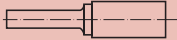
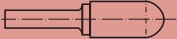













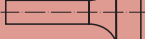
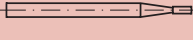








Page		
11	Technical Information	SC Pentagon SRL
14	Type and application	Tel/fax: 0236/412.088
15	Coatings	Depozite: Galati, Constanta, Tulcea si Braila
		www.PentagonRomania.ro; office@pentagonromania.ro



Page	Shape	Type	Shape (DIN 8033)	Shape (LUKAS)
16		Cylindrical	ZYA	A
18		Cylindrical round nose	WRC	C
19		Spherical	KUD	D
20		Oval	TRE	E
21		Arch round nose	RBF	F
22		Arch pointed nose	SPG	G
23		Flame	–	H
23		Internal	–	I
24		Counter sink	KSJ	J
24		Conical round nose	KEL	L
25		Conical pointed nose	SKM	M
25		Inverted cone	WKN	N
26		Burrs for the machining of plastic	–	P
27		Engraving Cutters	–	–
28		Burrs for radius trimming (external)	–	R
28		Burrs for radius trimming (internal)	–	S
29		Miniature Burrs	–	–
30		Small Burrs	–	–
32		Tool-Set	–	–
34		Burrs for machining of non-ferrous metals	–	–
35		Burrs with extended shank length	–	–
36		Some examples of our competitive performance	–	–
37		HQB special drills	–	–
225		Power Tools		

Technical Information

Quality

LUKAS tungsten carbide burrs are manufactured from well proven high quality carbide.

They are produced on high-tech CNC burr fluting machines. The accuracy of this technology guarantees repeatability of tooth profile and helix angle. This results in the optimal performance for every application.

Application

The best results are obtained by selecting the recommended cut and speed. Please refer to the cutting speeds in the table on page 13 or according to the table illustrating the various cuts on page 14.

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 decreases tool efficiency.

Shanks

We recommend that the largest shank diameter possible is selected from the appropriate list; this provides maximum safety. Other shank diameters and lengths are available on request. A selection of burrs with extra long shanks appears on page 35.

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.

Coated

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 technicians would be pleased to help you in the selection of the correct coating. Please note the different possibilities on page 15.

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 select the most appropriate packaging from our environmental friendly unit packs; this depends on the quantity ordered.

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 adjoining table.

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 used on low heat conducting materials. Never let the shank and head become discoloured 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.

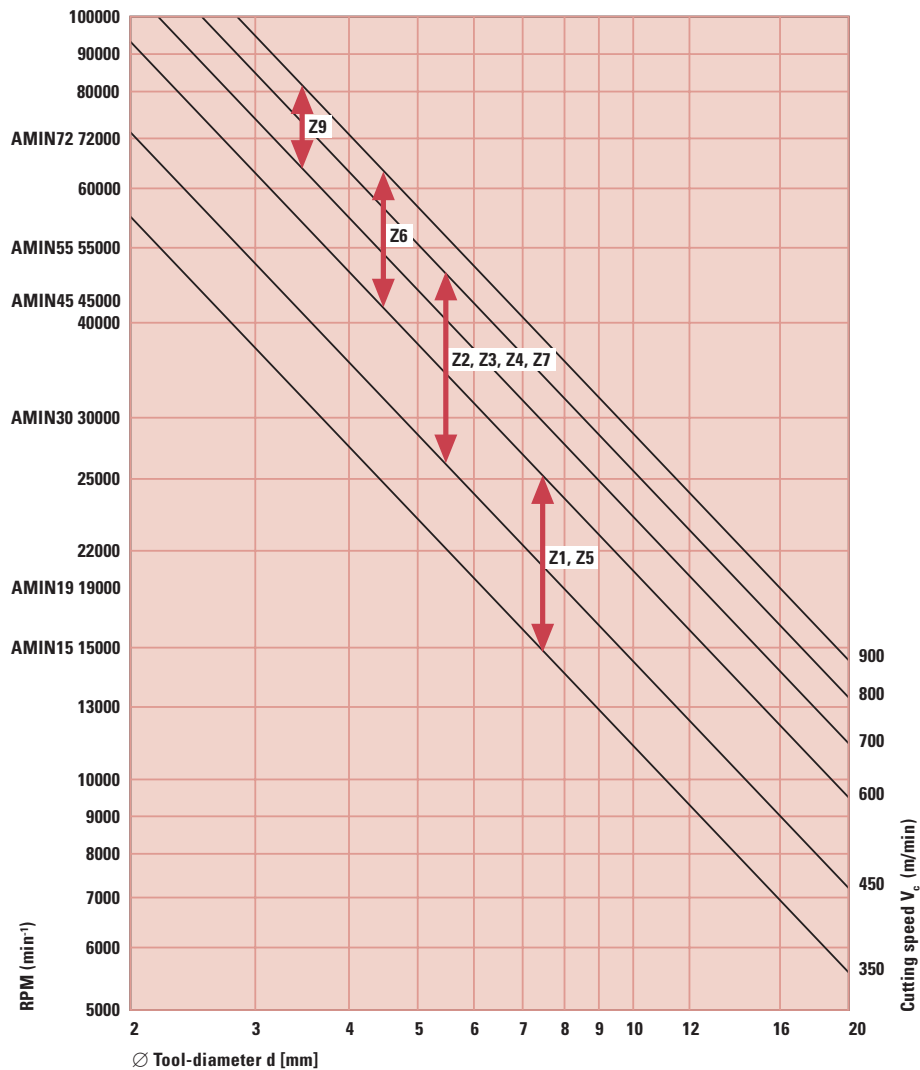
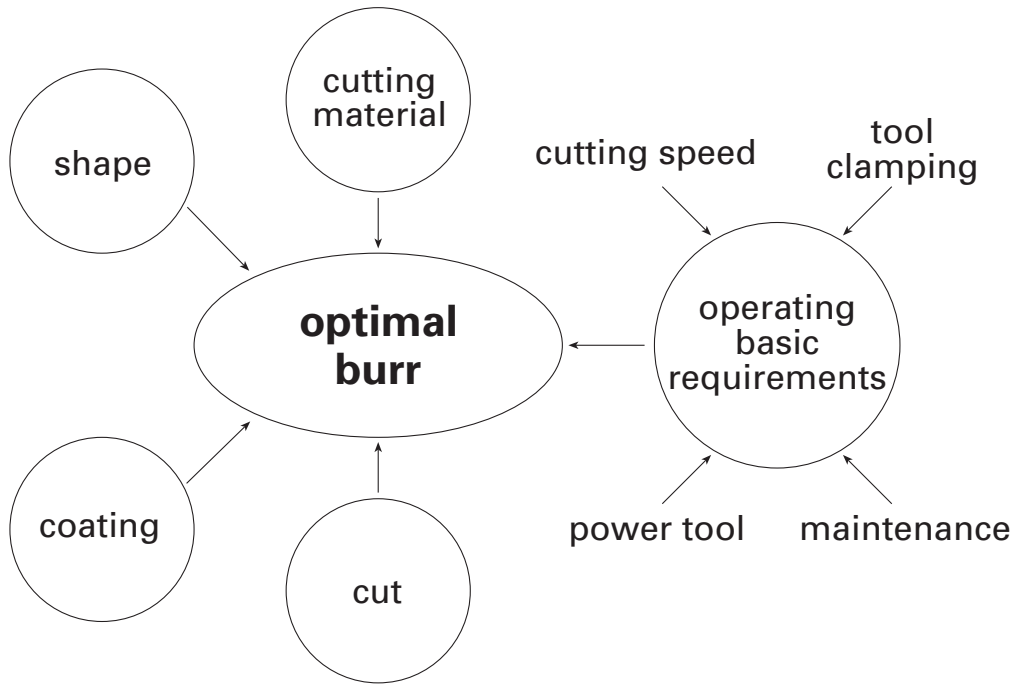
A reduction in RPM due to lack of power – particularly common with pneumatic tools – should be avoided.

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 vibrations and shank breakage, select the shortest shank overhang as possible.

Choosing the appropriate Burr




14 Tungsten Carbide Burrs



Types of cut and their application

The following types are available for specific applications Single cut	Lukas specification	Recommended application	Recommended cutting speed low high
	Z 1	Light metals, plastic, hard rubber, pressed and hard wood	v = 400 - 600 m/min v = 720 - 900 m/min
	Z 2	Cast iron, non-ferrous metals, tough materials, plastics	v = 450 - 800 m/min
	Z 3	Cast steel, welds, hardened and soft high tensile steels	v = 450 - 800 m/min
	Z 5	Application like Z 3, but to obtain finer surface finish	v = 350 - 600 m/min
	Z 9	Aluminium alloys, soft non-ferrous metals, plastics	v = 700 - 900 m/min

Burrs from head diameter 6 mm and larger, cut Z1, 2, 3 and 5 can be supplied with chip breaker to produce a short chip form. The burrs can be TiN, TiCN, TiAlN or LTE coated on request (page 15).

Cross cuts produce higher cutting capacity on tough materials	Lukas specification	Recommended application	Recommended cutting speed low high
	Z 4	High alloy steels, stainless, acid and heat resistant castings, plastics	v = 450 - 800 m/min
	Z 6	Application like Z 4 but higher rate of stock removal	v = 540 - 900 m/min
	Z 7	Cast steel, welds, hardened and soft steels (universal higher performance cut)	v = 450 - 800 m/min

Coatings	LUKAS-specification	Properties	Friction on steel (dry)
	TiN (Titanium nitride)	general purpose coating for steel and cast iron, high toughness	0,65–0,70 µm
	TCN (Titanium carbon nitride)	wear resisting coating for fine deburring process; suited to applications with higher thermal and shock loads	0,10–0,20 µm
	TiAlN (Titanium aluminium nitride) (see page 31)	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

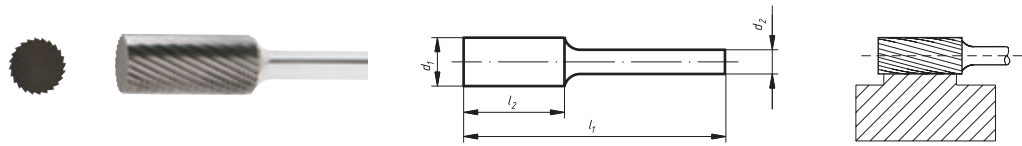
Take advantage of our regrind service

LUKAS tungsten carbide burrs can be resharpended several times when blunted by normal working conditions. Burrs with severe damage to the cutting edges are priced accordingly. We can offer this service providing the tools are delivered to us carriage paid.



The symbol denotes burrs which can be reground against enquiry.

16 Tungsten Carbide Burrs



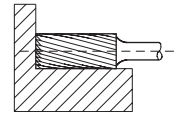
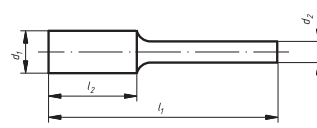
Shape A, Cylindrical

Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut									Resharpener cut			
						1	2	3	4	5	6	7	9	1,2,3,5	4,7	6	9	
HFA 0210.03	ZYA 0210	2	10	3	40	○	○	○	○	■	○	○	---	⊞	⊞	---	---	
HFA 0313.03	ZYA 0313	3	13	3	40	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFA 0413.06	ZYA 0413	4	13	6	58	○	○	■	○	○	○	■	---	⊞	⊞	⊞	---	
HFA 0607.03	ZYA 0607	6	7	3	37	○	○	○	○	■	○	○	---	⊞	⊞	⊞	---	
HFA 0613.03	ZYA 0613	6	13	3	43	○	○	○	○	■	○	■	---	⊞	⊞	⊞	---	
HFA 0616.06	ZYA 0616	6	16	6	58	○	■	■	■	■	○	■	■	⊞	⊞	⊞	---	
HFA 0820.06	ZYA 0820	8	20	6	60	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFA 1013.06	ZYA 1013	10	13	6	53	○	○	■	○	○	○	■	---	⊞	⊞	⊞	---	
HFA 1013.08	ZYA 1013	10	13	8	53	○	○	■	○	○	○	○	---	⊞	⊞	⊞	---	
HFA 1020.06	ZYA 1020	10	20	6	60	○	○	■	■	○	○	■	---	⊞	⊞	⊞	---	
HFA 1020.08	ZYA 1020	10	20	8	60	○	○	■	○	○	○	○	---	⊞	⊞	⊞	---	
HFA 1025.06	ZYA 1025	10	25	6	65	○	○	○	■	○	○	■	---	⊞	⊞	⊞	---	
HFA 1025.08	ZYA 1025	10	25	8	65	○	○	■	○	○	○	○	---	⊞	⊞	⊞	---	
HFA 1225.06	ZYA 1225	12	25	6	65	○	○	■	■	■	○	■	■	⊞	⊞	⊞	---	
HFA 1225.08	ZYA 1225	12	25	8	65	○	○	■	■	○	○	○	■	⊞	⊞	⊞	---	
HFA 1625.06	ZYA 1625	16	25	6	65	○	○	■	○	○	○	■	■	⊞	⊞	⊞	⊞	
HFA 1625.08	ZYA 1625	16	25	8	65	○	○	○	○	○	○	○	■	⊞	⊞	⊞	⊞	

Packing unit: 1 pc. per type

Ordering example: HFA 1225.06 Z3

Shape A, Cylindrical, with end-cut



Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut							Resharpener cut		
						1	2	3	4	5	6	7	1,2,3,5	4,7	6
HFAS 0210.03	ZYA-S 0210	2	10	3	40	○	○	○	---	■	---	---	○	---	---
HFAS 0313.03	ZYA-S 0313	3	13	3	40	○	○	■	■	■	---	■	○	○	---
HFAS 0413.06	ZYA-S 0413	4	13	6	58	○	○	■	---	○	---	■	○	---	---
HFAS 0607.03	ZYA-S 0607	6	7	3	37	○	○	○	---	■	---	---	○	---	---
HFAS 0613.03	ZYA-S 0613	6	13	3	43	○	○	○	---	■	---	■	○	---	---
HFAS 0616.06	ZYA-S 0616	6	16	6	58	○	○	■	■	■	---	■	○	○	---
HFAS 0820.06	ZYA-S 0820	8	20	6	60	○	○	■	■	■	---	■	○	○	---
HFAS 1013.06	ZYA-S 1013	10	13	6	53	○	○	■	---	○	---	■	○	---	---
HFAS 1013.08	ZYA-S 1013	10	13	8	53	○	○	■	---	○	---	---	○	---	---
HFAS 1020.06	ZYA-S 1020	10	20	6	60	○	○	■	■	○	---	■	○	○	---
HFAS 1025.06	ZYA-S 1025	10	25	6	65	○	○	○	■	○	---	■	○	○	---
HFAS 1225.06	ZYA-S 1225	12	25	6	65	○	○	■	■	■	---	■	○	○	---
HFAS 1225.08	ZYA-S 1225	12	25	8	65	○	○	○	■	○	---	■	○	○	---
HFAS 1625.06	ZYA-S 1625	16	25	6	65	○	○	■	---	○	---	■	○	---	---

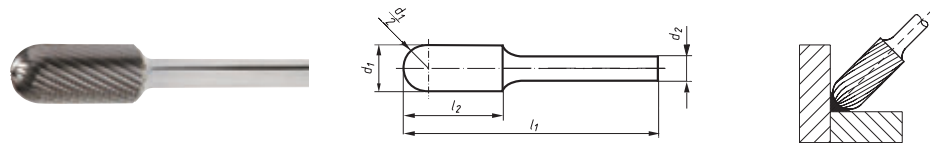
Packing unit: 1 pc. per type

Ordering example: HFAS 1225.06 Z3

18 Tungsten Carbide Burrs



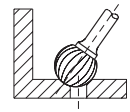
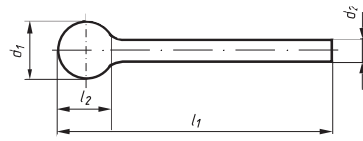
Shape C, Cylindrical Round nose



Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut									Resharpener cut			
						1	2	3	4	5	6	7	9	1,2,3,5	4,7	6	9	
HFC 0210.03	WRC 0210	2	10	3	40	○	○	○	○	■	○	■	---	---	---	---	---	
HFC 0313.03	WRC 0313	3	13	3	40	○	■	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFC 0413.06	WRC 0413	4	13	6	56	○	○	■	■	○	○	■	---	⊞	⊞	⊞	---	
HFC 0613.03	WRC 0613	6	13	3	43	○	○	○	○	■	○	■	---	⊞	⊞	⊞	---	
HFC 0616.06	WRC 0616	6	16	6	58	■	■	■	■	■	○	■	■	⊞	⊞	⊞	---	
HFC 0820.06	WRC 0820	8	20	6	60	○	○	■	■	■	■	■	---	⊞	⊞	⊞	---	
HFC 1020.06	WRC 1020	10	20	6	60	○	○	■	■	■	■	■	---	⊞	⊞	⊞	---	
HFC 1020.08	WRC 1020	10	20	8	60	○	○	○	■	○	○	■	---	⊞	⊞	⊞	---	
HFC 1025.06	WRC 1025	10	25	6	65	○	○	○	○	○	○	■	---	⊞	⊞	⊞	---	
HFC 1225.06	WRC 1225	12	25	6	65	■	■	■	■	■	■	■	■	⊞	⊞	⊞	---	
HFC 1225.08	WRC 1225	12	25	8	65	○	○	■	■	○	○	■	■	⊞	⊞	⊞	---	
HFC 1625.06	WRC 1625	16	25	6	65	○	○	■	○	○	○	■	■	⊞	⊞	⊞	⊞	
HFC 1625.08	WRC 1625	16	25	8	65	○	○	■	○	○	○	○	■	⊞	⊞	⊞	⊞	

Packing unit: 1 pc. per type

Ordering example: HFC 1225.06 Z4



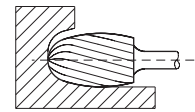
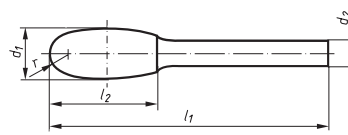
Shape D, Spherical

Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut									Resharpener cut			
						1	2	3	4	5	6	7	9	1,2,3,5	4,7	6	9	
HFD 0302.03	KUD 0302	3	2	3	40	○	■	■	■	■	○	■	---	⊞	⊞	---	---	
HFD 0403.03	KUD 0403	4	3	3	34	○	○	○	○	■	○	■	---	⊞	⊞	---	---	
HFD 0403.06	KUD 0403	4	3	6	58	○	○	■	■	○	○	■	---	⊞	⊞	---	---	
HFD 0605.03	KUD 0605	6	5	3	35	○	○	○	○	■	○	■	---	⊞	⊞	⊞	---	
HFD 0605.06	KUD 0605	6	5	6	58	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFD 0807.06	KUD 0807	8	7	6	47	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFD 1009.06	KUD 1009	10	9	6	49	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFD 1210.06	KUD 1210	12	10	6	51	○	○	■	■	■	○	■	■	⊞	⊞	⊞	---	
HFD 1210.08	KUD 1210	12	10	8	51	○	○	■	■	○	○	○	■	⊞	⊞	⊞	---	
HFD 1614.06	KUD 1614	16	14	6	54	○	○	■	■	○	○	■	■	⊞	⊞	⊞	---	
HFD 1614.08	KUD 1614	16	14	8	54	○	○	■	○	○	○	○	■	⊞	⊞	⊞	---	
HFD 2018.06	KUD 2018	20	18	6	58	○	○	■	○	○	○	■	---	⊞	⊞	⊞	---	
HFD 2018.08	KUD 2018	20	18	8	58	○	○	■	○	○	○	○	---	⊞	⊞	⊞	---	

Packing unit: 1 pc. per type

Ordering example: HFD 1210.06 Z7

20 Tungsten Carbide Burrs



Shape E, Oval

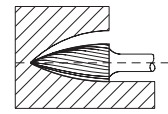
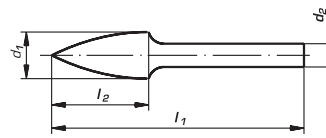
Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	r≈ mm	New burrs cut									Resharpener cut			
							1	2	3	4	5	6	7	9	1,2,3,5	4,7	6	9	
HFE 0307.03	TRE 0307	3	7	3	40	1,2	○	○	■	○	■	○	■	---	⊞	⊞	⊞	---	
HFE 0610.03	TRE 0610	6	10	3	40	2,8	○	○	○	○	■	○	■	---	⊞	⊞	⊞	---	
HFE 0610.06	TRE 0610	6	10	6	58	2,8	○	○	■	■	○	○	■	---	⊞	⊞	⊞	---	
HFE 0813.06	TRE 0813	8	13	6	53	3,7	○	○	■	■	○	○	■	---	⊞	⊞	⊞	---	
HFE 1220.06	TRE 1220	12	20	6	60	5,0	○	○	■	■	■	○	■	---	⊞	⊞	⊞	---	
HFE 1225.08	TRE 1225	12	25	8	65	5,0	○	○	■	○	○	○	○	■	⊞	⊞	⊞	---	
HFE 1625.06	TRE 1625	16	25	6	65	7,1	○	○	○	○	○	○	■	---	⊞	⊞	⊞	---	
HFE 1625.08	TRE 1625	16	25	8	65	7,1	○	○	■	○	○	○	○	■	⊞	⊞	⊞	---	
HFE 2035.08	TRE 2035	20	35	8	75	8,0	○	○	■	○	○	○	○	---	⊞	⊞	⊞	---	

Packing unit: 1 pc. per type

Ordering example: HFE 0813.06 Z4

22 Tungsten Carbide Burrs

Shape G, Arch pointed nose

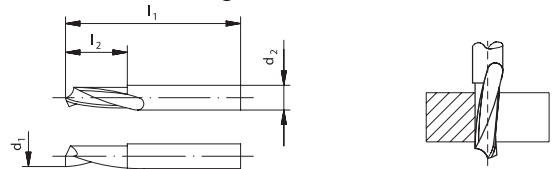


Description	similar DIN 8033	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut							Resharpener cut							
						1	2	3	4	5	6	7	1,2,3,5	4,7	6					
HFG 0307.03	SPG 0307	3	7	3	40	○	○	○	○	■	○	■	○	○	○	○	○	○	○	○
HFG 0313.03	SPG 0313	3	13	3	40	○	○	■	■	■	○	■	○	○	○	○	○	○	○	○
HFG 0613.03	SPG 0613	6	13	3	43	○	○	○	○	■	○	■	○	○	○	○	○	○	○	○
HFG 0618.06	SPG 0618	6	18	6	58	■	■	■	■	■	○	■	○	○	○	○	○	○	○	○
HFG 0820.06	---	8	20	6	60	○	○	■	○	○	○	■	○	○	○	○	○	○	○	○
HFG 1020.06	SPG 1020	10	20	6	60	○	○	■	■	■	○	■	○	○	○	○	○	○	○	○
HFG 1220.06	SPG 1220	12	20	6	60	○	○	■	○	○	○	■	○	○	○	○	○	○	○	○
HFG 1225.06	SPG 1225	12	25	6	65	○	■	■	■	○	○	■	○	○	○	○	○	○	○	○
HFG 1225.08	SPG 1225	12	25	8	65	○	○	■	○	○	○	○	○	○	○	○	○	○	○	○
HFG 1230.06	SPG 1230	12	30	6	70	○	■	■	■	■	○	■	○	○	○	○	○	○	○	○
HFG 1230.08	SPG 1230	12	30	8	70	○	○	■	○	○	○	○	○	○	○	○	○	○	○	○
HFG 1630.06	SPG 1630	16	30	6	70	○	○	■	■	○	○	■	○	○	○	○	○	○	○	○
HFG 1630.08	SPG 1630	16	30	8	70	○	○	■	○	○	○	○	○	○	○	○	○	○	○	○

Packing unit: 1 pc. per type

Ordering example: HFG 0307.03 Z5

Engraving cutters of solid carbide single flute type



Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm			
HGE 0207.03	2	7	3	40			■
HGE 0207.04	2	7	4	40			○
HGE 0307.03	3	7	3	40			■
HGE 0307.04	3	7	4	40			○
HGE 0407.04	4	7	4	40			○
HGE 0407.06	4	7	6	50			○
HGE 0508.06	5	8	6	50			○
HGE 0609.06	6	9	6	50			○

Packing unit: 1 pc.

Unless otherwise specified, the tolerances are as DIN 7468

Ordering example: HGE 0307.03

Cutters with mirror finished flute to allow ideal chip removal and to avoid clogging.

Application: Very well suited for the machining of light metals, non-ferrous metals, plastics and for high-speed-machining of aluminium parts.

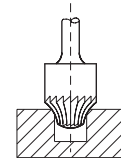
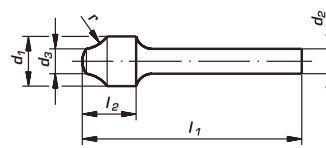
Recommended cutting speeds

Main group of materials	Sub-group	Hardness (HB)	Strength (N/mm ²)	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	–	–
	Thermo-setting plastics	–	–	–

28 Tungsten Carbide Burrs



Shape R, Trimming burr (external)

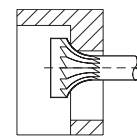
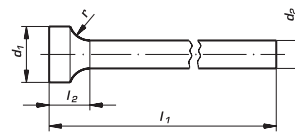


Description	d ₁ mm	d ₃ mm	l ₂ mm	d ₂ mm	l ₁ mm	r _≈ mm	New burrs cut							Resharpener cut					
							1	2	3	4	5	6	7	1,2,3,5					
HFR 0812.06	8	3	12	6	52	2,5	○	○	■	---	○	---	---	○	---	---	○	---	---
HFR 1015.06	10	2	15	6	55	8	○	○	■	---	○	---	---	○	---	---	○	---	---
HFR 1215.06	12	6	15	6	55	8	○	○	■	---	○	---	---	○	---	---	○	---	---
HFR 1215.08	12	6	15	8	55	8	○	○	■	---	○	---	---	○	---	---	○	---	---
HFR 1315.06	13	3	15	6	55	10	○	○	■	---	■	---	---	○	---	---	○	---	---
HFR 1315.08	13	3	15	8	55	10	○	○	■	---	○	---	---	○	---	---	○	---	---

Packing unit: 1 pc. per type

Ordering example: HFR 1015.06 Z3

Shape S, Trimming burr (internal)



Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	r _≈ mm	New burrs cut							Resharpener cut					
						1	2	3	4	5	6	7	1,2,3,5					
HFS 1618.08	16	18	8	120	6	○	○	■	---	○	---	---	○	---	---	○	---	---
HFS 1818.08	18	18	8	120	8	○	○	■	---	○	---	---	○	---	---	○	---	---
HFS 2218.08	22	18	8	120	10	○	○	■	---	○	---	---	○	---	---	○	---	---

Packing unit: 1 pc. per type

Ordering example: HFS 1618.08. Z3

You would like to mill,
grind or polish ...



www.lukas-erzett.com

■ delivery ex-stock

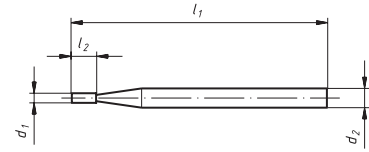
▲ quick delivery

○ available as special service

○ S regrind service, please enquire



Miniature burrs with multi-purpose cut



Shape	Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	Multi-purpose cut
	HFA 01004.03	1	4	3	40	■
	HFA 01504.03	1,5	4	3	40	■
	HFA 02004.03	2	4	3	40	■
	HFC 01004.03	1	4	3	40	■
	HFC 01504.03	1,5	4	3	40	■
	HFC 02004.03	2	4	3	40	■
	HFD 01001.03	1	0,9	3	40	■
	HFD 01501.03	1,5	1,35	3	40	■
	HFD 02002.03	2	1,8	3	40	■
	HFE 01504.03	1,5	4	3	40	■
	HFF 01504.03	1,5	4	3	40	■
	HFG 01504.03	1,5	4	3	40	■
	HFM 01504.03	1,5	4	3	40	■

Packing unit: 1 pc. per type

Ordering example: HFF 01504.03

Application:

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

Materials to be processed:

- stainless steel
- CrNi alloys
- non-ferrous metals
- zinc diecasting
- soft ceramics
- titanium alloys

Power Tool:

- We recommend our pneumatic grinder AMIN 72-013 GD.

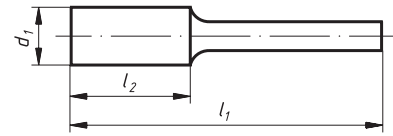
Useful hints:

- 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

Miniature burrs in cut 5, shank 3 mm



Shape	Description	similar DIN 8033	Shank H = Tungsten carbide S = Steel	d ₁ mm	l ₂ mm	l ₁ mm	Cut	New burrs	Resharpener
	HFA 0210.03	ZYA 0210	H	2	10	40	Z5	■	⊞
	HFAS 0210.03	ZYA-S 0210	H	2	10	40	Z5	■	⊞
	HFA 0313.03	ZYA 0313	H	3	13	40	Z5	■	⊞
	HFAS 0313.03	ZYA-S 0313	H	3	13	40	Z5	■	⊞
	HFA 0607.03	ZYA 0607	S	6	7	37	Z5	■	⊞
	HFAS 0607.03	ZYA-S 0607	S	6	7	37	Z5	■	⊞
	HFA 0613.03	ZYA 0613	S	6	13	43	Z5	■	⊞
	HFAS 0613.03	ZYA-S 0613	S	6	13	43	Z5	■	⊞
	HFC 0210.03	WRC 0210	H	2	10	40	Z5	■	⊞
	HFC 0313.03	WRC 0313	H	3	13	40	Z5	■	⊞
	HFC 0613.03	WRC 0613	S	6	13	43	Z5	■	⊞
	HFD 0302.03	KUD 0302	H	3	2	40	Z5	■	⊞
	HFD 0403.03	KUD 0403	H	4	3	34	Z5	■	⊞
	HFD 0605.03	KUD 0605	S	6	5	35	Z5	■	⊞
	HFE 0307.03	TRE 0307	H	3	7	40	Z5	■	⊞
	HFE 0610.03	TRE 0610	S	6	10	40	Z5	■	⊞
	HFF 0307.03	RBF 0307	H	3	7	40	Z5	■	⊞
	HFF 0313.03	RBF 0313	H	3	13	40	Z5	■	⊞

Packing unit: 1 pc. per type

Ordering example: HFA 0313.03 Z5

■ delivery ex-stock

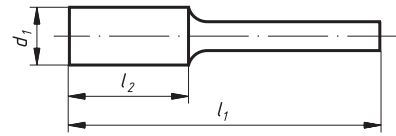
▲ quick delivery

○ available as special service

⊞ regrind service, please enquire



Miniature burrs in cut 5, shank 3 mm



Shape	Description	similar DIN 8033	Shank H = Tungsten carbide S = Steel	d ₁ mm	l ₂ mm	l ₁ mm	Cut	New burrs	Resharpener
	HFF 0613.03	RBF 0613	S	6	13	43	Z5	■	
	HFG 0307.03	SPG 0307	H	3	7	40	Z5	■	
	HFG 0313.03	SPG 0313	H	3	13	40	Z5	■	
	HFG 0613.03	SPG 0613	S	6	13	43	Z5	■	
	HFH 0307.03	---	H	3	7	40	Z5	■	
	HFH 0613.03	---	S	6	13	43	Z5	■	
	HFI 0204.03	---	H	2,5	4	40	*	■	
	HFI 0408.03	---	H	4	6	50	*	■	
	HFM 0307.03	SKM 0307	H	3	7	40	Z5	■	
	HFM 0311.03	SKM 0311	H	3	11	40	Z5	■	
	HFM 0613.03	SKM 0613	S	6	13	43	Z5	■	
	HFN 0307.03	WKN 0307	H	3	7	40	Z5	■	
	HFNS 0307.03	WKN-S 0307	H	3	7	40	Z5	■	
	HFN 0607.03	WKN 0607	S	6	7	37	Z5	■	
	HFNS 0607.03	WKN-S 0607	S	6	7	37	Z5	■	



* available only with fine cross-cut

Packing unit: 1 pc. per type

Ordering example: HFH 0307.03 Z5

32 Tungsten Carbide Burrs

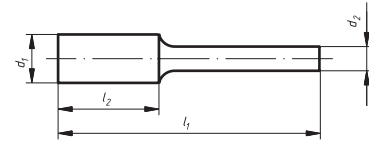
Tool-sets

	Description	Contents 1 pc. each	Shank Ø/mm	Cut	
	F10 S3 10-pieces	HFA 0313, HFA 0613, HFC 0313, HFC 0613, HFD 0302, HFD 0605, HFG 0313, HFG 0613, HFM 0613, HFF 0313	3	Z7	■
	F10 S6 10-pieces	HFAS 0616, HFAS 1225, HFC 0616, HFC 1225, HFD 0605, HFD 1210, HFG 0618, HFG 1225, HFF 0820, HFF 1225	6	Z7	■

Packing unit: 1 pc.

Ordering example: F10 S3

Tungsten Carbide Burrs with TiAlN-coating*



Shape	Description	Product-Number	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	Cut	New burrs
	HFA 0616.06 Z7 TiAlN	A10010616608TiAlN	6	16	6	58	7	■
	HFA 0820.06 Z7 TiAlN	A10010820608TiAlN	8	20	6	60	7	■
	HFAS 0616.06 Z7 TiAlN	A10010616608TiAl1	6	16	6	58	7	■
	HFAS 0820.06 Z7 TiAlN	A10010820608TiAl1	8	20	6	60	7	■
	HFC 0616.06 Z7 TiAlN	A10020616608TiAlN	6	16	6	58	7	■
	HFC 0820.06 Z7 TiAlN	A10020820608TiAlN	8	20	6	60	7	■
	HFC 1020.06 Z7 TiAlN	A10021020608TiAlN	10	20	6	60	7	■
	HFC 1225.06 Z7 TiAlN	A10021225608TiAlN	12	25	6	65	7	■
	HFD 0605.06 Z7 TiAlN	A10030606608TiAlN	6	5	6	58	7	■
	HFD 0807.06 Z7 TiAlN	A10030808608TiAlN	8	7	6	47	7	■
	HFD 1009.06 Z7 TiAlN	A10031010608TiAlN	10	9	6	49	7	■
	HFF 1225.06 Z7 TiAlN	A10101225608TiAlN	12	25	6	65	7	■
	HFG 0618.06 Z7 TiAlN	A10040618608TiAlN	6	18	6	58	7	■
	HFG 1020.06 Z7 TiAlN	A10041020608TiAlN	10	20	6	60	7	■
	HFG 1225.06 Z7 TiAlN	A10041225608TiAlN	12	25	6	65	7	■
	HFH 0820.06 Z7 TiAlN	A10090820608TiAlN	8	20	6	60	7	■
	HFH 1230.06 Z7 TiAlN	A10091230608TiAlN	12	30	6	70	7	■
	HFL 1020.06 Z7 TiAlN	A10071020608TiAlN	10	20	6	60	7	■

Packing unit: 1 pc. per type

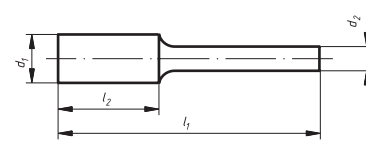
Ordering example: A10010616608TiAlN

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

The reasons for producing Tungsten Carbide Burrs with TiAlN-coating are as follows:

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

**Burrs for machining
non-ferrous metals,
cut 9**



Shape	Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	Cut	New burrs	Resharpener
	HFA 0616.06 Z9	6	16	6	58	Z9	■	---
	HFA 1225.06 Z9	12	25	6	65	Z9	■	---
	HFA 1225.08 Z9	12	25	8	65	Z9	■	---
	HFA 1625.06 Z9	16	25	6	65	Z9	■	⊠ S
	HFA 1625.08 Z9	16	25	8	65	Z9	■	⊠ S
	HFC 0616.06 Z9	6	16	6	56	Z9	■	---
	HFC 1225.06 Z9	12	25	6	65	Z9	■	---
	HFC 1225.08 Z9	12	25	8	65	Z9	■	---
	HFC 1625.06 Z9	16	25	6	65	Z9	■	⊠ S
	HFC 1625.08 Z9	16	25	8	65	Z9	■	⊠ S
	HFD 1210.06 Z9	12	10	6	50	Z9	■	---
	HFD 1210.08 Z9	12	10	8	50	Z9	■	---
	HFD 1614.06 Z9	16	14	6	54	Z9	■	---
	HFD 1614.08 Z9	16	14	8	54	Z9	■	---
	HFE 1225.08 Z9	12	25	8	65	Z9	■	---
	HFE 1625.08 Z9	16	25	8	65	Z9	■	---
	HFF 1225.06 Z9	12	25	6	65	Z9	■	---
	HFF 1225.08 Z9	12	25	8	65	Z9	■	---
	HFF 1630.06 Z9	16	30	6	70	Z9	■	---
	HFF 1630.08 Z9	16	30	8	70	Z9	■	---
	HFL 0820.06 Z9	8	20	6	60	Z9	■	---
	HFL 1020.06 Z9	10	20	6	60	Z9	■	---
	HFL 1225.06 Z9	12	25	6	65	Z9	■	---
	HFL 1230.06 Z9	12	30	6	70	Z9	■	---
	HFL 1230.08 Z9	12	30	8	70	Z9	■	⊠ S
	HFL 1630.08 Z9	16	30	8	70	Z9	■	⊠ S
	HFL 2040.08 Z9	20	40	8	80	Z9	■	⊠ S

Packing unit: 1 pc. per type
 ■ delivery ex-stock

▲ quick delivery

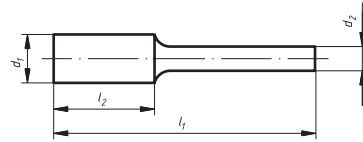
○ available as special service



Ordering example: HFC 1225.08 Z9
 regrind service, please enquire



Burrs with extended shank length (shank length 200 mm)



Shape	Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	New burrs cut	
						3	7
	HFA 1225.06 L	12	25	6	225	■	■
	HFC 0616.06 L	6	16	6	216	■	■
	HFC 0820.06 L	8	20	6	220	■	■
	HFC 1225.06 L	12	25	6	225	○	■
	HFD 0605.06 L	6	5	6	205	■	■
	HFD 0807.06 L	8	7	6	207	■	■
	HFD 1009.06 L	10	9	6	209	■	■
	HFD 1210.06 L	12	10	6	210	■	■
	HFD 1210.08 L	12	10	8	210	■	■
	HFE 1220.06 L	12	20	6	220	■	■
	HFE 1220.08 L	12	20	8	220	■	■
	HFF 0618.06 L	6	18	6	218	■	■
	HFF 1230.08 L	12	30	8	230	■	■
	HFG 0618.06 L	6	18	6	218	■	■
	HFG 1230.08 L	12	30	8	230	■	■
	HFH 1020.06 L	10	20	6	220	■	■
	HFH 1230.08 L	12	30	8	230	■	■

Packing unit: 1 pc. per type

Ordering example: HFD 1210.08 Z3 L

Further shapes, dimensions, cuts and shank lengths on request.



We are pleased to help you

With your assistance, our product specialists will develop a range of tools to solve your particular problem.



■ delivery ex-stock

▲ quick delivery

○ available as special service



regrind service, please enquire

Some examples of our competitive performance



Tools for stationary use

Differential drill, radius mill, shank-end mill, die mill, profile mill



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

Range of application:

- Tool construction
- Turbine construction
- Aircraft and space industry
- general machine construction

We supply these milling cutters with a diameter **of 12 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, relief and helix angles).

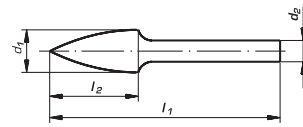
Tools for off-hand use



Trimming burr



HZB special drill with special shank design for easy insertion



Description	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	delivery ex-stock
HZB 0513.04	5,3	13	4	138	■
HZB 0613.05	6,3	13	5	158	■
HZB 0820.06	8,3	20	6	185	■
HZB 1020.10	10,3	20	10	200	■
HZB 1225.10	12,3	25	10	205	■
HZB 1430.12	14,3	30	12	250	■
HZB 1630.12	16,3	30	12	250	■

Packing unit: 1 pc. per type

Ordering example: HZB 0513.04

The LUKAS HZB-special drill was designed for the use with lattice bricks. It drills accurately dimensioned holes into the porous brick material, without affecting the webs.

When using identical plugs, a retention force of up to 200 % higher than that when conventional drills are used can be achieved.

Application:

- installation of doors, windows and other building components
- anchoring of scaffolding
- difficult facade installation

Suitable building materials:

- vertically perforated and lattice bricks
- limited suitability for glazed tiles

Application:

- May be used without run-out with all commercial drilling machines with a chuck opening of up to 12 mm
- drills from tungsten carbide, therefore long service life
- no destruction of brick webs, but precise drilling
- up to 20 x more drill holes than with conventional drills

