Tungsten carbide burrs with STEEL cut

Maximum stock removal on steel and cast steel

PFERD

- Up to 50 % higher stock removal performance when used on steel and cast steel in comparison to conventional cross cut burrs
- Significantly increased aggressiveness, large chips and very good chip removal through the innovative tooth geometry
- Comfortable working with reduced vibration and lower noise

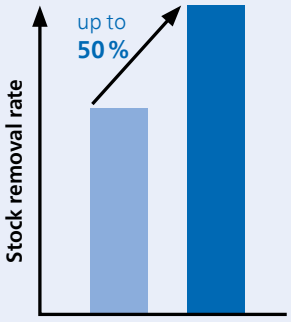
Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

With the innovative STEEL cut, PFERD has developed unique burrs for working with steel and cast steel. They are characterized by significantly increased aggressiveness and good guidance. Thus they ensure safe and precise work. The extremely high stock removal rate makes burrs with the STEEL cut impressive, with significant time savings and a high economic value. PFERD also offers tungsten carbide burrs with STEEL cut with a high-quality HICOAT coating.

Applications:

- Milling out
- Levelling
- Deburring
- Cutting out holes
- Surface work
- Work on weld seams

Performance values for applications on steel and cast steel



- Conventional burrs with cross cut
- Tungsten carbide burrs, STEEL cut

Materials that can be worked:

- Steel
- Cast steel

Recommendations for use:

- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burrs, work with higher rotational/cutting speeds. Power recommendation for tool drives: from 300 watts.
- Please observe the rotational speed recommendations.

Matching tool drives:

- Flexible shaft drive
- Straight grinder
- Robot
- Machine tools

Safety notes:

- The very high stock removal rate can cause discolouration on the shank. This does not constitute a safety risk.

= Wear eye protection!

= Wear hearing protection!

= Wearing protective gloves is recommended. Handle the tool drive with both hands.

= Observe the recommended rotational speed, especially when using burrs with long shanks!

PFERDVALUE:

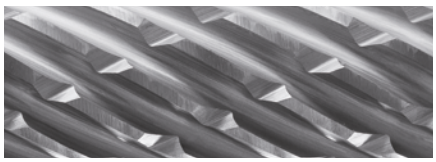
PFERDERGONOMICS recommends burrs with STEEL cut as an innovative tool solution for comfortable working with significantly reduced vibration and less noise.

Vibration Filter | **Noise** Filter | **Haptic** Filter

PFERDEFFICIENCY recommends burrs with STEEL cut for long fatigue-free and resource-saving work with perfect results in a very short period of time.

Energy Saving | **Waste** Saving | **Time** Saving | **Resource** Saving

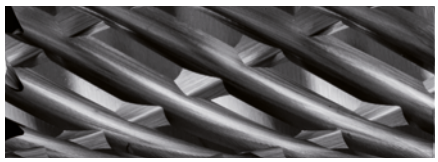
STEEL cut



Advantages:

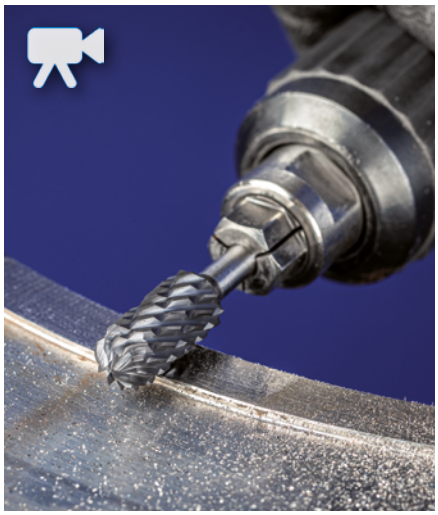
- Up to 50 % higher stock removal rate when used on steel and cast steel in comparison to conventional cross-cut burrs.
- Significantly increased aggressiveness, large chips and very good chip removal through the innovative tooth geometry.
- Workpiece is protected through much lower thermal load.

STEEL cut with HICOAT coating HC-FEP



Advantages:

- High hardness and wear resistance.
- Effective chip removal through improved anti-adhesion characteristics.
- Very high resistance against thermal load.
- Increased service life.
- Also suitable for use at higher cutting speeds when compared with uncoated burrs.



Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Recommended rotational speed range [RPM]

To determine the recommended rotational speed range [RPM], please proceed as follows:

❶ Refer to the table for the cutting speed.

❷ Select the required burr diameter.

❸ The cutting speed range and the burr diameter determine the recommended rotational speed range.

Safety note:

Please observe the reduced rotational speeds for burrs with a long shank. They can be found on page 4.

Material group			Application	Cut	❶ Cutting speed
Steel, cast steel	Steels up to 1,200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	STEEL	450–750 m/min
				HICOAT HC-FEP	450–900 m/min
	Hardened, heat-treated steels over 1,200 N/mm² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel		STEEL	450–750 m/min
				HICOAT HC-FEP	450–900 m/min

Example:
TC burr,
STEEL cut,
burr dia. 12 mm.
Cutting speed: 450–750 m/min
Rotational speed range:
12,000–20,000 RPM

❷ Burr dia. [mm]	❸ Cutting speeds [m/min]		
	450	750	900
	Rotational speeds [RPM]		
6	24,000	40,000	48,000
8	18,000	30,000	36,000
10	14,000	24,000	29,000
12	12,000	20,000	24,000
16	9,000	15,000	18,000

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Tungsten carbide burrs with a long shank are ideal for cost-effectively machining small, hard-to-reach areas on components. Long-shank versions are available with the 3 PLUS, 5, STEEL and TOUGH cuts.

Tungsten carbide burrs with a long shank can be shortened if required.
Tungsten carbide burrs with the designation **GL 75 mm** are made from solid tungsten carbide, which means they can only be shortened using diamond tools.
GL = total length (solid tungsten carbide)
SL = shank length (long steel shank)

Safety notes:

Not suitable for robotic or stationary applications. **Risk of bending**. Use only rigid clamping systems/drives.

= Observe the prescribed rotational speed!

Safety note – maximum rotational speed [RPM] for burrs with long shanks

When working with long-shank burrs, it is crucial that the burr is in contact with the workpiece (or inserted in the bore or slot to be machined) before the drive system is turned on. As a rule, the tool must remain in contact with the workpiece for as long as the machine is running. Failure to observe this procedure may result in shank failure (bending) and hence an increased risk of accidents. If continuous contact between the tool and the workpiece is not guaranteed, the ❸ **maximum idling speeds stated in the table must not be exceeded**.

For safety reasons, the maximum application speeds ❷ **with contact with the workpiece** require a reduction in the recommended speed of tungsten carbide burrs with standard shanks. The reduced speeds are stated in the table below.

To determine the recommended rotational speed range [RPM], please proceed as follows:

❶ Select the required burr diameter.
❷ For the maximum application speed [RPM] with contact with the workpiece, please refer to the right-hand side of the table.

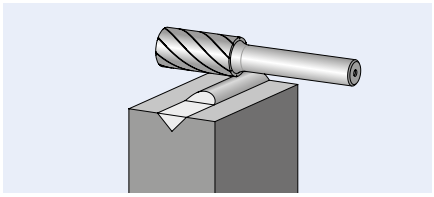
Example:
TC burr, SL 150 mm,
3 PLUS cut,
burr dia. 12 mm.
Coarse stock removal on steels
up to 1,200 N/mm².
Maximum application speed with contact with the workpiece: 7,000 RPM

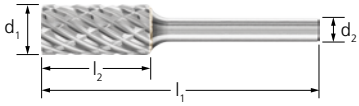
❶ Burr dia. [mm]	❸ Maximum idling speed [RPM] without contact with the workpiece		❷ Maximum application speed [RPM] with contact with the workpiece	
	Shank length [mm]			
	75	150	75	150
3	10,000	-	31,000	-
6	6,000	8,000	15,000	15,000
8	-	6,000	-	11,000
10	-	4,000	-	9,000
12	-	3,000	-	7,000

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Cylindrical shape ZYA without end cut

Cylindrical burr according to DIN 8032.





Ordering notes:
- Please complete the description with the desired cut.

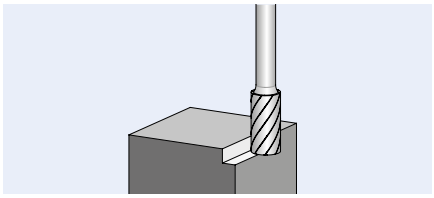
PFERDVALUE:

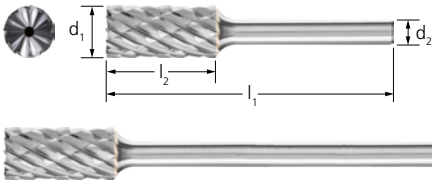
Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
				EAN 4007220				
Shank dia. 6 mm								
6	16	6	55	937198	-	24,000–40,000	1	ZYA 0616/6 ...
8	20	6	60	937211	-	18,000–30,000	1	ZYA 0820/6 ...
10	20	6	60	937235	221662	14,000–24,000	1	ZYA 1020/6 ...
12	25	6	65	937242	221655	12,000–20,000	1	ZYA 1225/6 ...
16	25	6	65	002360	-	9,000–15,000	1	ZYA 1625/6 ...

Cylindrical shape ZYAS with end cut

Cylindrical burr according to DIN 8032. Shape ZYAS with circumferential and end cut.
SL = shank length (long steel shank)





Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

Ordering notes:
- Please complete the description with the desired cut.

PFERDVALUE:

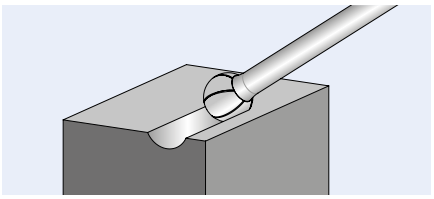
Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
				EAN 4007220				
Shank dia. 6 mm								
6	16	6	55	937259	-	24,000–40,000	1	ZYAS 0616/6 ...
8	20	6	60	937266	-	18,000–30,000	1	ZYAS 0820/6 ...
10	20	6	60	937310	221600	14,000–24,000	1	ZYAS 1020/6 ...
12	25	6	65	937341	221686	12,000–20,000	1	ZYAS 1225/6 ...
16	25	6	65	002889	-	9,000–15,000	1	ZYAS 1625/6 ...
Long shank dia. of 6 mm, SL 150 mm								
8	20	6	170	091173	-	11,000	1	ZYAS 0820/6 ... SL 150
10	20	6	170	091289	-	9,000	1	ZYAS 1020/6 ... SL 150
12	25	6	175	091982	-	7,000	1	ZYAS 1225/6 ... SL 150

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Ball shape KUD

Ball-shaped burr according to DIN 8032.
SL = shank length (long steel shank)



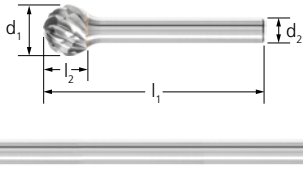
Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

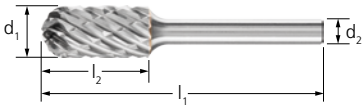
PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

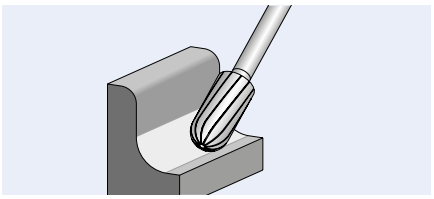


d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
				EAN 4007220				
Shank dia. 6 mm								
6	5	6	45	936832	-	24,000–40,000	1	KUD 0605/6 ...
8	7	6	47	936849	-	18,000–30,000	1	KUD 0807/6 ...
10	9	6	49	936863	221679	14,000–24,000	1	KUD 1009/6 ...
12	10	6	51	936870	221693	12,000–20,000	1	KUD 1210/6 ...
16	14	6	54	003008	-	9,000–15,000	1	KUD 1614/6 ...
Long shank dia. of 6 mm, SL 150 mm								
10	9	6	159	092002	-	9,000	1	KUD 1009/6 ... SL 150
12	10	6	160	087206	-	7,000	1	KUD 1210/6 ... SL 150

Cylindrical shape with radius end WRC



Cylindrical burr with radius end according to DIN 8032. Combination of cylindrical and ball-shaped geometries.
SL = shank length (long steel shank)



Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

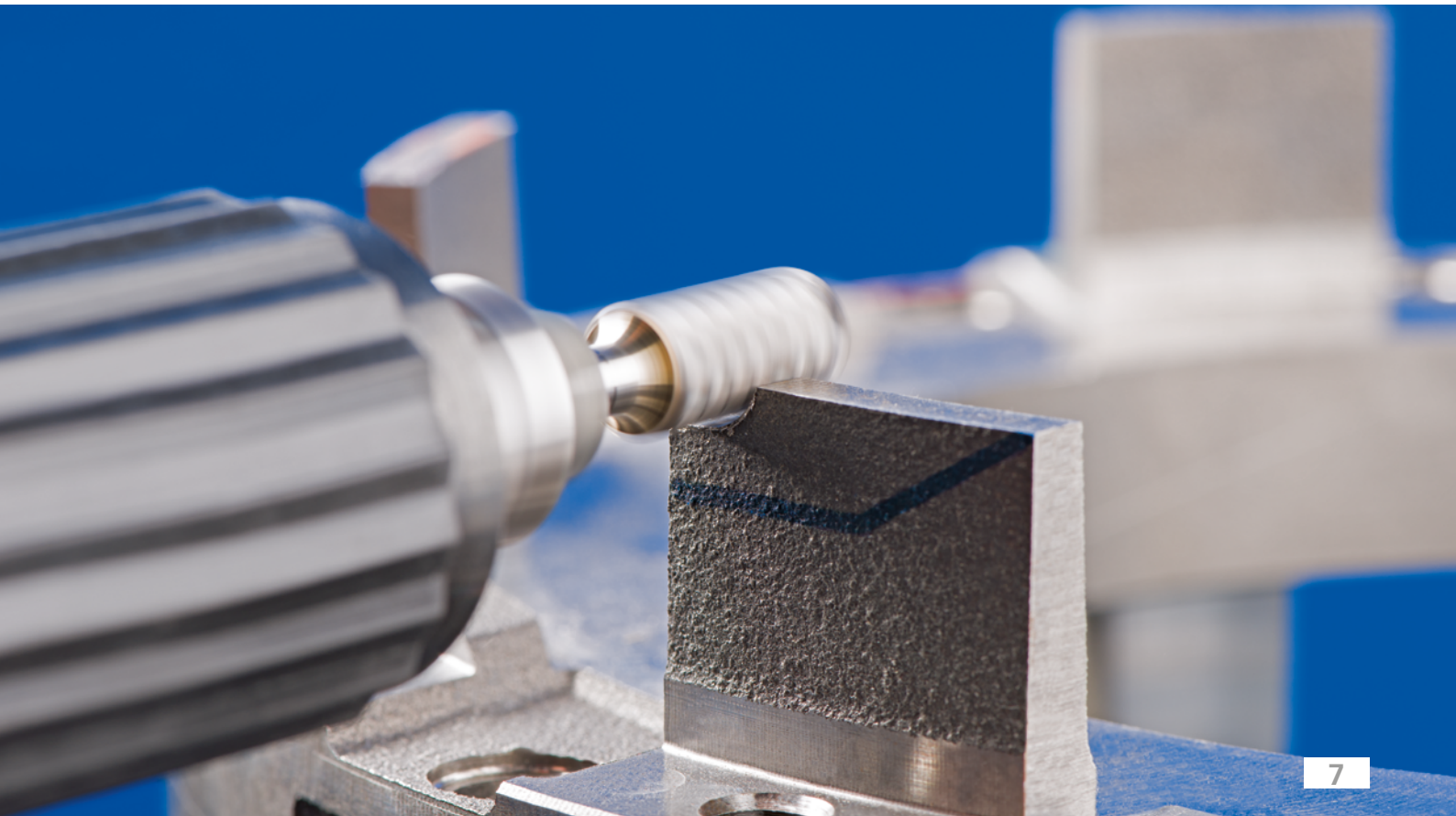
PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

Ordering notes:

- Please complete the description with the desired cut.

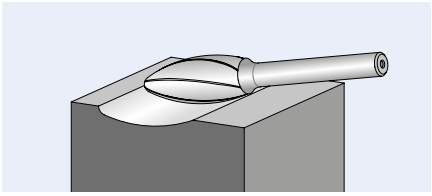
d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut: STEEL	Cut: STEEL HC-FEP	RPM		Description
				EAN 4007220				
Shank dia. 6 mm								
6	16	6	55	937129	-	24,000–40,000	1	WRC 0616/6 ...
8	20	6	60	937150	-	18,000–30,000	1	WRC 0820/6 ...
10	20	6	60	937174	222713	14,000–24,000	1	WRC 1020/6 ...
12	25	6	65	936696	221570	12,000–20,000	1	WRC 1225/6 ...
16	25	6	65	003022	-	9,000–15,000	1	WRC 1625/6 ...
Long shank dia. of 6 mm, SL 150 mm								
8	20	6	170	092309	-	11,000	1	WRC 0820/6 ... SL 150
10	20	6	170	092422	-	9,000	1	WRC 1020/6 ... SL 150
12	25	6	175	092439	-	7,000	1	WRC 1225/6 ... SL 150



Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Flame shape B

Flame-shaped burr according to ISO 7755/8.
SL = shank length (long steel shank)



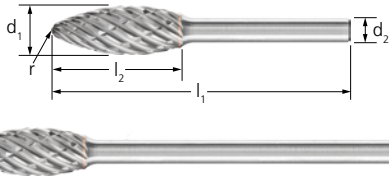
Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

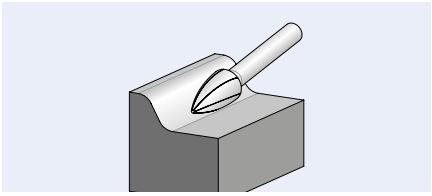


d1 [mm]	l2 [mm]	d2 [mm]	l1 [mm]	r [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
					EAN 4007220				
Shank dia. 6 mm									
8	20	6	60	1.5	936719	-	18,000–30,000	1	B 0820/6 ...
10	25	6	65	1.7	092590	221617	14,000–24,000	1	B 1025/6 ...
12	30	6	70	2.1	936764	221624	12,000–20,000	1	B 1230/6 ...
16	35	6	75	2.6	003039	-	9,000–15,000	1	B 1635/6 ...
Long shank dia. of 6 mm, SL 150 mm									
10	25	6	175	1.7	092446	-	9,000	1	B 1025/6 ... SL 150
12	30	6	180	2.1	092453	-	7,000	1	B 1230/6 ... SL 150

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Pointed tree shape SPG

Pointed tree-shaped burr according to DIN 8032, flattened tip.
SL = shank length (long steel shank)



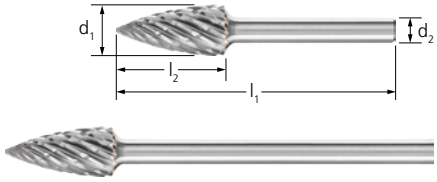
Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

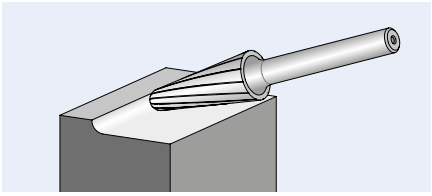


d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut		RPM		Description
				STEEL	STEEL HC-FEP			
				EAN 4007220				
Shank dia. 6 mm								
6	18	6	55	936979	-	24,000–40,000	1	SPG 0618/6 ...
8	20	6	60	936993	-	18,000–30,000	1	SPG 0820/6 ...
10	20	6	60	937013	221716	14,000–24,000	1	SPG 1020/6 ...
12	25	6	65	937082	221648	12,000–20,000	1	SPG 1225/6 ...
16	30	6	70	003046	-	9,000–15,000	1	SPG 1630/6 ...
Long shank dia. of 6 mm, SL 150 mm								
8	20	6	170	092460	-	11,000	1	SPG 0820/6 ... SL 150
10	20	6	170	092477	-	9,000	1	SPG 1020/6 ... SL 150
12	25	6	175	092484	-	7,000	1	SPG 1225/6 ... SL 150

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Conical shape with radius end KEL

Conical burr with radius end according to DIN 8032.
SL = shank length (long steel shank)



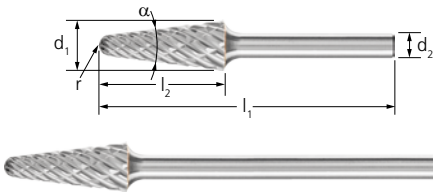
Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

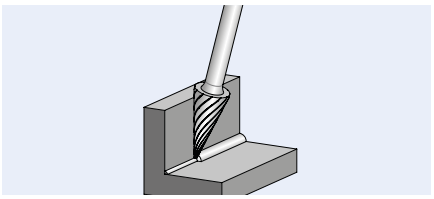


d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	α	r [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
						EAN 4007220				
Shank dia. 6 mm										
10	20	6	60	14°	2.9	936771	221587	14,000–24,000	1	KEL 1020/6 ...
12	30	6	70	14°	2.6	936818	222904	12,000–20,000	1	KEL 1230/6 ...
16	30	6	70	14°	4.8	003053	-	9,000–15,000	1	KEL 1630/6 ...
Long shank dia. of 6 mm, SL 150 mm										
10	20	6	170	14°	2.9	092576	-	9,000	1	KEL 1020/6 ... SL 150
12	30	6	180	14°	2.6	092583	-	7,000	1	KEL 1230/6 ... SL 150

Tungsten carbide burrs with STEEL cut
for use on steel and cast steel

Conical pointed shape SKM

Conical pointed burr according to DIN 8032, flattened tip.
SL = shank length (long steel shank)



Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

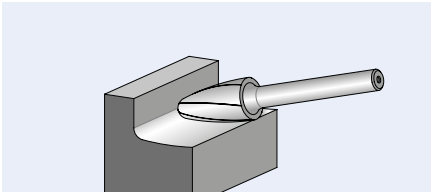
PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	α	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
					EAN 4007220				
Shank dia. 6 mm									
6	18	6	55	18°	092736	-	24,000–40,000	1	SKM 0618/6 ...
8	20	6	60	22°	092774	-	18,000–30,000	1	SKM 0820/6 ...
10	20	6	60	28°	092781	221747	14,000–24,000	1	SKM 1020/6 ...
12	25	6	65	26°	092859	221754	12,000–20,000	1	SKM 1225/6 ...
Long shank dia. of 6 mm, SL 150 mm									
10	20	6	170	28°	092545	-	9,000	1	SKM 1020/6 ... SL 150
12	25	6	175	26°	092569	-	7,000	1	SKM 1225/6 ... SL 150

Tree shape with radius end RBF

Tree-shaped burr with radius end according to DIN 8032.
SL = shank length (long steel shank)



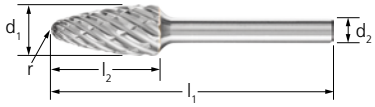
Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

PFERDVALUE:

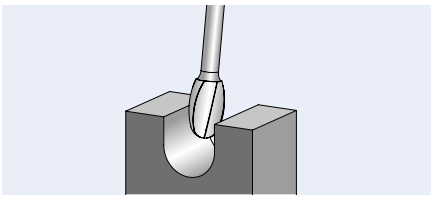
Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving



d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	r [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
					EAN 4007220				
Shank dia. 6 mm									
6	18	6	55	1.5	936887	-	24,000–40,000	1	RBF 0618/6 ...
8	20	6	60	1.2	936900	-	18,000–30,000	1	RBF 0820/6 ...
10	20	6	60	2.5	936924	221631	14,000–24,000	1	RBF 1020/6 ...
12	25	6	65	2.5	936931	221563	12,000–20,000	1	RBF 1225/6 ...
16	30	6	70	3.6	003060	-	9,000–15,000	1	RBF 1630/6 ...
Long shank dia. of 6 mm, SL 150 mm									
8	20	6	170	1.2	092491	-	11,000	1	RBF 0820/6 ... SL 150
10	20	6	170	2.5	092507	-	9,000	1	RBF 1020/6 ... SL 150
12	25	6	175	2.5	092514	-	7,000	1	RBF 1225/6 ... SL 150

Oval shape TRE

Oval burr according to ISO 7755/8.
SL = shank length (long steel shank)



Ordering notes:
- Please complete the description with the desired cut.

Safety notes:

The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 4.

PFERDVALUE:

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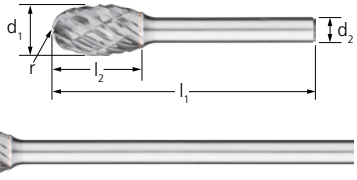

d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	r [mm]	Cut STEEL	Cut STEEL HC-FEP	RPM		Description
					EAN 4007220				
Shank dia. 6 mm									
8	13	6	53	3.7	092637	-	18,000–30,000	1	TRE 0813/6 ...
10	16	6	56	4.0	092644	221808	14,000–24,000	1	TRE 1016/6 ...
12	20	6	60	5.0	092682	221778	12,000–20,000	1	TRE 1220/6 ...
16	25	6	65	6.5	092729	-	9,000–15,000	1	TRE 1625/6 ...
Long shank dia. of 6 mm, SL 150 mm									
10	16	6	160	4.0	092521	-	9,000	1	TRE 1016/6 ... SL 150
12	20	6	170	5.0	092538	-	7,000	1	TRE 1220/6 ... SL 150

Set 1812 STEEL

Set 1812 STEEL contains five tungsten carbide burrs for processing steel and cast steel in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage. The burrs are secured at the shanks, facilitating the selection and withdrawal of the tools. Five further slots are available for other burrs.

Contents:
5 tungsten carbide burrs,
shank diameter of 6 mm,
STEEL cut
1 piece each:
- ZYA 1225/6 STEEL
- KUD 1210/6 STEEL
- WRC 1225/6 STEEL
- SPG 1225/6 STEEL
- RBF 1225/6 STEEL

PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

Cut STEEL		Description
EAN 4007220		
Shank dia. 6 mm		
004357	1	1812 STEEL

Subject to technical modifications.