20	18	6	58	❶	❷	❸	④			⑦			■	1
A10032020608	HFD 2018.06	Z7 Steel	KUD 2018	20	18	6	58	❶	❷	❸		❺		⑦			■	1
A10032020803	HFD 2018.08	Z3	KUD 2018	20	18	8	58	❶	❷	❸	④			⑦			■	1

Shape D, Spherical BASE-X

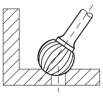
● ● ● ★☆☆





Ordering example: A10030403322

Further dimensions, cuts and shank lengths on request

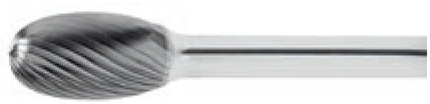


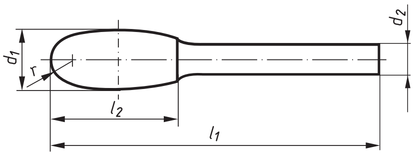
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10030403322	HFD 0403.03 BASE-X	ZX	KUD 0403	4	3	3	34	❶	❷	❸	④	❺		⑦			■	10
A10030605322	HFD 0605.03 BASE-X	ZX	KUD 0605	6	5	3	35	❶	❷	❸	④	❺		⑦			■	10
A10030807622	HFD 0807.06 BASE-X	ZX	KUD 0807	8	7	6	47	❶	❷	❸	④	❺		⑦			■	10
A10030807622150	HFD 0807.06 BASE-X	ZX	KUD 0807	8	7	6	157	❶	❷	❸	④	❺		⑦			■	1
A10031009622	HFD 1009.06 BASE-X	ZX	KUD 1009	10	9	6	49	❶	❷	❸	④	❺		⑦			■	10
A10031009622150	HFD 1009.06 BASE-X	ZX	KUD 1009	10	9	6	159	❶	❷	❸	④	❺		⑦			■	1
A5003100962214	HFD 1009.06 BASE-X	ZX	KUD 1009	10	9	1/4"	49	❶	❷	❸	④	❺		⑦			■	10
A10031210622	HFD 1210.06 BASE-X	ZX	KUD 1210	12	10	6	51	❶	❷	❸	④	❺		⑦			■	5
A5003121062214	HFD 1210.06 BASE-X	ZX	KUD 1210	12	10	1/4"	51	❶	❷	❸	④	❺		⑦			■	5

Shape E, Oval

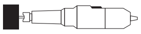
● ● ● ● ● ● ★★☆

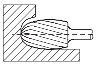




Ordering example: A10060307303

Further dimensions, cuts and shank lengths on request





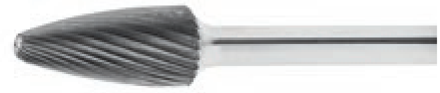
PG 1

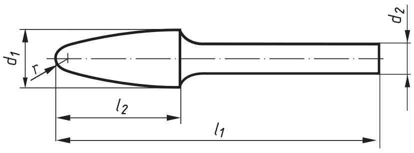
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										
A10060307303	HFE 0307.03	Z3	TRE 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10060307305	HFE 0307.03	Z5	TRE 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10060307308	HFE 0307.03	Z7 Steel	TRE 0307	3	7	3	40	❶	❷	❸		❺		⑦			■	1
A10060610305	HFE 0610.03	Z5	TRE 0610	6	10	3	40	❶	❷	❸	④			⑦			■	1
A10060610308	HFE 0610.03	Z7 Steel	TRE 0610	6	10	3	40	❶	❷	❸		❺		⑦			■	1
A10060610603	HFE 0610.06	Z3	TRE 0610	6	10	6	50	❶	❷	❸	④			⑦			■	1
A10060610604	HFE 0610.06	Z4	TRE 0610	6	10	6	50		❷	❸	❹			❼	⑧		■	1
A10060610608	HFE 0610.06	Z7 Steel	TRE 0610	6	10	6	50	❶	❷	❸		❺		⑦			■	1
A10060610621	HFE 0610.06	Cast	TRE 0610	6	10	6	50					❺					■	1
A10060813603	HFE 0813.06	Z3	TRE 0813	8	13	6	53	❶	❷	❸	④			⑦			■	1
A10060813604	HFE 0813.06	Z4	TRE 0813	8	13	6	53		❷	❸	❹			❼	⑧		■	1
A10060813608	HFE 0813.06	Z7 Steel	TRE 0813	8	13	6	53	❶	❷	❸		❺		⑦			■	1
A10060813621	HFE 0813.06	Cast	TRE 0813	8	13	6	53					❺					■	1
A10061016621	HFE 1016.06	Cast	TRE 1016	10	16	6	56					❺					■	1
A10061220603	HFE 1220.06	Z3	TRE 1220	12	20	6	60	❶	❷	❸	④			⑦			■	1
A10061220604	HFE 1220.06	Z4	TRE 1220	12	20	6	60		❷	❸	❹			❼	⑧		■	1
A10061220608	HFE 1220.06	Z7 Steel	TRE 1220	12	20	6	60	❶	❷	❸		❺		⑦			■	1
A10061220621	HFE 1220.06	Cast	TRE 1220	12	20	6	60					❺					■	1
A10061225803	HFE 1225.08	Z3	TRE 1225	12	25	8	65	❶	❷	❸	④			⑦			■	1
A10061225809	HFE 1225.08	Z9 Alu	TRE 1225	12	25	8	65						❻		❽		■	1
A10061625608	HFE 1625.06	Z7 Steel	TRE 1625	16	25	6	65	❶	❷	❸		❺		⑦			■	1
A10061625803	HFE 1625.08	Z3	TRE 1625	16	25	8	65	❶	❷	❸	④			⑦			■	1
A10061625809	HFE 1625.08	Z9 Alu	TRE 1625	16	25	8	65						❻		❽		■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Shape F, Arch round nose

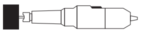
● ● ● ● ● ● ★★☆

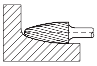




Ordering example: A10100307303

Further dimensions, cuts and shank lengths on request



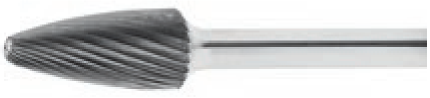


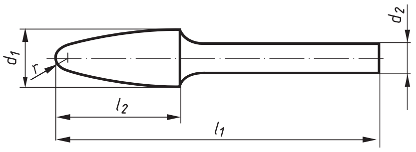
PG 1

Product number	**Description**	**Cut**	**similar to DIN 8033**	**d$_1$ mm**	**l$_2$ mm**	**d$_2$ mm**	**l$_1$ mm**	**recommended for** Information on page 438										
A10100307303	HFF 0307.03	Z3	RBF 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10100307304	HFF 0307.03	Z4	RBF 0307	3	7	3	40		❷	❸	❹			❼	⑧		■	1
A10100307305	HFF 0307.03	Z5	RBF 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10100313305	HFF 0313.03	Z5	RBF 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10100313308	HFF 0313.03	Z7 Steel	RBF 0313	3	13	3	40	❶	❷	❸		❺		⑦			■	1
A10100313309	HFF 0313.03	Z9 Alu	RBF 0313	3	13	3	40						❻		❽		■	1
A10100613305	HFF 0613.03	Z5	RBF 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10100613308	HFF 0613.03	Z7 Steel	RBF 0613	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A10100618603	HFF 0618.06	Z3	RBF 0618	6	18	6	50	❶	❷	❸	④			⑦			■	1
A10100618604	HFF 0618.06	Z4	RBF 0618	6	18	6	50		❷	❸	❹			❼	⑧		■	1
A10100618605	HFF 0618.06	Z5	RBF 0618	6	18	6	50	❶	❷	❸	④			⑦			■	1
A10100618608	HFF 0618.06	Z7 Steel	RBF 0618	6	18	6	50	❶	❷	❸		❺		⑦			■	1
A10100618609	HFF 0618.06	Z9 Alu	RBF 0618	6	18	6	50						❻		❽		■	1
A10100618620	HFF 0618.06	Z42 Inox/Steel	RBF 0618	6	18	6	50	❶	②	③	❹						■	1
A10100618621	HFF 0618.06	Cast	RBF 0618	6	18	6	50					❺					■	1
A10100820603	HFF 0820.06	Z3	––	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10100820608	HFF 0820.06	Z7 Steel	––	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10100820620	HFF 0820.06	Z42 Inox/Steel	––	8	20	6	60	❶	②	③	❹						■	1
A10100820621	HFF 0820.06	Cast	––	8	20	6	60					❺					■	1
A10101020603	HFF 1020.06	Z3	RBF 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10101020604	HFF 1020.06	Z4	RBF 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10101020606	HFF 1020.06	Z6	RBF 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10101020608	HFF 1020.06	Z7 Steel	RBF 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10101020620	HFF 1020.06	Z42 Inox/Steel	RBF 1020	10	20	6	60	❶	②	③	❹						■	1
A10101020621	HFF 1020.06	Cast	RBF 1020	10	20	6	60					❺					■	1
A10101225601	HFF 1225.06	Z1	RBF 1225	12	25	6	65						⑥		❽		■	1
A10101225603	HFF 1225.06	Z3	RBF 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10101225604	HFF 1225.06	Z4	RBF 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1
A10101225608	HFF 1225.06	Z7 Steel	RBF 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10101225609	HFF 1225.06	Z9 Alu	RBF 1225	12	25	6	65						❻		❽		■	1
A10101225620	HFF 1225.06	Z42 Inox/Steel	RBF 1225	12	25	6	65	❶	②	③	❹						■	1
A10101225621	HFF 1225.06	Cast	RBF 1225	12	25	6	65					❺					■	1
A10101225803	HFF 1225.08	Z3	RBF 1225	12	25	8	65	❶	❷	❸	④			⑦			■	1
A10101225808	HFF 1225.08	Z7 Steel	RBF 1225	12	25	8	65	❶	❷	❸		❺		⑦			■	1
A10101225809	HFF 1225.08	Z9 Alu	RBF 1225	12	25	8	65						❻		❽		■	1
A10101230603	HFF 1230.06	Z3	RBF 1230	12	30	6	70	❶	❷	❸	④			⑦			■	1
A10101230608	HFF 1230.06	Z7 Steel	RBF 1230	12	30	6	70	❶	❷	❸		❺		⑦			■	1

Shape F, Arch round nose

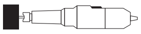
● ● ● ● ● ● ★★☆

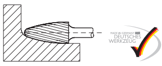




Ordering example: A10100307303

Further dimensions, cuts and shank lengths on request



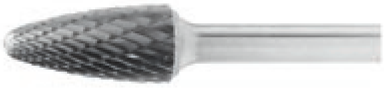


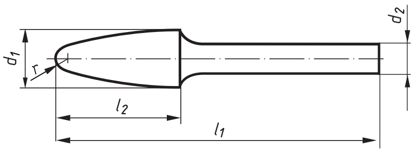
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		
A10101630608	HFF 1630.06	Z7 Steel	RBF 1630	16	30	6	70	❶ ❷ ❸ ❺ ⑦	■	1
A10101630609	HFF 1630.06	Z9 Alu	RBF 1630	16	30	6	70	❻ ❽	■	1
A10101630803	HFF 1630.08	Z3	RBF 1630	16	30	8	70	❶ ❷ ❸ ④ ⑦	■	1
A10101630809	HFF 1630.08	Z9 Alu	RBF 1630	16	30	8	70	❻ ❽	■	1

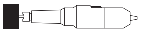
Shape F, Arch round nose BASE-X

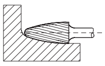
● ● ● ★☆☆





Ordering example: A10100313322





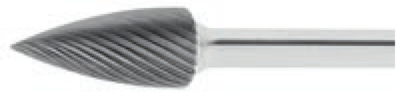
PG 1

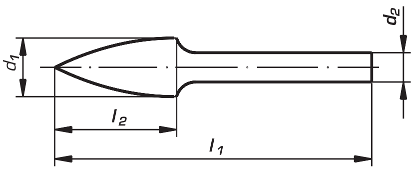
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438		
A10100313322	HFF 0313.03 BASE-X	ZX	RBF 0313	3	13	3	40	❶ ❷ ❸ ④ ❺ ⑦	■	10
A10100618622	HFF 0618.06 BASE-X	ZX	RBF 0618	6	18	6	50	❶ ❷ ❸ ④ ❺ ⑦	■	10
A10100820622	HFF 0820.06 BASE-X	ZX	—	8	20	6	60	❶ ❷ ❸ ④ ❺ ⑦	■	10
A10100820622150	HFF 0820.06 BASE-X	ZX		8	20	6	170	❶ ❷ ❸ ④ ❺ ⑦	■	1
A5010082062214	HFF 0820.06 BASE-X	ZX	—	8	20	1/4"	60	❶ ❷ ❸ ④ ❺ ⑦	■	10
A10101020622	HFF 1020.06 BASE-X	ZX	RBF 1020	10	20	6	60	❶ ❷ ❸ ④ ❺ ⑦	■	10
A5010102062214	HFF 1020.06 BASE-X	ZX	RBF 1020	10	20	1/4"	60	❶ ❷ ❸ ④ ❺ ⑦	■	10
A10101225622	HFF 1225.06 BASE-X	ZX	RBF 1225	12	25	6	65	❶ ❷ ❸ ④ ❺ ⑦	■	5
A5010122562214	HFF 1225.06 BASE-X	ZX	RBF 1225	12	25	1/4"	65	❶ ❷ ❸ ④ ❺ ⑦	■	5
A10101225622150	HFF 1225.06 BASE-X	ZX		12	25	6	175	❶ ❷ ❸ ④ ❺ ⑦	■	1

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Shape G, Arch pointed nose

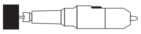
● ● ● ● ● ● ★★☆

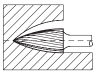




Ordering example: A10040307305

Further dimensions, cuts and shank lengths on request



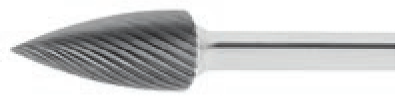


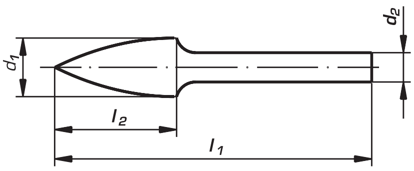
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438										📦
A10040307305	HFG 0307.03	Z5	SPG 0307	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10040307308	HFG 0307.03	Z7 Steel	SPG 0307	3	7	3	40	❶	❷	❸		❺		⑦			■	1
A10040313303	HFG 0313.03	Z3	SPG 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10040313304	HFG 0313.03	Z4	SPG 0313	3	13	3	40		❷	❸	❹			❼	⑧		■	1
A10040313305	HFG 0313.03	Z5	SPG 0313	3	13	3	40	❶	❷	❸	④			⑦			■	1
A10040313308	HFG 0313.03	Z7 Steel	SPG 0313	3	13	3	40	❶	❷	❸		❺		⑦			■	1
A10040313309	HFG 0313.03	Z9 Alu	SPG 0313	3	13	3	40						❻		❽		■	1
A10040613305	HFG 0613.03	Z5	SPG 0613	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10040613308	HFG 0613.03	Z7 Steel	SPG 0613	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A10040618601	HFG 0618.06	Z1	SPG 0618	6	18	6	50						⑥		❽		■	1
A10040618602	HFG 0618.06	Z2	SPG 0618	6	18	6	50	①				❺	⑥		❽		■	1
A10040618603	HFG 0618.06	Z3	SPG 0618	6	18	6	50	❶	❷	❸	④			⑦			■	1
A10040618604	HFG 0618.06	Z4	SPG 0618	6	18	6	50		❷	❸	❹			❼	⑧		■	1
A10040618605	HFG 0618.06	Z5	SPG 0618	6	18	6	50	❶	❷	❸	④			⑦			■	1
A10040618608	HFG 0618.06	Z7 Steel	SPG 0618	6	18	6	50	❶	❷	❸		❺		⑦			■	1
A10040618620	HFG 0618.06	Z42 Inox/Steel	SPG 0618	6	18	6	50	❶	②	③	❹						■	1
A10040618621	HFG 0618.06	Cast	SPG 0618	6	18	6	50					❺					■	1
A10040820603	HFG 0820.06	Z3	---	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10040820608	HFG 0820.06	Z7 Steel	---	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10040820620	HFG 0820.06	Z42 Inox/Steel	---	8	20	6	60	❶	②	③	❹						■	1
A10040820621	HFG 0820.06	Cast	---	8	20	6	60					❺					■	1
A10041020603	HFG 1020.06	Z3	SPG 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10041020604	HFG 1020.06	Z4	SPG 1020	10	20	6	60		❷	❸	❹			❼	⑧		■	1
A10041020605	HFG 1020.06	Z5	SPG 1020	10	20	6	60	❶	❷	❸	④			⑦			■	1
A10041020608	HFG 1020.06	Z7 Steel	SPG 1020	10	20	6	60	❶	❷	❸		❺		⑦			■	1
A10041020620	HFG 1020.06	Z42 Inox/Steel	SPG 1020	10	20	6	60	❶	②	③	❹						■	1
A10041020621	HFG 1020.06	Cast	SPG 1020	10	20	6	60					❺					■	1
A10041220603	HFG 1220.06	Z3	SPG 1220	12	20	6	60	❶	❷	❸	④			⑦			■	1
A10041220608	HFG 1220.06	Z7 Steel	SPG 1220	12	20	6	60	❶	❷	❸		❺		⑦			■	1
A10041225602	HFG 1225.06	Z2	SPG 1225	12	25	6	65	①				❺	⑥		❽		■	1
A10041225603	HFG 1225.06	Z3	SPG 1225	12	25	6	65	❶	❷	❸	④			⑦			■	1
A10041225604	HFG 1225.06	Z4	SPG 1225	12	25	6	65		❷	❸	❹			❼	⑧		■	1
A10041225608	HFG 1225.06	Z7 Steel	SPG 1225	12	25	6	65	❶	❷	❸		❺		⑦			■	1
A10041225620	HFG 1225.06	Z42 Inox/Steel	SPG 1225	12	25	6	65	❶	②	③	❹						■	1
A10041225621	HFG 1225.06	Cast	SPG 1225	12	25	6	65					❺					■	1
A10041225803	HFG 1225.08	Z3	SPG 1225	12	25	8	65	❶	❷	❸	④			⑦			■	1
A10041230602	HFG 1230.06	Z2	SPG 1230	12	30	6	70	①				❺	⑥		❽		■	1

Shape G, Arch pointed nose

● ● ● ● ● ● ★★☆





Ordering example: A10040307305

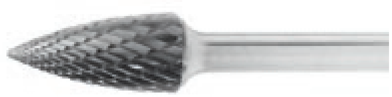
Further dimensions, cuts and shank lengths on request

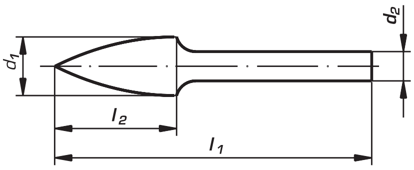
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438									📦
A10041230603	HFG 1230.06	Z3	SPG 1230	12	30	6	70	❶	❷	❸	④			⑦		■	1
A10041230604	HFG 1230.06	Z4	SPG 1230	12	30	6	70		❷	❸	❹			❼	⑧	■	1
A10041230605	HFG 1230.06	Z5	SPG 1230	12	30	6	70	❶	❷	❸	④			⑦		■	1
A10041230608	HFG 1230.06	Z7 Steel	SPG 1230	12	30	6	70	❶	❷	❸		❺		⑦		■	1
A10041630603	HFG 1630.06	Z3	SPG 1630	16	30	6	70	❶	❷	❸	④			⑦		■	1
A10041630604	HFG 1630.06	Z4	SPG 1630	16	30	6	70		❷	❸	❹			❼	⑧	■	1
A10041630608	HFG 1630.06	Z7 Steel	SPG 1630	16	30	6	70	❶	❷	❸		❺		⑦		■	1
A10041630803	HFG 1630.08	Z3	SPG 1630	16	30	8	70	❶	❷	❸	④			⑦		■	1

Shape G, Arch pointed nose BASE-X

● ● ● ★☆☆





Ordering example: A10040313322

PG 1

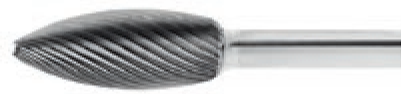
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438									📦
A10040313322	HFG 0313.03 BASE-X	ZX	SPG 0313	3	13	3	40	❶	❷	❸	④	❺		⑦		■	10
A10040613322	HFG 0613.03 BASE-X	ZX	SPG 0613	6	13	3	43	❶	❷	❸	④	❺		⑦		■	10
A10040820622	HFG 0820.06 BASE-X	ZX	SPG 0820	8	20	6	60	❶	❷	❸	④	❺		⑦		■	10
A5004082062214	HFG 0820.06 BASE-X	ZX	SPG 8020	8	20	1/4"	60	❶	❷	❸	④	❺		⑦		■	10
A10041020622	HFG 1020.06 BASE-X	ZX	SPG 1020	10	20	6	60	❶	❷	❸	④	❺		⑦		■	10
A5004102062214	HFG 1020.06 BASE-X	ZX	SPG 1020	10	20	1/4"	60	❶	❷	❸	④	❺		⑦		■	10
A10041225622	HFG 1225.06 BASE-X	ZX	SPG 1225	12	25	6	65	❶	❷	❸	④	❺		⑦		■	5
A5004122562214	HFG 1225.06 BASE-X	ZX	SPG 1225	12	25	1/4"	65	❶	❷	❸	④	❺		⑦		■	5
A10041230622	HFG 1230.06 BASE-X	ZX	SPG 1230	12	30	6	65	❶	❷	❸	④	❺		⑦		■	5
A5004123062214	HFG 1230.06 BASE-X	ZX	SPG 1230	12	30	1/4"	70	❶	❷	❸	④	❺		⑦		■	5

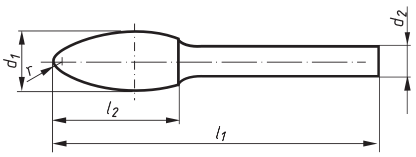
● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Shape H, Flame

● ● ● ● ● ●

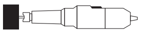
★★☆

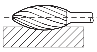




Ordering example: A10090307305

Further dimensions, cuts and shank lengths on request





PG 1

Product number	**Description**	**Cut**	**d_1 mm**	**l_2 mm**	**d_2 mm**	**l_1 mm**	**recommended for** Information on page 438										📦
A10090307305	HFH 0307.03	Z5	3	7	3	40	❶	❷	❸	④			⑦			■	1
A10090613301	HFH 0613.03	Z1	6	13	3	43						⑥		❽		■	1
A10090613302	HFH 0613.03	Z2	6	13	3	43	①				❺	⑥		❽		■	1
A10090613303	HFH 0613.03	Z3	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10090613304	HFH 0613.03	Z4	6	13	3	43		❷	❸	❹			❼	⑧		■	1
A10090613305	HFH 0613.03	Z5	6	13	3	43	❶	❷	❸	④			⑦			■	1
A10090613308	HFH 0613.03	Z7 Steel	6	13	3	43	❶	❷	❸		❺		⑦			■	1
A10090820602	HFH 0820.06	Z2	8	20	6	60	①				❺	⑥		❽		■	1
A10090820603	HFH 0820.06	Z3	8	20	6	60	❶	❷	❸	④			⑦			■	1
A10090820604	HFH 0820.06	Z4	8	20	6	60		❷	❸	❹			❼	⑧		■	1
A10090820608	HFH 0820.06	Z7 Steel	8	20	6	60	❶	❷	❸		❺		⑦			■	1
A10091230603	HFH 1230.06	Z3	12	30	6	70	❶	❷	❸	④			⑦			■	1
A10091230604	HFH 1230.06	Z4	12	30	6	70		❷	❸	❹			❼	⑧		■	1
A10091230608	HFH 1230.06	Z7 Steel	12	30	6	70	❶	❷	❸		❺		⑦			■	1
A10091230803	HFH 1230.08	Z3	12	30	8	70	❶	❷	❸	④			⑦			■	1
A10091635608	HFH 1635.06	Z7 Steel	16	35	6	75	❶	❷	❸		❺		⑦			■	1

Shape I, Internal burr with multi-purpose cut

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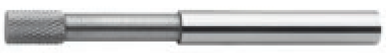
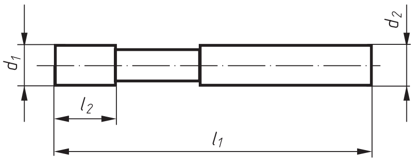
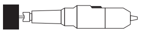
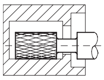




Ordering example: A10010204300

Further dimensions, cuts and shank lengths on request





PG 1

Product number	**Description**	**Cut**	**d_1 mm**	**l_2 mm**	**d_2 mm**	**l_1 mm**	**recommended for** Information on page 438										📦
A10010204300	HFI 0204.03	ZI	2,5	4	3	40			❸	❹			❼			■	1
A10010408300	HFI 0408.03	ZI	4	8	3	50			❸	❹			❼			■	1
A10010810600	HFI 0810.06	ZI	8	10	6	65			❸	❹			❼			■	1

Shape J, Pointed nose

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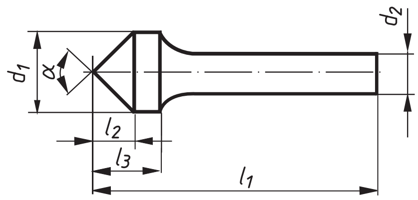
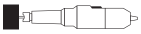
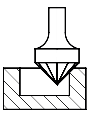


Ordering example: A10080660603

Further dimensions, cuts and shank lengths on request



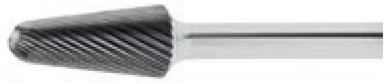


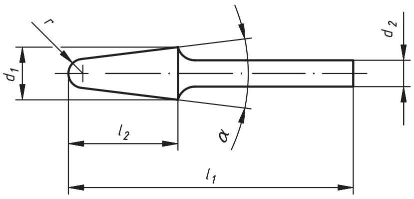
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	l3 mm	d_2 mm	l_1 mm	α	**recommended for** Information on page 438										📦
A10080660603	HFJ 0605.06	Z3	KSJ 0605	6	5	-	6	50	60°	❶	❷	❸	④			⑦			■	1
A10081060603	HFJ 1013.06	Z3	KSJ 1008	10	9	13	6	53	60°	❶	❷	❸	④			⑦			■	1
A10081090603	HFJ 1010.06	Z3	KSK 1005	10	5	10	6	50	90°	❶	❷	❸	④			⑦			■	1
A10081660603	HFJ 1616.06	Z3	KSJ 1613	16	14	16	6	56	60°	❶	❷	❸	④			⑦			■	1
A10081690603	HFJ 1613.06	Z3	KSK 1608	16	8	13	6	53	90°	❶	❷	❸	④			⑦			■	1
A10081690803	HFJ 1613.08	Z3	KSK 1608	16	8	13	8	53	90°	❶	❷	❸	④			⑦			■	1

Shape L, Conical round nose

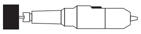
● ● ● ● ● ★★☆

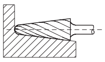




Ordering example: A10070820603

Further dimensions, cuts and shank lengths on request





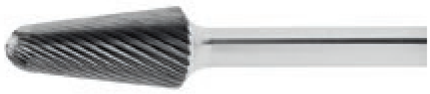
PG 1

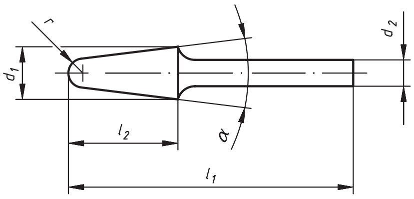
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	r mm	α	**recommended for** Information on page 438										📦
A10070820603	HFL 0820.06	Z3	- - -	8	20	6	60	1,5	14°	❶	❷	❸	④			⑦			■	1
A10070820608	HFL 0820.06	Z7 Steel	- - -	8	20	6	60	1,5	14°	❶	❷	❸		❺		⑦			■	1
A10070820609	HFL 0820.06	Z9 Alu	- - -	8	20	6	60	1,5	14°						❻		❽		■	1
A10071020603	HFL 1020.06	Z3	KEL 1020	10	20	6	60	2,9	14°	❶	❷	❸	④			⑦			■	1
A10071020608	HFL 1020.06	Z7 Steel	KEL 1020	10	20	6	60	2,9	14°	❶	❷	❸		❺		⑦			■	1
A10071020609	HFL 1020.06	Z9 Alu	KEL 1020	10	20	6	60	2,9	14°						❻		❽		■	1
A10071225603	HFL 1225.06	Z3	KEL 1225	12	25	6	65	3,3	14°	❶	❷	❸	④			⑦			■	5
A10071225604	HFL 1225.06	Z4	KEL 1225	12	25	6	65	3,3	14°		❷	❸	❹			❼	⑧		■	1
A10071225608	HFL 1225.06	Z7 Steel	KEL 1225	12	25	6	65	3,3	14°	❶	❷	❸		❺		⑦			■	1
A10071225609	HFL 1225.06	Z9 Alu	KEL 1225	12	25	6	65	3,3	14°						❻		❽		■	1
A10071225803	HFL 1225.08	Z3	KEL 1225	12	25	8	65	3,3	14°	❶	❷	❸	④			⑦			■	1
A10071230601	HFL 1230.06	Z1	KEL 1230	12	30	6	70	2,6	14°						⑥		❽		■	1
A10071230603	HFL 1230.06	Z3	KEL 1230	12	30	6	70	2,6	14°	❶	❷	❸	④			⑦			■	1
A10071230604	HFL 1230.06	Z4	KEL 1230	12	30	6	70	2,6	14°		❷	❸	❹			❼	⑧		■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Shape L, Conical round nose

● ● ● ● ● ★★☆





Ordering example: A10070820603

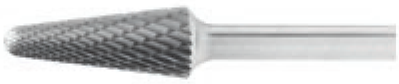
Further dimensions, cuts and shank lengths on request

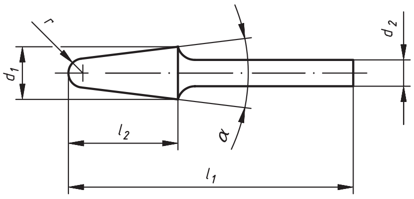
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	r mm	α	recommended for Information on page 438										
A10071230605	HFL 1230.06	Z5	KEL 1230	12	30	6	70	2,6	14°	❶	❷	❸	④			⑦			■	1
A10071230608	HFL 1230.06	Z7 Steel	KEL 1230	12	30	6	70	2,6	14°	❶	❷	❸		❺		⑦			■	1
A10071230609	HFL 1230.06	Z9 Alu	KEL 1230	12	30	6	70	2,6	14°						❻		❽		■	1
A10071230804	HFL 1230.08	Z4	KEL 1230	12	30	8	70	2,6	14°		❷	❸	❹			❼	⑧		■	1
A10071230809	HFL 1230.08	Z9 Alu	KEL 1230	12	30	8	70	2,6	14°						❻		❽		■	1
A10071630603	HFL 1630.06	Z3	KEL 1630	16	30	6	70	4,8	14°	❶	❷	❸	④			⑦			■	1
A10071630608	HFL 1630.06	Z7 Steel	KEL 1630	16	30	6	70	4,8	14°	❶	❷	❸		❺		⑦			■	1
A10072040809	HFL 2040.08	Z9 Alu	KEL 2040	20	40	8	80	5,5	14°						❻		❽		■	1

Shape L, Conical round nose BASE-X

● ● ● ★☆☆





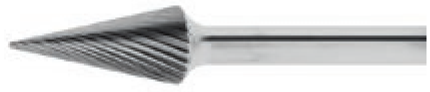
Ordering example: A10071230622

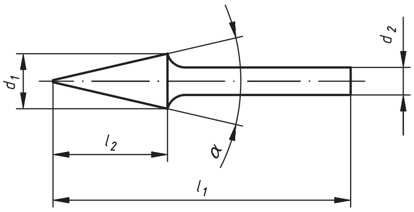
PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	r mm	α	recommended for Information on page 438										
A10071230622	HFL 1230.06 BASE-X	ZX	KEL 1230	12	30	6	70	2,6	14°	❶	❷	❸	④	❺		⑦			■	5
A5007123062214	HFL 1230.06 BASE-X	ZX	KEL 1230	12	30	1/4"	70	2,6	14°	❶	❷	❸	④	❺		⑦			■	5

Shape M, Conical pointed nose

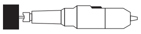
● ● ● ● ● ● ★★☆

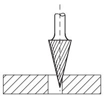




Ordering example: A10050307303

Further dimensions, cuts and shank lengths on request





PG 1

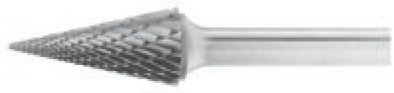
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	recommended for Information on page 438										📦
A10050307303	HFM 0307.03	Z3	SKM 0307	3	7	3	40	➊	➋	➌	④			⑦			■	1
A10050307305	HFM 0307.03	Z5	SKM 0307	3	7	3	40	➊	➋	➌	④			⑦			■	1
A10050307308	HFM 0307.03	Z7 Steel	SKM 0307	3	7	3	40	➊	➋	➌		➎		⑦			■	1
A10050311305	HFM 0311.03	Z5	SKM 0311	3	11	3	40	➊	➋	➌	④			⑦			■	1
A10050311308	HFM 0311.03	Z7 Steel	SKM 0311	3	11	3	40	➊	➋	➌		➎		⑦			■	1
A10050613305	HFM 0613.03	Z5	SKM 0613	6	13	3	43	➊	➋	➌	④			⑦			■	1
A10050613308	HFM 0613.03	Z7 Steel	SKM 0613	6	13	3	43	➊	➋	➌		➎		⑦			■	1
A10050618603	HFM 0618.06	Z3	SKM 0618	6	18	6	50	➊	➋	➌	④			⑦			■	1
A10050618604	HFM 0618.06	Z4	SKM 0618	6	18	6	50		➋	➌	➍			➐	⑧		■	1
A10050618605	HFM 0618.06	Z5	SKM 0618	6	18	6	50	➊	➋	➌	④			⑦			■	1
A10050618608	HFM 0618.06	Z7 Steel	SKM 0618	6	18	6	50	➊	➋	➌		➎		⑦			■	1
A10050618609	HFM 0618.06	Z9 Alu	SKM 0618	6	18	6	50						➏		➑		■	1
A10050618620	HFM 0618.06	Z42 Inox/Steel	SKM 0618	6	18	6	50	➊	②	③	➍						■	1
A10050820603	HFM 0820.06	Z3	- - -	8	20	6	60	➊	➋	➌	④			⑦			■	1
A10050820608	HFM 0820.06	Z7 Steel	- - -	8	20	6	60	➊	➋	➌		➎		⑦			■	1
A10050820620	HFM 0820.06	Z42 Inox/Steel	---	8	20	6	60	➊	②	③	➍						■	1
A10051020603	HFM 1020.06	Z3	SKM 1020	10	20	6	60	➊	➋	➌	④			⑦			■	1
A10051020604	HFM 1020.06	Z4	SKM 1020	10	20	6	60		➋	➌	➍			➐	⑧		■	1
A10051020608	HFM 1020.06	Z7 Steel	SKM 1020	10	20	6	60	➊	➋	➌		➎		⑦			■	1
A10051020620	HFM 1020.06	Z42 Inox/Steel	SKM 1020	10	20	6	60	➊	②	③	➍						■	1
A10051020803	HFM 1020.08	Z3	- - -	10	20	8	60	➊	➋	➌	④			⑦			■	1
A10051225601	HFM 1225.06	Z1	SKM 1225	12	25	6	65						⑥		➑		■	1
A10051225603	HFM 1225.06	Z3	SKM 1225	12	25	6	65	➊	➋	➌	④			⑦			■	1
A10051225604	HFM 1225.06	Z4	SKM 1225	12	25	6	65		➋	➌	➍			➐	⑧		■	1
A10051225608	HFM 1225.06	Z7 Steel	SKM 1225	12	25	6	65	➊	➋	➌		➎		⑦			■	1
A10051225620	HFM 1225.06	Z42 Inox/Steel	SKM 1225	12	25	6	65	➊	②	③	➍						■	1
A10051225803	HFM 1225.08	Z3	SKM 1225	12	25	8	65	➊	➋	➌	④			⑦			■	1

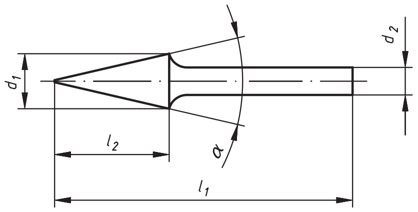
● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Shape M, Conical pointed nose BASE-X

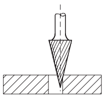
● ● ●

★☆☆





Ordering example: A10050311322



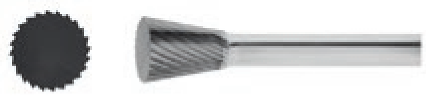
PG 1

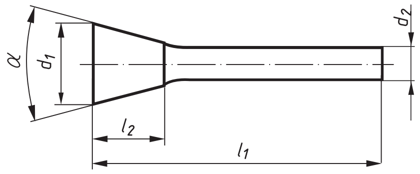
Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	α	recommended for Information on page 438										📦
A10050311322	HFM 0311.03 BASE-X	ZX	SKM 0311	3	11	3	40	14°	❶	❷	❸	④	❺		⑦			■	10
A10050618622	HFM 0618.06 BASE-X	ZX	SKM 0618	6	18	6	50	16°	❶	❷	❸	④	❺		⑦			■	10
A5005061862214	HFM 0618.06 BASE-X	ZX	SKM 0618	6	18	1/4"	50	16°	❶	❷	❸	④	❺		⑦			■	10
A10051020622	HFM 1020.06 BASE-X	ZX	SKM 1020	10	20	6	60	27°	❶	❷	❸	④	❺		⑦			■	10
A5005102062214	HFM 1020.06 BASE-X	ZX	SKM 1020	10	20	1/4"	60	27°	❶	❷	❸	④	❺		⑦			■	10
A10051225622	HFM 1225.06 BASE-X	ZX	SKM 1225	12	25	6	65	26°	❶	❷	❸	④	❺		⑦			■	5
A5005122562214	HFM 1225.06 BASE-X	ZX	SKM 1225	12	25	1/4"	65	26°	❶	❷	❸	④	❺		⑦			■	5

Shape N, Inverted cone

● ● ● ● ●

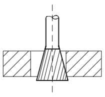
★★☆





Ordering example: A10120307305

Further dimensions, cuts and shank lengths on request

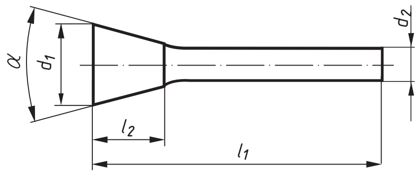


PG 1

Product number	Description	Cut	similar to DIN 8033	d_1 mm	l_2 mm	d_2 mm	l_1 mm	α	recommended for Information on page 438										📦
A10120307305	HFN 0307.03	Z5	WKN 0307	3	7	3	40	10°	❶	❷	❸	④			⑦			■	1
A10120307308	HFN 0307.03	Z7 Steel	WKN 0307	3	7	3	40	10°	❶	❷	❸		❺		⑦			■	1
A10120607305	HFN 0607.03	Z5	WKN 0607	6	7	3	37	10°	❶	❷	❸	④			⑦			■	1
A10120607604	HFN 0607.06	Z4	WKN 0607	6	7	6	50	10°		❷	❸	❹			❼	⑧		■	1
A10120607605	HFN 0607.06	Z5	WKN 0607	6	7	6	50	10°	❶	❷	❸	④			⑦			■	1
A10121013603	HFN 1013.06	Z3	WKN 1013	10	13	6	53	10°	❶	❷	❸	④			⑦			■	1
A10121013604	HFN 1013.06	Z4	WKN 1013	10	13	6	53	10°		❷	❸	❹			❼	⑧		■	1
A10121213603	HFN 1213.06	Z3	WKN 1213	12	13	6	53	20°	❶	❷	❸	④			⑦			■	1
A10121213604	HFN 1213.06	Z4	WKN 1213	12	13	6	53	20°		❷	❸	❹			❼	⑧		■	1
A10121613803	HFN 1613.08	Z3	WKN 1613	16	13	8	53	20°	❶	❷	❸	④			⑦			■	1
A10122013604	HFN 2013.06	Z4	- - -	20	13	6	53	30°	❶	❷	❸		❺		⑦			■	1

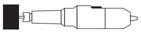
Shape N, Inverted cone with end cut

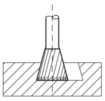
● ● ● ● ● ★★☆



Ordering example: A101203073050001

Further dimensions, cuts and shank lengths on request



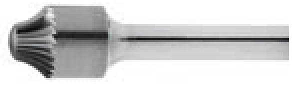


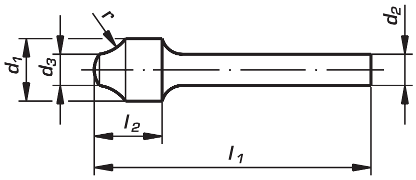
PG 1

Product number	**Description**	**Cut**	**similar to DIN 8033**	**d_1 mm**	**l_2 mm**	**d_2 mm**	**l_1 mm**	**α**	**recommended for** Information on page 438										📦
A101216138030001	HFNS 1613.08	Z3	WKN-S 1613	16	13	8	53	20°	❶	❷	❸		❺		⑦			■	1
A101203073050001	HFNS 0307.03	Z5	WKN-S 0307	3	7	3	40	10°	❶	❷	❸	④			⑦			■	1
A101203073080001	HFNS 0307.03	Z7 Steel	WKN-S 0307	3	7	3	40	10°	❶	❷	❸		❺		⑦			■	1
A101206073050001	HFNS 0607.03	Z5	WKN-S 0607	6	7	3	37	10°	❶	❷	❸	④			⑦			■	1
A101210136030001	HFNS 1013.06	Z3	WKN-S 1013	10	13	6	53	10°	❶	❷	❸	④			⑦			■	1
A101212136030001	HFNS 1213.06	Z3	WKN-S 1213	12	13	6	53	20°	❶	❷	❸	④			⑦			■	1
A101216136040001	HFNS 1613.06	Z4	WKN-S 1613	16	13	6	53	20°		❷	❸	❹			❼	⑧		■	1
A101216138030001	HFNS 1613.08	Z3	WKN-S 1613	16	13	8	53	20°	❶	❷	❸		❺		⑦			■	1

Shape R, Trimming burr (external)

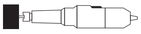
● ● ● ★★☆

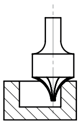




Ordering example: A10140812603

Further dimensions, cuts and shank lengths on request





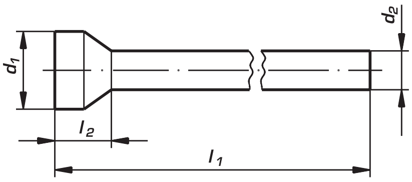
PG 1

Product number	**Description**	**Cut**	**d_1 mm**	**d_3 mm**	**l_2 mm**	**d_2 mm**	**l_1 mm**	**recommended for** Information on page 438										📦
A10140812603	HFR 0812.06	Z3	8	3	12	6	52	❶	❷	❸	④			⑦			■	1
A10141015603	HFR 1015.06	Z3	10	2	15	6	55	❶	❷	❸	④			⑦			■	1
A10141215603	HFR 1215.06	Z3	12	6	15	6	55	❶	❷	❸	④			⑦			■	1
A10141215803	HFR 1215.08	Z3	12	6	15	8	55	❶	❷	❸	④			⑦			■	1
A10141315603	HFR 1315.06	Z3	13	3	15	6	55	❶	❷	❸	④			⑦			■	1
A10141315605	HFR 1315.06	Z5	13	3	15	6	55	❶	❷	❸	④			⑦			■	1
A10141315803	HFR 1315.08	Z3	13	3	15	8	55	❶	❷	❸	④			⑦			■	1

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

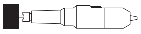
HFT Backward deburring tool

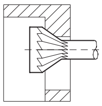
● ● ● ★★☆



Ordering example: A10170504303

Further dimensions, cuts and shank lengths on request





PG 1

Product number	Description	Cut	d_1 mm	l_2 mm	d_2 mm	l_1 mm	**recommended for** Information on page 438		
A10170504303	HFT 0504.03	Z3	5	4	3	40	❶ ❷ ❸ ④ ⑦	■	1
A10170705303	HFT 0705.03	Z3	7	5	3	40	❶ ❷ ❸ ④ ⑦	■	1
A10171006603	HFT 1006.06	Z3	10	6	6	60	❶ ❷ ❸ ④ ⑦	■	1
A10171207603	HFT 1207.06	Z3	12	7	6	65	❶ ❷ ❸ ④ ⑦	■	1
A10171610603	HFT 1610.06	Z3	16	10	6	70	❶ ❷ ❸ ④ ⑦	■	1
A10171610803	HFT 1610.08	Z3	16	10	8	120	❶ ❷ ❸ ④ ⑦	■	1
A10171811803	HFT 1811.08	Z3	18	11	8	120	❶ ❷ ❸ ④ ⑦	■	1

Safety instructions:
Reduced speed for burrs with a total length l_1=120 mm: max. 11.000 rpm.

Applications:

- Reverse deburring of bores at difficult to access areas, for example in pipes, containers and construction components
- Reverse chamfering of bores

Advantages:

- Defined 45° bevel
- For different bore diameters
- Variable chamfer width
- Quick work result

Tool-Sets F10 S3 and F10 S6

● ● ● ● ★★☆

Ordering example: A1039000509

10 pieces

PG 1

Product number	Description	Image	Cut	Shank Ø mm	1 piece each	recommended for Information on page 438									
A10390010	F10 S3		Z7 Steel	3	HFA 0313, HFA 0613, HFC 0313, HFC 0613, HFD 0302, HFD 0605, HFG 0313, HFG 0613, HFM 0613, HFF 0313	❶	❷	❸		❺		⑦		■	1
A1039001006	F10 S6		Z7 Steel	6	HFAS 0616, HFAS 1225, HFC 0616, HFC 1225, HFD 0605, HFD 1210, HFG 0618, HFG 1225, HFF 0820, HFF 1225	❶	❷	❸		❺		⑦		■	1

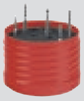
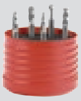
Tool-Sets F5 S3 and F10 S6

● ● ● ● ● ★★☆

Ordering example: A1039000509

5 pieces and 10 pieces

PG 1

Product number	Description	Image	Cut	Shank Ø mm	1 piece each	recommended for Information on page 438									
A1039001020	Assortment		Z42 Inox/ Steel	6	HFA 0616, HFA 1225, HFC 0616, HFC 1225, HFD 0605, HFD 1210, HFG 0618, HFG 1225, HFF 0618, HFF 1225	❶	②	③	❹					■	1
A1039000509	Assortment		Z9 Alu	3	HFA 0313, HFC 0313, HFD 0403, HFF 0313, HFG 0313						❻		❽	■	1
A10390005096	Assortment		Z9 Alu	6	HFA 0616, HFC 0616, HFM 0618, HFF 0618, HFD 0605						❻		❽	■	1

● Inox/Steel ● Steel ● Aluminium ● Stone ● Cast material ● Plastic ● Titanium

Tool-set, BASE-X, F5 S6

● ● ● ★☆☆

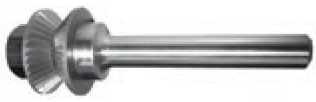
Ordering example: A10390053

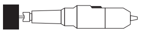
5 pieces

Product number	Description	Image	Cut	Shank Ø mm	1 piece each	recommended for Information on page 438									PG 1	
A10390053	F5 S3 Tool-sets BASE-X		ZX	3	HFA 0313, HFC 0313, HFD 0605, HFF 0313, HFG 0313	❶	❷	❸	④	❺		⑦			■	1
A10390056	F5 S6 Tool-sets BASE-X		ZX	6	HFA 1225, HFC 1225, HFD 1210, HFF 1225, HFG 1225	❶	❷	❸	④	❺		⑦			■	1

Tools for hand-held and floor-stand application

● ● ● ★★☆





PG 1

Trimming burr | delivery on request

Range of application:
- General machine building
- shipbuilding

Tools for stationary use

● ● ● ● ● ● ★★☆

PG 1

Differential drill, radius mill, shank-end mill, die mill, profile mill | delivery on request

Range of application:
- Tool construction
- Turbine construction
- Aerospace industry
- General machine building

In addition to rotary burrs, we also produce tungsten carbide milling tools in special shapes and sizes for stationary application.

We supply these milling cutters with a diameter **of 20 mm** maximum diameter and with a maximum length **of 250 mm**; they differ from our extensive standard range by the shape, tool material and geometry (rake, clearance and helix angles).

● **Inox/Steel** ● **Steel** ● **Aluminium** ● **Stone** ● **Cast material** ● **Plastic** ● **Titanium**

Material classification

❶ Steels and Cast Steels

Rm up to 800 N/mm^2
- common structural steels
- free cutting steels
- case hardened steels
- fine grained structural steels
- extruded steels
- toughened structural steels
- boiler plate
- nitrided steels
- cast steels
- heat treated steels
- heat resistant structural steels

❷ Alloyed, Tempered Steels

Rm 800 up to 1200 N/mm^2
- case hardened steels
- spring steels
- fine grained structural steels
- nitrided steels
- heat treated steels
- wear resistant steels
- bearing steels

❸ Tool Steels

Rm up to 1300 N/mm^2
- 60–65 HRC
- high-speed steels
- non-alloyed tool steels
- cold working tool steels
- hot working tool steels

❹ Rust, acid and heat resistant Steels and Cast Steels

- austenitic
- ferritic
- ferritic-austenitic
- heat-resistant
- martensitic
- stainless, sulpherized

❺ Cast Iron

❻ Aluminium, Magnesuim and Copper Alloys

- over 300 HB
- 200–300 HB
- up to 200 HB
- over 15% Si
- 10–15% Si
- 0,5–10% Si
- below 0,5% Si

❼ Titanium and Nickel Alloys

- Rm 900 up to 1500 N/mm^2
- Rm up to 900 N/mm^2

❽ Plastics, Wood, Rubber

❾ Glass/Carbides

❿ Stone/Tiles/Gas Cement

⓫ Concrete/Reinforced Concrete

⓬ Ceramic/Floor Tiles

⓭ Marble

⓮ Granite

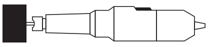
⓯ Freshly Poured Concrete

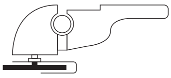
⓰ Asphalt

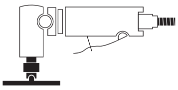
● best suitable
○ suitablet

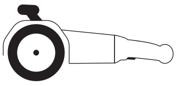
■ delivery ex-stock
▲ delivery on request

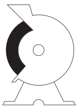
Power tools

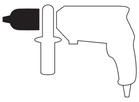

Straight grinder

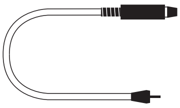

Free-hand angle grinder

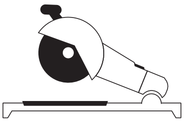

Pneumatic angle grinder

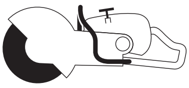

Conditioning machine


Backstand


Boring machine


Flexible shaft grinder


Fixed-base cutting machine


Petrol-driven cutting machine

Product Lines

★★★ High Performance
★★☆ Industry
★☆☆ Base

Safety Symbols

(Depending on the product these symbols may vary)


Wear eye protection


Wear hearing protection


Wear a respirator


Read the instructions


Wear gloves


Only permitted with a back-up pad


Not permitted for wet grinding


Not permitted for face grinding


Do not use if damaged


Not permitted for hand-held or manually-guided grinding