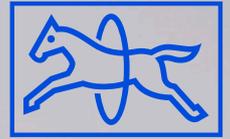


**PFERD**



**TOOLS**



# Diamond and CBN tools

### Diamond and CBN tools

■ Highlights from the PFERD TOOLS range	3
■ Customer-specific products made to order	4
■ The quick way to find the perfect tool	5
■ Materials	6
■ Safety notes and recommended cutting speeds	6
■ Recommended rotational speed range	8



### Diamond and CBN tools – electroplated bond

■ Diamond needle files	9
■ Diamond rифler files	12
■ Diamond handy files	12
■ Diamond grinding points	14
■ Diamond grinding discs CC-GRIND SOLID DIAMOND	14



### Diamond tools for the construction industry

■ Segmented diamond cut-off wheels for fast cutting	18
■ Diamond cut-off wheels with continuous edge for easy cutting (TURBO)	18
■ Diamond cut-off wheels with continuous edge for very fine cutting	19
■ Grinding discs	19
■ Diamond for the construction industry Performance Line PSF	20
■ Drilling aid for dry diamond drill bits DPD	21
■ Carbide cut-off wheel for general-purpose cutting	21



# Diamond and CBN tools

## Highlights from the PFERD TOOLS range



### DUODISC DIAMOND

Exceptionally well-suited to machining grey cast iron and nodular cast iron (GG and GGG or GJL and GJS). Ideal for roughing and deburring work in fettling shops. The coating geometry enables small feeders and risers to be separated. Scan the QR code to find out more about DUODISC DIAMOND.



#### Advantages:

- Constant tool diameter.
- Reduced tool change times thanks to long tool life.
- Dust is minimized as the tool does not wear away.

### Multi Power Carbide Wheel

The Multi Carbide Wheel is a general-purpose cut-off wheel and the perfect solution for demanding cutting tasks in the construction industry and in DIY applications. With sharp tungsten carbide grains, this cut-off wheel ensures excellent cutting quality and short cutting times on all kinds of materials such as wood with nails, plastics, non-ferrous metals and drywall construction materials.



Scan the QR code to find out more about the general-purpose cut-off wheel.

- Ideal choice when changing materials.
- Optimum cutting speed due to consistent diameter and high ease of cutting.
- Long service life thanks to special bonding of the tungsten carbide grain with the steel body.

### Diamond tools for the construction industry

PFERD TOOLS diamond tools are the ideal solution for demanding projects which involve working on hard materials such as concrete, asphalt, granite or tiles. The broad product range offers the right tool for any application, ensuring the best results and improving the cost-effectiveness of your building projects.



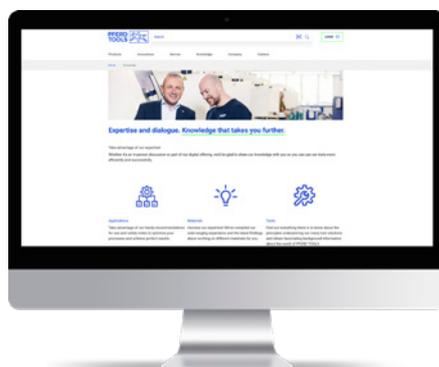
Scan the QR code to find out more about diamond tools for the construction industry.

#### Advantages:

- Optimum results.
- Maximum efficiency and safety.
- Comprehensive product range for a wide range of uses.

### More expert information online

Scan the QR code to find out a wide range of tool and application knowledge relating to PFERD TOOLS' high-quality tools and their huge variety of materials.



# Diamond and CBN tools

## Customer-specific products made to order



PFERD TOOLS specializes in consulting for and the production of customer-specific electroplated diamond and CBN tools.

Almost all tool blank geometries can be coated with various grit sizes. The electroplated bond also enables economic production of small batch sizes. Because of the diverse possibilities, our production can respond to individual customer requirements with a high degree of flexibility.

Our technical advisers will be happy to visit you on-site to develop individual and economical tool solutions for your applications.

Get the best possible advice for super-hard solutions! Scan the QR code to find out more about customer-specific products made to order.



## Customer-specific tool solutions for grey and nodular cast iron



### Tools for auxiliary spindles

PFERD TOOLS offers tools for auxiliary spindles in different shapes/geometries and dimensions as well as with M12 and M16 threads.

### Cut-off wheels and grinding discs

Diamond cut-off wheels and diamond grinding discs from PFERD TOOLS can be purchased in diameters of up to 600 mm. Shapes and dimensions (hole, radius, reference circle, etc.) can be produced according to customer requirements.

### Grinding points and grinding drums

The range of products from PFERD TOOLS that can be produced according to customer requirements includes diamond grinding drums and diamond grinding points. These can be customized with different shapes, dimensions and shanks.

5



## 1. Process analysis and tool development

Contact us at [www.pferd.com](http://www.pferd.com) and arrange an appointment with our experienced sales representatives and technical advisers.

If you already have precise ideas about the desired tool, you can provide us with a technical drawing or a dimensioned sketch and information on the desired abrasives and grit sizes.

Our employees **will analyze your application with you on-site** and develop the most economic individual tool solution for you. You will then immediately receive a quote. Three production variants are possible:

## 2. Production

### ■ Complete production

From design and construction, through manufacture of the tool blank (steel, stainless steel or brass) and its coating with diamond or CBN grit, to the balancing of the finished tool, PFERD TOOLS offers you all the production steps from a single source. This guarantees you the highest level of quality, flexibility and on-time delivery.

### ■ Coating

Steel, stainless steel or brass blanks provided by the customer can also be coated with diamond or CBN grit. Close cooperation at an early stage is recommended.

### ■ Recoating

PFERD TOOLS offers recoating of blunt tools with steel or stainless steel blanks as an economical alternative to replacement production. Tools with brass blanks cannot be recoated.

## 3. Use

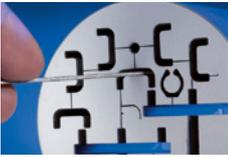
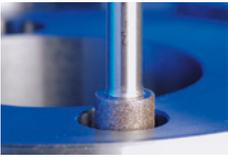
Our flexible production and global logistics network ensure that you receive your new tool on time.

If desired, your personal sales representative and a technical adviser will set up all the process parameters together with you.

**See the quality, performance and economic value of products from PFERD TOOLS for yourself!**

# Diamond and CBN tools

The quick way to find the perfect tool

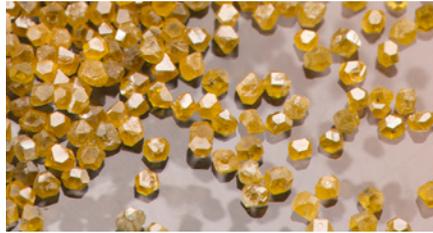
Use	Material	Application	Tools	
<b>Filing</b> 	Hardened steels, tungsten carbide, ceramics, glass, ferrite, nickel-based and titanium-based alloys	Precision filing	Diamond files	
		Precision filing with air-powered filing machines	Diamond files for air-powered filing machines	
		Machining concave and convex surfaces	Flexible diamond files Diamond sheets	
		Fibre-reinforced plastics (GRP/CRP)	Deburring, chamfering and breaking of edges	Diamond machinist's files, grit size D 251
<b>Grinding</b>   	Tungsten carbide, ceramics, glass, ferrite (magnetic material), nickel-based and titanium-based alloys	Grinding of bores, radii, contours, profiles and shoulders, as well as deburring and chamfering	Electroplated diamond grinding points Diamond grinding disc CC-GRIND SOLID DIAMOND	
		Internal grinding of bores	Electroplated diamond grinding points, cylindrical shape ZY Electroplated diamond grinding discs	
		Tungsten carbide	Sharpening of tungsten carbide tools	Resinoid-bonded diamond grinding discs
		Hardened steels from approx. 54 HRC	Grinding of bores, radii, contours, profiles and shoulders, as well as deburring and chamfering	Electroplated CBN grinding points
	Internal grinding of bores		Electroplated CBN grinding points, cylindrical shape ZY Electroplated CBN grinding discs	
		HSS (High Speed Steel)	Sharpening of HSS tools	Resinoid-bonded CBN grinding discs
		Fibre-reinforced plastics (GRP/CRP)	Deburring, chamfering and general grinding work	Electroplated diamond grinding points, cylindrical shape with radius end WR, grit size D 357 Diamond grinding disc CC-GRIND SOLID DIAMOND
				Grey and nodular cast iron
			Grinding burning-ins, sand inclusions and adhesions and separating short risers and feeders	
	<b>Cutting</b> 	Tungsten carbide, ceramics, glass, ferrite, nickel-based and titanium-based alloys	Cutting	Diamond cut-off wheels, grit size D 64/D 151
Fibre-reinforced plastics (GRP/CRP)		Cut-off grinding, trimming, making cut-outs, and cutting straight contours to size	Diamond cut-off wheels, grit size D 357/D 427	
		Sawing, trimming, making cut-outs, and cutting curved contours to size	Diamond sabre saw blades	
Grey and nodular cast iron		Separation of open risers, burrs, feeders, sprues, parting lines etc.	Diamond cut-off wheels, grit size D 852	

# Diamond and CBN tools

## Materials

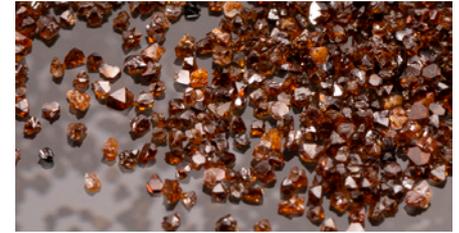


Diamond and CBN abrasives are used when materials cannot be machined with conventional abrasives such as aluminium oxide or silicon carbide. They also provide a more economical solution for many applications. Due to high chemical wear, rotating diamond tools are not suitable for work on steel. CBN tools are used for these applications. The two abrasives complement each other ideally. In the adjacent overview, you will find various materials associated with the abrasives.



### Diamond

- Duroplastics, in particular with glass or carbon fibre reinforcement (GRP and CRP)
- Ferrite (magnetic material)
- Glass
- Graphite and synthetic carbon
- Grey and nodular cast iron
- Tungsten carbide
- Nickel or titanium-based superalloys
- Technical ceramics
- Wear-resistant coatings (powder metal alloys and hardfacing alloys)



### CBN

- Case-hardened steels
- Roller-bearing and ball-bearing steels
- Tool steels
- Other hardened steel materials with a hardness from approx. 54 HRC

## Safety notes and recommended cutting speeds

5

### Safety notes

The operator is responsible for the grinding application, including correct tool drive use, correct handling and use of the grinding tools.



Wear eye protection!



Wear hearing protection!



Wear gloves!



Wear a dust mask!



Follow the safety instructions!

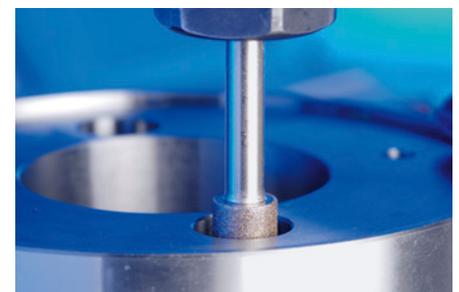


### Recommended cutting speeds

The recommended cutting speed ranges depend on the application and must not exceed the maximum permissible peripheral speed. Because of the wide range of tasks and application fields of electroplated diamond and CBN tools, as well as the large influence of the employed tool drive, it is not possible to specify a generally valid cutting speed. The recommended cutting speed ranges serve as reference values.

#### Generally, the following applies:

- In dry grinding, do not use diamond tools at too high a cutting speed in order to avoid thermal damage to the abrasive.
- If possible, do not use CBN tools under the cutting speeds specified below. The optimum cutting speed has a direct effect on the economic efficiency of the tools in use.
- All parameters must always be coordinated with each other within the grinding process. If the cutting speed is changed, the feed, infeed and coolant supply, among others, must be adjusted accordingly.
- Electroplated diamond and CBN tools can be used in dedicated stationary applications up to a peripheral speed of 125 m/s.



# Diamond and CBN tools

## Safety notes and recommended cutting speeds



		Cutting speed [m/s] ▶	5	10	15	20	25	30	35	40	45	...	80
<b>Electroplated bond</b>	Diamond	Dry grinding			8–18 m/s								30–80 m/s for CRP/GRP as well as grey and nodular cast iron
		Wet grinding				15–25 m/s							
	CBN	Dry grinding				15–25 m/s							
		Wet grinding						20–40 m/s					
<b>Resinoid bond</b>	Diamond	Dry grinding			15–20 m/s								
		Wet grinding					20–30 m/s						
	CBN	Dry grinding					18–30 m/s						
		Wet grinding							25–40 m/s				
<b>Metal bond</b>	Diamond	Dry grinding		10–15 m/s									
		Wet grinding				15–30 m/s							
	CBN	Wet grinding					25–30 m/s						



# Diamond and CBN tools

## Recommended rotational speed range



Tool dia. [mm]	Cutting speed [m/s]											
	8	12	15	18	20	25	30	40	50	80	100	125
	Rotational speed rounded off [RPM]											
1	153,000	-	-	-	-	-	-	-	-	-	-	-
2	76,400	115,000	143,000	172,000	191,000	-	-	-	-	-	-	-
3	50,900	76,400	95,500	115,000	127,000	159,000	191,000	-	-	-	-	-
4	38,200	57,300	71,600	85,900	95,500	119,000	143,000	-	-	-	-	-
5	30,600	45,800	57,300	68,800	76,400	95,500	115,000	153,000	-	-	-	-
6	25,500	38,200	47,700	57,300	63,700	79,600	95,500	127,000	159,000	-	-	-
7	21,800	32,700	40,900	49,100	54,600	68,200	81,900	109,000	136,000	-	-	-
8	19,100	28,600	35,800	43,000	47,700	59,700	71,600	95,500	119,000	191,000	-	-
9	17,000	25,500	31,800	38,200	42,400	53,100	63,700	84,900	106,000	170,000	-	-
10	15,300	22,900	28,600	34,400	38,200	47,700	57,300	76,400	95,500	153,000	191,000	-
12	12,700	19,100	23,900	28,600	31,800	39,800	47,700	63,700	79,600	127,000	159,000	199,000
14	10,900	16,400	20,500	24,600	27,300	34,100	40,900	54,600	68,200	109,000	136,000	171,000
15	10,200	15,300	19,100	22,900	25,500	31,800	38,200	50,900	63,700	102,000	127,000	159,000
16	9,500	14,300	17,900	21,500	23,900	29,800	35,800	47,700	59,700	95,500	119,000	149,000
18	8,500	12,700	15,900	19,100	21,200	26,500	31,800	42,400	53,100	84,900	106,000	133,000
20	7,600	11,500	14,300	17,200	19,100	23,900	28,600	38,200	47,700	76,400	95,500	119,000
22	6,900	10,400	13,000	15,600	17,400	21,700	26,000	34,700	43,400	69,400	86,800	109,000
25	6,100	9,200	11,500	13,800	15,300	19,100	22,900	30,600	38,200	61,100	76,400	95,500
30	5,100	7,600	9,500	11,500	12,700	15,900	19,100	25,500	31,800	50,900	63,700	79,600
40	3,800	5,700	7,200	8,600	9,500	11,900	14,300	19,100	23,900	38,200	47,700	59,700
50	3,100	4,600	5,700	6,900	7,600	9,500	11,500	15,300	19,100	30,600	38,200	47,700
75	2,000	3,100	3,800	4,600	5,100	6,400	7,600	10,200	12,700	20,400	25,500	31,800
100	1,530	2,300	2,900	3,400	3,800	4,800	5,700	7,600	9,500	15,300	19,100	23,900
125	1,220	1,830	2,300	2,800	3,100	3,800	4,600	6,100	7,600	12,200	15,300	19,100
150	1,020	1,530	1,910	2,300	2,500	3,200	3,800	5,100	6,400	10,200	12,700	15,900
175	870	1,310	1,640	1,960	2,200	2,700	3,300	4,400	5,500	8,700	10,900	13,600
200	760	1,150	1,430	1,720	1,910	2,400	2,900	3,800	4,800	7,600	9,500	11,900
230	660	1,000	1,250	1,490	1,660	2,100	2,500	3,300	4,200	6,600	8,300	10,400
250	610	920	1,150	1,380	1,530	1,910	2,300	3,100	3,800	6,100	7,600	9,500
300	510	760	950	1,150	1,270	1,590	1,910	2,500	3,200	5,100	6,400	8,000
350	440	650	820	980	1,090	1,360	1,640	2,200	2,700	4,400	5,500	6,800
400	380	570	720	860	950	1,190	1,430	1,910	2,400	3,800	4,800	6,000
450	340	510	640	760	850	1,060	1,270	1,700	2,100	3,400	4,200	5,300
500	310	460	570	690	760	950	1,150	1,530	1,910	3,100	3,800	4,800
600	250	380	480	570	640	800	950	1,270	1,590	2,500	3,200	4,000

Refer to the table for the recommended rotational speed based on the diameter and cutting speed of your tool.

**Example:**

Diamond grinding point, diameter: 20 mm

Cutting speed: 25 m/s

**Rotational speed rounded: 23,900 RPM**





### Diamond needle files, hand

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Hand	5.5	1.6	140	70	D 91	1	15101061	DF 4112 D 91
					D 126	1	15101062	DF 4112 D 126
					D 181	1	15101063	DF 4112 D 181



### Diamond needle files, hand with rounded edges

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Hand with round edges	5.5	1.6	140	70	D 126	1	15102062	DF 4112R D 126



### Diamond needle files, flat

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Flat	5.5	1.6	140	70	D 91	1	15103061	DF 4122 D 91
					D 126	1	15103062	DF 4122 D 126



### Diamond needle files, three square

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Three square	3.5	140	70	D 126	1	15104062	DF 4132 D 126



### Diamond needle files, square

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Square	2.6	140	70	D 126	1	15105062	DF 4142 D 126



### Diamond needle files, half-round

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Half-round	5.5	1.6	140	70	D 91	1	15106061	DF 4152 D 91



### Diamond needle files, round

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Round	3.2	140	70	D 91	1	15107061	DF 4162 D 91
				D 126	1	15107062	DF 4162 D 126
				D 181	1	15107063	DF 4162 D 181



### Diamond needle files, knife

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Knife shape	5	1.8	140	70	D 126	1	15108062	DF 4172 D 126



### Diamond needle files, feather edge

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Feather edge	5	2.4	140	70	D 126	1	15109062	DF 4182 D 126



### Diamond needle files, barrette

Diamond needle files can be used generally in tool making.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Barrette shape	5	2	140	70	D 126	1	15100062	DF 4102 D 126



### Diamond needle file sets

Diamond needle file sets are supplied in a sturdy, practical plastic box which protects the tools from damage. This is ideal for keeping in the tool trolley or workbench.

**Contents:**

- Contains one each of the following needle files: hand, three square, square, half-round and round.
- Longer tool life due to harder diamond grain.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.

Grit size		Item no.	Designation
D 91	1	15842051	DF 4205 D 91
D 126	1	15842052	DF 4205 D 126



### Diamond needle file sets

Diamond needle file sets are supplied in a sturdy, practical plastic box which protects the tools from damage. This is ideal for keeping in the tool trolley or workbench.

**Contents:**

- Contains one each of the following needle files: hand, hand with round edges, flat, three square, square, half-round, round, knife, feather edge, crossing oval and barrette.
- Longer tool life due to harder diamond grain.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.

Grit size		Item no.	Designation
D 91	1	15842111	DF 4211 D 91
D 126	1	15842112	DF 4211 D 126



### Diamond riffler file set

The diamond riffler file set is supplied in a sturdy, practical plastic box which protects the tools from damage. This is ideal for keeping in the tool trolley or workbench.



#### Contents:

Contains one each of the following riffler files: crossing oval, hand, square, three square, round.

#### Special features:

- Sturdy plastic box to prevent damage.

Grit size		Item no.	Designation
D 126	1	15816242	DF 1624 D 126

## Diamond handy files



### Diamond handy files, hand

Diamond handy files have a forged shank which allows for use without an additional handle.

#### Special features:

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Hand	10.3	2.8	215	100	D 126	1	15430202	DF 2601 D 126



### Diamond handy files, half-round

Diamond handy files have a forged shank which allows for use without an additional handle.

#### Special features:

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Half-round	12.5	3.8	215	100	D 126	1	15431202	DF 2602 D 126



### Diamond handy files, three square

Diamond handy files have a forged shank which allows for use without an additional handle.

#### Special features:

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Three square	10	215	100	D 126	1	15432202	DF 2607 D 126
				D 181	1	15432203	DF 2607 D 181



### Diamond handy files, square

Diamond handy files have a forged shank which allows for use without an additional handle.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Height with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Square	5.5	5.5	215	100	D 126	1	15433202	DF 2608 D 126



### Diamond handy files, round

Diamond handy files have a forged shank which allows for use without an additional handle.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Profile	Width with coating [mm]	Total length [mm]	Coating length [mm]	Grit size		Item no.	Designation
Round	6.7	215	100	D 126	1	15434202	DF 2610 D 126



### Diamond handy file sets

Diamond handy file sets are supplied in a sturdy, practical plastic box which protects the tools from damage. This is ideal for keeping in the tool trolley or workbench.

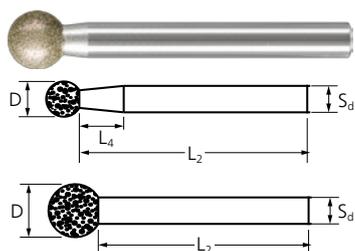
**Contents:**

Contains one each of the following handy files: hand, half-round, three square, square and round.

**Special features:**

- Ideal for work on hardened steel.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

Grit size		Item no.	Designation
D 126	1	15826272	DF 2627 D 126



### Ball shape KU

The ball shape KU is often used in manual applications. This shape is well-suited for engraving, contour grinding and deburring tasks.



#### Special features:

- Ideal for work on tungsten carbide.
- No chemical wear thanks to the low working temperatures.
- Longer tool life due to harder diamond grain.

D [mm]	S <sub>d</sub> [mm]	L <sub>2</sub> [mm]	L <sub>4</sub> [mm]	Grit size		Item no.	Designation
1	3	44	10	D 126	1	36201010	DKU-A 1,0/3 D 126
2	3	43	8	D 126	1	36202010	DKU-A 2,0/3 D 126
3	3	42	6	D 126	1	36203010	DKU-A 3,0/3 D 126

## Diamond grinding discs CC-GRIND SOLID DIAMOND

5



### CC-GRIND SOLID DIAMOND

The CC-GRIND SOLID DIAMOND has been specially developed for applications on hard materials which cannot be machined with conventional tools made of aluminium oxide or silicon carbide.



#### Special features:

- Fast, aggressive grinding with maximum stock removal rate.
- Easy and quick elimination of metal contamination thanks to diamond as a super-hard abrasive.
- Lower dust load due to the dimensional stability of the grinding tool (no tool wear).

D [mm]	H [mm]	Grit size	Max. RPM		Item no.	Designation
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#### Integrated clamping flange set SFS CC-GRIND SOLID/FLEX 115/125 M14

125	22.23	D 852	12,200	1	36612585	CC-GRIND SOLID DIAMOND 125-22.23 D 852
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# Diamond tools for the construction industry

## General information

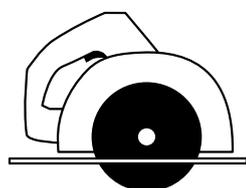


In the demanding world of the construction industry, precision, efficiency and durability are crucial. When it comes to working on hard materials such as concrete, asphalt, granite or tiles, conventional tools will quickly reach their limits. This is where PFERD TOOLS diamond tools come in – the ideal solution for demanding projects. PFERD TOOLS diamond tools achieve clean, precise cuts and perfect surface results – even in the most difficult of applications.

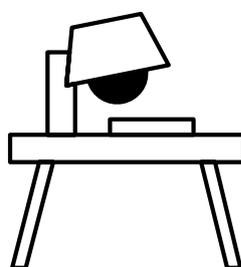
The extensive range of diamond tools for the construction industry comprises cut-off wheels along with dry drill bits and grinding discs in various types, tailored to the application and/or the material to be processed. You can rely on the tried-and-tested PFERD TOOLS quality to make your construction projects safer, more efficient and more successful.



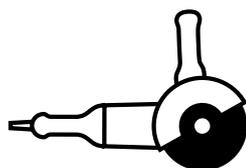
### Suitable tool drives



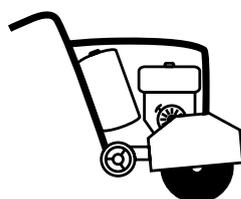
Manual circular saw



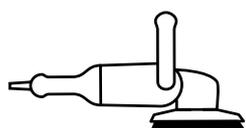
Circular bench saw



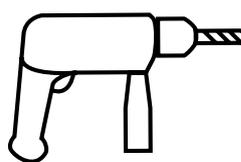
Angle grinder



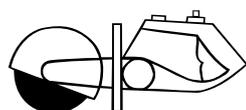
Joint cutter



Concrete grinder



Power drill



Petrol cutter



# Diamond tools for the construction industry

## General information



### Safety notes

- Observe any usage restrictions, warnings and safety notes:



Wear eye protection!



Wear hearing protection!



Wear a dust mask!



Wear gloves!



Follow the safety instructions!



Not permitted for face grinding!



Do not use if damaged!



### Organization for the Safety of Abrasives (oSa)

Together with other renowned manufacturers, PFERD TOOLS has voluntarily undertaken to produce quality tools conforming to the most exacting safety standards. Member companies of oSa (the Organization for the Safety of Abrasives) are committed to continuous product safety and quality monitoring. Products from PFERD TOOLS carry the oSa mark. Scan the QR code for further information.



#### Safety standard:

- PFERD TOOLS diamond tools conform to the highest safety requirements in accordance with EN 13236 "Safety requirements for superabrasive products".

5

### POS packaging

PFERD TOOLS offers diamond tools for the construction industry in promotional individual packaging. The addition of "POS" in the designation indicates all diamond tools in POS packaging.

#### Advantages:

- Functional European standard hole mounting for optimum product presentation on the sales wall.
- Product is easily recognizable through the viewing window.



### Diamond cut-off wheels for the construction industry

PFERD TOOLS diamond cut-off wheels are manufactured in compliance with the highest quality and safety standards. They guarantee optimum cutting results and allow efficient processing of different materials, e.g. concrete, exposed aggregate concrete, clinker brick, hard stone, granite and other abrasive building materials. The product range offers the best tool for any application.



### Explanation of item designation

- ① **Description and shape of the tool:** (see figures on right)
- ② **Outer diameter:** Outer dia. D in [mm]
- ③ **Wheel thickness:** Wheel thickness T in [mm]
- ④ **Bore diameter:** Bore dia. H in [mm]
- ⑤ **PFERD TOOLS product line:** Universal Line PSF

**DS 230 x 2,8 x 22,3 PSF**

- ① ② ③ ④ ⑤

The PFERD TOOLS item designation corresponds to the designation in accordance with EN 13236.

### The quick way to find the perfect tool

Application	Material	Tools	
<b>Aggressive, fast cutting</b>	<ul style="list-style-type: none"> <li>■ Concrete (medium-hard, reinforced, hard)</li> <li>■ Aerated concrete</li> <li>■ Pumice</li> <li>■ Brick</li> <li>■ Soft clinker brick</li> <li>■ Sand-lime brick</li> </ul>	Cut-off wheels of the type DS <ul style="list-style-type: none"> <li>■ Start Line START</li> <li>■ Universal Line PSF</li> <li>■ Performance Line SG</li> <li>■ Special Line SGP</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Asphalt</li> </ul>	Cut-off wheels of the type DS AS <ul style="list-style-type: none"> <li>■ Performance Line SG</li> </ul>	
<b>Easy cutting with high cutting quality</b>	<ul style="list-style-type: none"> <li>■ Fresh concrete</li> <li>■ Screed</li> <li>■ Firebrick</li> </ul>	Cut-off wheels of the type DG <ul style="list-style-type: none"> <li>■ Performance Line SG</li> </ul>	
	<ul style="list-style-type: none"> <li>■ Sandstone</li> <li>■ Clay brick</li> <li>■ Slate</li> <li>■ Granite</li> <li>■ Marble</li> </ul>	Cut-off wheels of the type DG <ul style="list-style-type: none"> <li>■ Start Line START</li> <li>■ Universal Line PSF</li> <li>■ Performance Line SG</li> </ul>	
<b>Cutting without edge breakage</b>	<ul style="list-style-type: none"> <li>■ Glazed tiles</li> <li>■ Ceramic tiles</li> <li>■ Porcelain stoneware</li> <li>■ Slate</li> <li>■ Marble</li> </ul>	Cut-off wheels of the type DG FL <ul style="list-style-type: none"> <li>■ Universal Line PSF</li> <li>■ Performance Line SG</li> </ul>	

### Shapes

PFERD TOOLS diamond cut-off wheels are available in four types tailored to different materials to ensure the best results each time.



- Shape DS**
- Segmented type for fast cutting



- Shape DG**
- Type with continuous rim for easy cutting (TURBO)



- Shape DS AS**
- Segmented type for fast cutting of asphalt



- Shape DG FL**
- Type with continuous rim for very fine cutting, e.g. tiles and glazed tiles

# Diamond tools for the construction industry

## Segmented diamond cut-off wheels for fast cutting



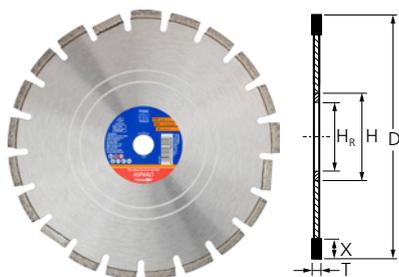
### DS START type

General-purpose segmented-rim tool for aggressive, fast cutting with high cutting performance and a good tool life.

#### Special features:

- High diamond qualities.
- Good cutting characteristics and short cutting times.
- Good ease of cutting and high economic efficiency.

D [mm]	T [mm]	H [mm]	H <sub>R</sub> [mm]	X [mm]	Max. RPM		Item no.	Designation
100	1.6	20	16	7	15,300	1	68300037	DS 100x1.6x16/20 START
115	1.6	22.23	-	7	13,300	1	68300044	DS 115x1.6x22.23 START
125	1.6	22.23	-	7	12,200	1	68300045	DS 125x1.6x22.23 START
178	2	22.23	-	7	8,600	1	68300038	DS 178x2.0x22.23 START
230	2.3	22.23	-	7	6,600	1	68300039	DS 230x2.3x22.23 START
350	3.2	25.4	-	8	5,400	1	68300047	DS 350x3.2x25.4 START
400	3.2	25.4	-	10	4,800	1	68300054	DS 400X3.2X25.4 START
450	3.2	25.4	-	10	4,200	1	68300055	DS 450X3.2X25.4 START



### DS AS PSF type

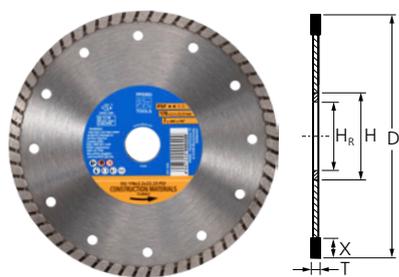
General-purpose segmented-edge tool for the aggressive, fast cutting of asphalt with high cutting performance and an ideal tool life.

#### Special features:

- High diamond qualities.
- Good cutting characteristics and short cutting times.
- Good ease of cutting and high economic efficiency.

D [mm]	T [mm]	H [mm]	X [mm]	Max. RPM		Item no.	Designation
300	2.8	25.4	10	6,400	1	68300058	DS 300X2,8X20/25,4 AS PSF
350	2.8	25.4	10	5,400	1	68300059	DS 350X2,8X25,4 AS PSF
400	3.2	25.4	10	4,800	1	68300060	DS 400X3,2X25,4 AS PSF
450	3.2	25.4	10	4,200	1	68300061	DS 450X3,2X25,4 AS PSF

## Diamond cut-off wheels with continuous edge for easy cutting (TURBO)



### DG START type

General-purpose continuous-rim tool for easy cutting (TURBO) with high cutting performance and a good tool life.

#### Special features:

- High diamond qualities.
- Good cutting characteristics and short cutting times.
- Good ease of cutting and high economic efficiency.

D [mm]	T [mm]	H [mm]	H <sub>R</sub> [mm]	X [mm]	Max. RPM		Item no.	Designation
100	1.9	20	16	7	15,300	1	68300036	DG 100x1.9x16/20 START
125	1.9	22.23	-	7	12,200	1	68300043	DG 125x1.9x22.23 START
178	2.2	22.23	-	7	8,600	1	68300048	DG 178 x 2.2 x 22.23 START
230	2.6	22.23	-	7	6,600	1	68300050	DG 230x2.6x22.23 START

# Diamond tools for the construction industry

## Diamond cut-off wheels with continuous edge for very fine cutting



### DG FL PSF type

General-purpose continuous-edge tool for cutting without edge breakages on workpieces with high-quality surfaces. High cutting performance and ideal tool life.

#### Special features:

- High diamond qualities.
- Excellent cutting characteristics and short cutting times.
- High ease of cutting and economic efficiency.

D [mm]	T [mm]	H [mm]	H <sub>R</sub> [mm]	X [mm]	Max. RPM		Item no.	Designation
100	1.6	20	16	7	15,300	1	68300035	DG 100 x 1,6 x 16/20 FL PSF
115	1.6	22.23	-	7	13,300	1	68300040	DG 115 x 1,6 x 22,23 FL PSF (ZA)
125	1.6	22.23	-	7	12,200	1	68300041	DG 125 x 1,6 x 22,23 FL PSF (ZA)

## Grinding discs



### Diamond grinding disc

Diamond grinding discs are efficient tools for smoothing uneven surfaces, e.g. removing tile adhesive and grinding concrete in preparation for tiling. They are also used for chamfering and edge breaking on stone.



#### Special features:

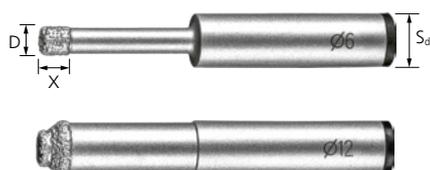
- High diamond qualities.
- Excellent cutting characteristics and short grinding times.
- Very long tool life and high economic efficiency.

D [mm]	H [mm]	X [mm]	Diam. arbor hole with adapter [mm]	Number, rows	Max. RPM		Item no.	Designation
<b>Single row</b>								
100	22.23	6	16	1	15,280	1	68300063	DCW 1R 100x6x16/22.23
125	22.23	6	-	1	12,200	1	68300065	DCW 1R 125x6x22.23
<b>Two rows</b>								
100	22.23	6	16	2	15,280	1	68300066	DCW 2R 100x6x16/22.23
125	22.23	6	-	2	12,200	1	68300068	DCW 2R 125x6x22.23



# Diamond tools for the construction industry

## Diamond for the construction industry Performance Line PSF



### Dry diamond drill bit DPD for power drills

Vacuum-brazed dry diamond drill bits for power drills are ideal for drilling holes into tiles and glazed tiles. The wax filling provides a self-cooling effect.

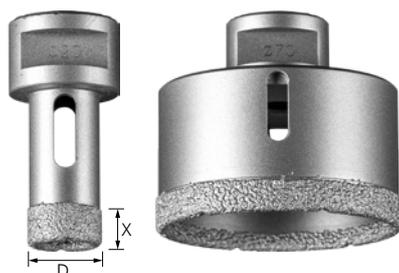


#### Special features:

- Self-cooling effect thanks to wax filling in the drill bit.
- Convenient working and high cutting quality – no edge breakage on workpieces with high-quality surfaces.
- Very secure hold and no slipping in the drill chuck thanks to the hexagonal shank.

D [mm]	Max. workpiece thickness [mm]	X [mm]	S <sub>d</sub> [mm]		Item no.	Designation
5	30	6	12	1	68300091	DPD 5 FL PSF
6	30	6	12	1	68300092	DPD 6 FL PSF
8	30	6	12	1	68300093	DPD 8 FL PSF
10	30	6	12	1	68300094	DPD 10 FL PSF
12	30	6	12	1	68300095	DPD 12 FL PSF

5



### Dry diamond drill bit DCD for angle grinders

Vacuum-brazed dry diamond drill bits DCD are suitable for drilling holes and round recesses in tiles and glazed tiles for water connections, sockets and light switches, for example. With M14 thread for use on 115/125 mm angle grinders.



#### Special features:

- Very long tool life.
- Convenient working and high cutting quality – no edge breakage on workpieces with high-quality surfaces.
- Special coating design protects the drill bit and workpiece from overheating.

D [mm]	Max. workpiece thickness [mm]	X [mm]	Thread	Max. RPM		Item no.	Designation
20	40	10	M14	13,300	1	68300075	DCD 20XM14 FL PSF
22	40	10	M14	13,300	1	68300076	DCD 22XM14 FL PSF
25	40	10	M14	13,300	1	68300077	DCD 25XM14 FL PSF
27	40	10	M14	13,300	1	68300078	DCD 27XM14 FL PSF
30	40	10	M14	13,300	1	68300079	DCD 30XM14 FL PSF
32	40	10	M14	13,300	1	68300080	DCD 32XM14 FL PSF
35	40	10	M14	13,300	1	68300081	DCD 35XM14 FL PSF
38	40	10	M14	13,300	1	68300082	DCD 38XM14 FL PSF
40	40	10	M14	13,300	1	68300083	DCD 40XM14 FL PSF
45	40	10	M14	13,300	1	68300084	DCD 45XM14 FL PSF
51	40	10	M14	13,300	1	68300085	DCD 51XM14 FL PSF
55	40	10	M14	13,300	1	68300086	DCD 55XM14 FL PSF
60	40	10	M14	13,300	1	68300087	DCD 60XM14 FL PSF
65	40	10	M14	13,300	1	68300088	DCD 65XM14 FL PSF
68	40	10	M14	13,300	1	68300089	DCD 68XM14 FL PSF
70	40	10	M14	13,300	1	68300090	DCD 70XM14 FL PSF



### Diamond drilling aid DPD

Mobile drilling aid with suction cup for centring dry diamond drill bits on tiles and other smooth surfaces.

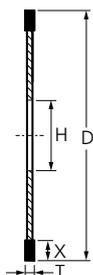


#### Special features:

- Enables optimal alignment of the tile drill bit.
- Thanks to the holder, drilling tools do not slip.
- Creates precise holes with clean cut edges.

Suitable for		Item no.	Designation
Dry diamond drill bit DPD dia. 5–12 mm	1	68300096	DPD 5-12 mm

## Carbide cut-off wheel for general-purpose cutting



### DS Multi Power Carbide type

General-purpose cut-off wheel for effective cutting of many different materials, such as wood with embedded nails, plastics (e.g. pipes), non-ferrous metals and drywall construction materials. The cutting edge made of sharp tungsten carbide grains achieves clean, precise cuts.

#### Special features:

- Ideal choice when changing materials.
- Optimum cutting speed due to consistent diameter and high ease of cutting.
- Long service life thanks to special bonding of the tungsten carbide grain with the steel body.

D [mm]	T [mm]	H [mm]	X [mm]	Max. RPM		Item no.	Designation
125	1.2	22.23	2	12,200	1	68200002	POS MULTI POWER CARBIDE WHEEL DS 125X1,2X22,23

