



Table of contents



Diamond and CBN tools – electroplated bond	
Recommended rotational speed range and safety notes	11
Recommended cutting speeds	10
Comparison of bond types	9
Abrasives, materials, grit sizes	8
The fast way to the best tool	6
General information	4





Customer-specific tool solutions

14





Diamond files

■ Diamond escapement files	1
■ Diamond needle files	1
■ Diamond riffler files	1
■ Diamond handy files	1
Conical diamond files	1
■ Diamond machinist's files	2
■ Flexible diamond files	2
■ Diamond sheets	2

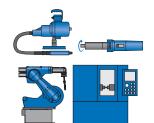




■ Diamond files for manual filing machines

22



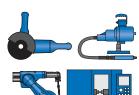


Diamond and CBN grinding points and grinding discs

■ Diamond grinding points	24
■ Diamond grinding discs	29
■ CBN grinding points	30
CBN grinding discs	33

-





Diamond cut-off wheels

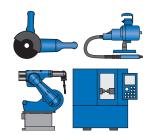
■ Diamond cut-off wheels

34



Table of contents

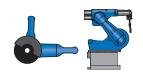




Diamond tools for foundries

■ Diamond cut-off wheels for foundries ■ Diamond grinding points for foundries 36 36





Diamond grinding discs

■ Diamond grinding disc CC-GRIND-SOLID-DIAMOND

38





Diamond sabre saw blades

■ Diamond sabre saw blades

38

Diamond and CBN tools - resinoid bond





Diamond and CBN grinding tools

- Diamond grinding tools
- CBN grinding tools
- Sharpening block
- Customer-specific tool solutions

42 43 44

Diamond cut-off wheels for the construction industry





Diamond cut-off wheels

- Segmented type
- Continuous rim type (TURBO)
- Continuous rim type ■ DSB sharpening block

52 52

50

51

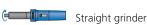
Angle grinder



Machine tools



Filing machine





Manual application files



Sabre saw



Table saw



Robot



Petrol cutter

General information





In use in many industries

The use of efficient tools for work on surfaces and cutting materials is an important factor for ensuring profitability in many processes and industries.

For many materials and applications, tools with super-hard abrasives like diamond or CBN (cubic boron nitride) abrasives provide a cost-effective alternative to conventional tools.

With their high hardness, they have a particularly long tool life and are an established problemsolver in many industries:

- Automotive industry and suppliers
- Energy industry
- Foundries (grey and nodular cast iron)
- Ceramic industry
- Plastics processing (GRP/CRP)
- Machine and plant construction
- Medical equipment

■ Tool and mould construction

■ Tool industry



PFERD quality

PFERD diamond and CBN grinding tools comply with the highest quality and safety requirements and are manufactured and labelled according to the European safety standard EN 13236.

In addition to the high quality standards, occupational health and safety as well as ergonomics play a prominent role.

PFERD quality management is certified according to ISO 9001.



PFERDTOOL-CENTER

On the TOOL-CENTER, the point of sale from PFERD, you will find all the important information required for selecting the most appropriate tool.

Your local retailer or PFERD sales representative will be glad to answer any questions you might have



Packaging

Diamond and CBN tool packaging is matched to the requirements of the industry. It provides the tools with optimum protection against dirt and damage. The packaging units (PU) for the individual tools are listed in the product tables.

Diamond file sets and diamond machinist's files and sheets are supplied in practical, sturdy plastic boxes. These are ideal for storing the tools in the tool trolley or on the workbench.

Particularly large or heavy products made to order are supplied in sturdy wooden crates that protect the tools during transport.





General information

PFERDVALUE - Your added value with PFERD

Results from the PFERD test laboratories as well as from the product tests by independent testing institutes prove: PFERD tools offer measurable added value.

Discover PFERDERGONOMICS and PFERDEFFICIENCY:

As part of **PFERD**ERGONOMICS, PFERD offers ergonomically optimized tools and tool drives that contribute to greater safety and working comfort, and thus to health protection.

O offers As part of **PFERD**EFFICIENCY, PFERD offers I drives innovative, high-performance tool solutions and tool drives with outstanding added value.

For more information on this topic, please refer to our brochure "PFERDVALUE – Your added value with PFERD".

















Resource Saving

Electroplated diamond and CBN tools are characterized by low dust generation.

Diamond machinist's files are supplied with ergonomic file handles.

Associations

PFERD is an active member of the German Abrasives Association (VDS), the Federation of European Producers of Abrasives (FEPA) and the Organization for the Safety of Abrasives (oSa). The national and international activities of those associations include the areas of safety, standardization, classification and quality assurance.







Additional diamond tools with electroplated bonds in the PFERD product range

COMBIDISC diamond abrasive discs:

COMBIDISC is a comprehensive range for work on surfaces. COMBIDISC diamond abrasive discs are ideally suited for work on wear-resistant coatings and hard facings made from tungsten carbide, chromium carbide, titanium carbide, etc.

Diamond hand pads:

Diamond hand pads are ideally suited for grinding work on wear-resistant coatings and hard facings made from tungsten carbide, chromium carbide, titanium carbide, etc.

Further information and ordering data can be found in catalogue section 4.







Diamond and CBN toolsThe fast way to the best tool



General application	Material	Application
Filing	 Hardened steels Tungsten carbide Ceramic Glass Ferrite Nickel- and titanium-based alloys 	Precision filing Precision filing with air-powered filing machines Machining concave and convex surfaces
0 0	■ Fibre-reinforced plastics (GRP/CRP)	Deburring, chamfering and breaking of edges
Grinding	 Tungsten carbide Ceramic Glass Ferrite (magnetic material) Nickel- and titanium-based alloys 	Grinding of bores, radii Grinding of contours, profiles and shoulders, as well as deburring and chamfering
		Internal grinding of bores
	■ Tungsten carbide	Sharpening of tungsten carbide tools
	■ Hardened steel materials from approx. 54 HRC	Grinding of bores, radii, contours, profiles and shoulders, as well as deburring and chamfering
		Internal grinding of bores
	■ HSS (High Speed Steel)	Sharpening of HSS tools
	■ Fibre-reinforced plastics (GRP/CRP)	Deburring, chamfering and general grinding work
	■ Grey and nodular cast iron	Grinding burning-ins, sand inclusions and adhesions
Cutting	 Tungsten carbide Ceramic Glass Ferrite Nickel- and titanium-based alloys 	Cutting
	■ Fibre-reinforced plastics (GRP/CRP)	Cut-off grinding, trimming, making cut-outs and cutting straight contours to size Sawing, trimming, making cut-outs and cutting
	■ Grey and nodular cast iron	curved contours to size Separation of open risers, burrs, feeders, sprues, parting lines, etc.

You can find diamond cut-off wheels for the construction industry on page 48.





Tools	>	Page
Diamond files	OI 3	16
Diamond files for air-powered filing machines		22
Flexible diamond files Diamond sheets		21
	0	
Diamond machinist's files, grit size D 251		20
Electroplated diamond grinding points		24
Diamond grinding disc CC-GRIND-SOLID-DIAMOND		38
Electroplated diamond grinding points, cylindrical shape ZY		24
Electroplated diamond grinding discs		29
Resinoid-bonded diamond grinding discs		40
Electroplated CBN grinding points	ŢŢĬŢŢ	30
Electroplated CBN grinding points, cylindrical shape ZY		30
Electroplated CBN grinding discs	•	33
Resinoid-bonded CBN grinding discs		42
Electroplated diamond grinding points, cylindrical shape with radius end WR, grit size D 357		26
Diamond grinding disc CC-GRIND-SOLID-DIAMOND		38
Grinding points for foundries		36
Diamond cut-off wheels, grit size D64/D151	元 (2) (2) (3)	34
Diamond cut-off wheels, grit size D357/D427	Environment of the second	34
Diamond sabre saw blades	THE REAL PROPERTY AND ADDRESS OF THE PARTY AND	38
Diamond cut-off wheels, grit size D 852		34

Abrasives, materials, grit sizes



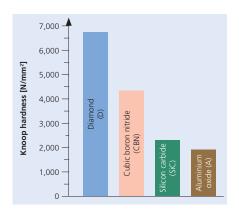
Super-hard abrasives

Diamond and CBN form the group of superhard abrasives.

Diamond is the hardest naturally occurring solid. It consists of pure carbon in a crystalline structure. For grinding tools, the diamonds used are generally synthetic, produced at very high temperatures under high pressure. The properties of the abrasive can be optimized for the subsequent application of the tool.

CBN (cubic boron nitride) is the second-hardest solid known. It consists of boron and nitrogen in a crystalline structure.

For work on certain materials, diamond and CBN tools are an economic alternative to tools with conventional abrasives such as aluminium oxide and silicon carbide. Diamond and CBN grain is much harder and its cutting edges are very resistant to blunting. Diamond and CBN tools therefore enjoy a very long tool life.



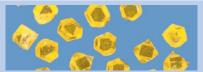
Materials

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.

Using the colour coding system, the abrasive of the tool can be identified immediately.

Diamond = blue



- 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 = red



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

Grit sizes

The grit size data for diamond and CBN tools relates to the average grit diameter in [μ m]. Thus, the higher the number specified in the grit designation, the coarser the grit size. A coarse grit size increases stock removal and the surface roughness of the workpiece.

Selecting the optimum grit size depends on the intended application, the material to be machined, the tool drive employed and a wide range of other factors. As a general rule, the harder the material to be worked and the finer the desired surface roughness, the finer the selected grit size should be.

Grit sizes	Grit design ISO 6106 (FE	Equivalent US mesh number/inch	
	Diamond	CBN	US Mesh Size
Micro-grit	D 25/D30	-	-
Very fine	D 46	B 46	325/400
♦ ♦ ♦ ♦ ♦	D 54	B 54	270/325
	D 64	B 64	230/270
♦▼ ♦ ♦	D 76	B 76	200/230
	D 91	B 91	170/200
Smaller	D 107	B 107	140/170
S	D 126	B 126	120/140
	D 151	B 151	100/120
Ze	D 181	B 181	80/100
Grit size	D 213	B 213	70/80
Ō	D 251	-	60/70
	-	B 252	60/80
ger	D 301	B 301	50/60
_arger	D 357	B 357	45/50
\bigwedge	D 427	B 427	40/50
	D 502	-	35/45
x(+)x	D 602	-	30/40
	D 711	-	25/30
\/a====================================	D 852	-	20/30
Very coarse	D 1001	-	16/20



Comparison of bond types

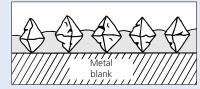
Diamond and CBN tools

Electroplated bond

Resinoid and metal bond

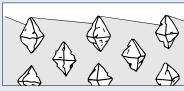












The main characteristic of electroplated tools is the monolayer coating with diamond or CBN grit. The coating is provided by the fixation of abrasive grit onto a metal blank via an electrochemically deposited nickel layer. The nickel layer thickness is around half of the grit diameter used.

The abrasive coating of resinoid-bonded diamond and CBN tools consists of abrasive grit, bond and fillers. The bond is tightly pressed, i.e. it has no pores.

The metal bond is closely related to the resinoid bond. It is characterized by a higher grit retention strength and dimensional stability when compared to the resinoid bond.

Tool construction

Bond type

■ Shorter work time due to the coating type

- Reduction in unproductive idle times because dressing and profiling are not required
- Reduction in tool costs due to the monolayer coating and the possibility of recoating
- Individual tool profiles
- Constant tool geometry due to the monolayer coating

Further information on the advantages of electroplated grinding tools can be found on page 13.

Resinoid bond:

- The characteristics of the resinoid bond can be optimally adjusted to the application
- Easy to dress

Metal bond:

■ High dimensional stability and wear resistance

Applications

Electroplated tools are problem solvers for work on various materials, such as particularly hard or abrasive materials. Among other things, the characteristics of the electrochemically coated tools can be adapted to the application through the selection of the grit sizes.

Electroplated diamond and CBN tools are used for both wet and dry grinding.

Resinoid-bonded diamond and CBN grinding discs are often used for grinding, i.e. sharpening tungsten carbide or HSS tools, as well as in other production grinding processes.

Metal-bonded tools are used for grinding glass and industrial

Resinoid and metal-bonded diamond and CBN tools are used for both wet and dry grinding, according to the tool specification.

Pages 12-38

Pages 39-47

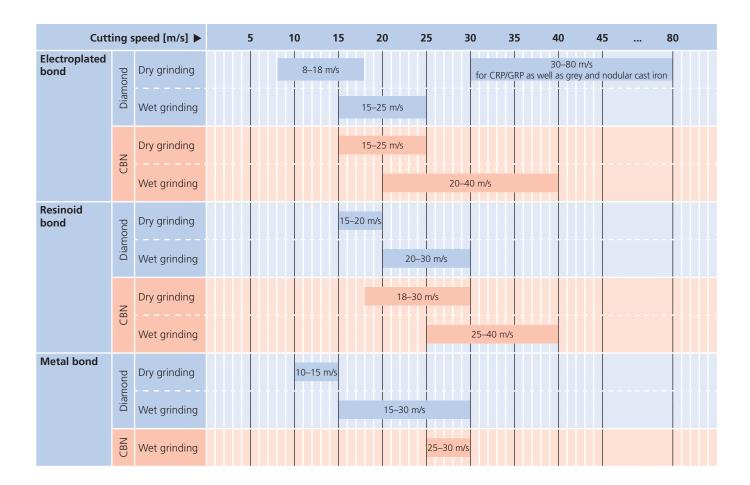
Recommended cutting speeds

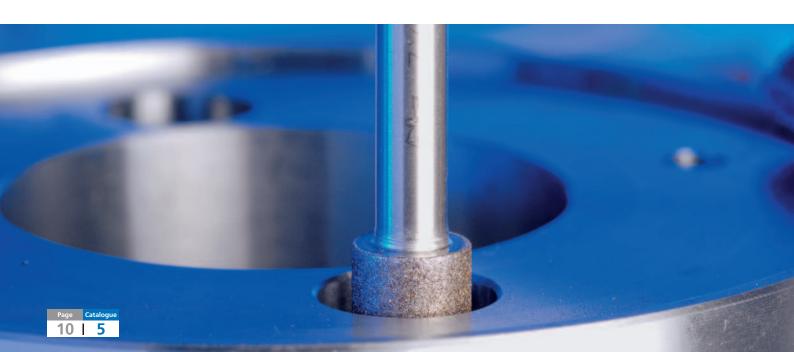


The recommended cutting speed ranges depend on the application and must not exceed the maximum permissible peripheral speed. Because of the wide range of tasks and application fields of electroplated diamond and CBN tools, as well as the large influence of the employed tool drive, it is not possible 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 value of the tools in use.
- All parameters must always be coordinated with each other within the grinding process. If the cutting speed is changed, among others the feed, infeed and coolant supply 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.





Recommended rotational speed range and safety notes

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 off: 23,900 RPM

	Cutting speed [m/s]											
Tool dia. [mm]	8	12	15	18	20	25	30	40	50	80	100	125
[]					Rotatio	nal speed r	ounded of	f [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

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!

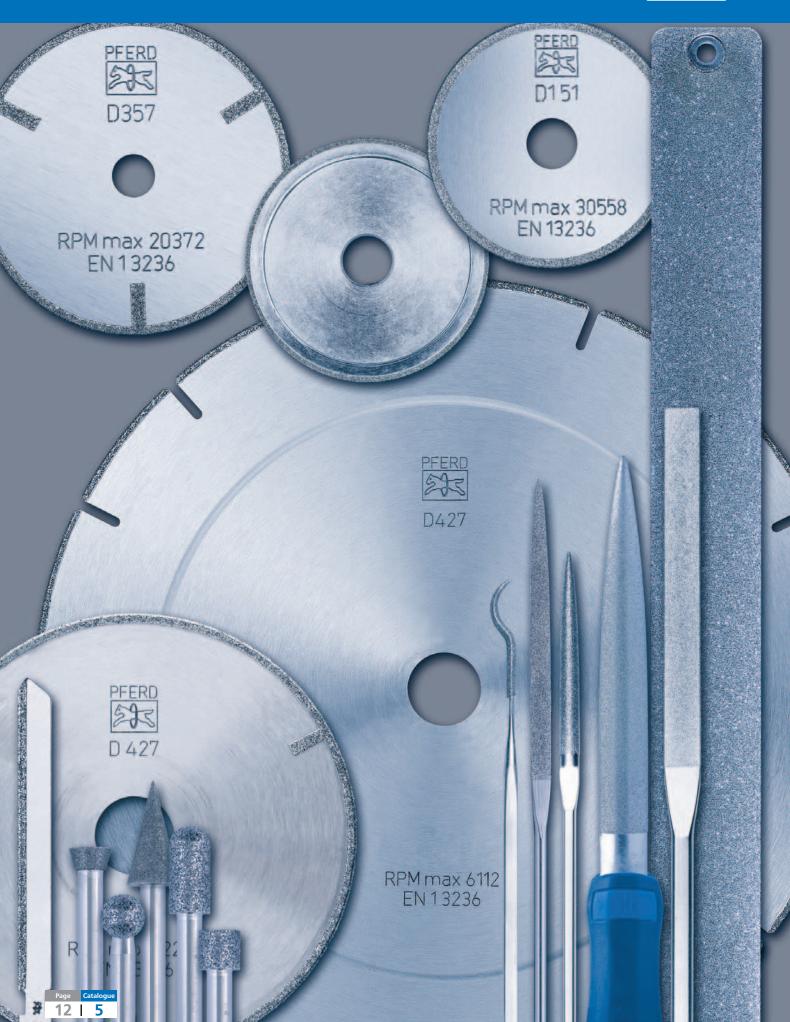


= Read the safety instructions!











General information

The advantages of electroplated diamond and CBN grinding tools

Individual tool geometry



■ Since virtually any machine-produced tool blank geometry can be used, electroplated diamond and CBN tools offer maximum flexibility in terms of tool profiles.

Shorter processing time



■ The individual diamond or CBN grit projects well out of the electroplated bond. The resulting large chip spaces reduce tool loading while delivering very high stock removal. In conjunction with a sharp-edged super-hard grit, they guarantee maximum cutting characteristics and a very high stock removal rate.

Constant tool geometry



■ The tool geometry of electroplated tools is retained thanks to the monolayer coating. This eliminates time-consuming profiling. The constant tool diameter enables work on deep-lying areas for a large number of workpieces, minimizes the formation of dust and allows use on robots.

Reduction in unproductive idle time

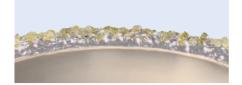


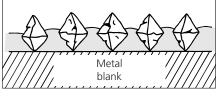
- The combination of the super-hard diamond or CBN abrasives and an electroplated bond results in a very long tool life and thus a reduction in tool changing times.
- No expensive and complicated dressing. Electroplated diamond and CBN tools are ready for immediate use thanks to their monolayer coating.

Reduction in tool costs



- Electroplated tools are less expensive than tools with other bond types due to their monolayer coating. They also provide an economic solution for the production of small batch sizes.
- Complex and/or large tool blanks can be recoated and reused.

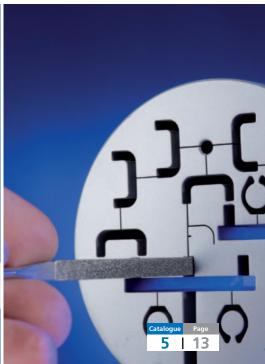












Customer-specific tool solutions





PFERD specializes in consultancy 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 tool solutions for your applications.

Get the best possible advice for super-hard solutions!

1. Process analysis and tool development

Contact us at 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 analyse 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:

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 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 offers recoating of blunt tools with steel or stainless steel blanks as an economic alternative to replacement production.

Tools with brass blanks cannot be recoated.

3. Use

2. Production

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 PFERD tools for yourself!

PFERD offers comprehensive information on various topics related to cutting and work on surfaces.

In our **PRAXIS brochure "PFERD tools for use on plastics"** you will find lots of information about plastics and their properties, valuable practical tips and tricks, as well as the appropriate tools which meet the high demands of this material.

Please contact us for further details!

In the brochure "Electroplated diamond tools – economical processing of grey and nodular cast iron" we have combined our standard and special product range for use on grey and nodular cast iron.































Diamond files and sheets





Diamond files and sheets are used particularly successfully for tasks where conventional files fail due to the hardness of the material to be worked.

Recommendations for use:

Apply only slight pressure to the file, especially in workpiece edge areas.

- Loaded diamond files can be cleaned in kerosene or anti-static plastic cleaner with a file brush. Alternatively, ultrasonic cleaning is also possible. Often it will suffice to knock the file against a hard object.
- Avoid contact with grease when using files!

Note:

Diamond files and sheets are also used for processing hardened steel. The working temperatures are so low that no chemical wear occurs. This allows the higher hardness of the diamond grain to be exploited for a longer

Ordering notes:

■ Please complete the description with the desired grit size.

Diamond escapement files



Diamond escapement files

Diamond escapement files are used on very small shapes in tool making and precision mechanics. They have a forged shank which allows use without an additional handle. Grit sizes D 25 and D 46 provide ultra-fine surface finishes.

PFERDVALUE:



Profile	Cross section	Overall	Coating	Grit size				\Rightarrow	Description
	with coating	length	length	D 25	D 46	D 91	D 126		
	[mm]	[mm]	[mm]		EAN 4007220				
half-round	4.2 x 1.5	140	40	535530	323625	254622	254639	1	DF 3608
crossing oval	3.8 x 1.8	140	40	535516	323632	254462	254479	1	DF 3609
barrette	4 x 1.2	140	40	535509	323649	254493	254509	1	DF 3610
three square	3	140	40	535561	323656	254554	254578	1	DF 3614
hand	4 x 1.2	140	40	535578	323663	254523	254530	1	DF 3617
square	2 x 2	140	40	535547	323670	254592	254608	1	DF 3619
round	1.8	140	40	535523	323687	254653	254660	1	DF 3621



Diamond escapement file sets

Diamond escapement 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:

- 1 piece each:
- DF 3608 (half-round)
- DF 3614 (three square) ■ DF 3617 (hand)
- DF 3619 (square)
- DF 3621 (round)



	Grit		Description		
D 25	D 46				
	EAN 40				
535639	323700	323694	017364	1	DF 3090

Diamond needle files

Diamond needle files

Diamond needle files are designed for general use in tool making.

Diamond needle files in extra slim design (S) are particularly suitable for work on deep-set and narrow contours.

Accessories:

- Quick-mounting handle SH 220 (EAN 4007220**806555**)
- Needle file holder NFH 212 (EAN 4007220**669532**)



Profile	Cross section	Overall	Coating		Grit size			Description	
	with coating	length	length	D 91	D 126	D 181			
	[mm]	[mm]	[mm]		EAN 4007220)			
Needle files, extra slim (S)									
hand	5.3 x 1.3	140	70	-	806227	-	1	DF 4112S	
three square	2.8	140	70	-	806258	-	1	DF 4132S	
square	2.3	140	70	-	806289	-	1	DF 4142S	
round	2.8	140	70	-	806319	-	1	DF 4162S	
Needle files									
hand	5.5 x 1.6	140	70	016664	016671	016688	1	DF 4112	
hand with rounded edges	5.5 x 1.6	140	70	016695	016701	016718	1	DF 4112R	
flat	5.5 x 1.6	140	70	016725	016732	016749	1	DF 4122	
three square	3.5	140	70	016756	016763	016770	1	DF 4132	
square	2.6 x 2.6	140	70	016787	016794	016800	1	DF 4142	
half-round	5.5 x 1.6	140	70	016817	016824	016831	1	DF 4152	
round	3.2	140	70	016848	016855	016862	1	DF 4162	
knife	5 x 1.8	140	70	016879	016886	016893	1	DF 4172	
feather edge	5 x 2.4	140	70	016909	016916	-	1	DF 4182	
crossing oval	5 x 2.2	140	70	016930	016947	-	1	DF 4192	
barrette	5 x 2	140	70	016633	016640	-	1	DF 4102	

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 DF 4205:

- 1 piece each:
- DF 4112 (hand)
- DF 4132 (three square)
- DF 4142 (square)
- DF 4152 (half-round)
- DF 4162 (round)

Contents DF 4211:

- 1 piece each:
- DF 4112 (hand)
- DF 4112R (hand with rounded edges)
- DF 4122 (flat)
- DF 4132 (three square)
- DF 4142 (square)
- DF 4152 (half-round)
- DF 4162 (round)
- DF 4172 (knife)
- DF 4182 (feather edge)
- DF 4192 (crossing oval)
- DF 4102 (barrette)

	■ D1 4102	(barrette)		
	Grit size			Description
D 91	D 126	D 181		
	EAN 4007220			
017371	017388	017395	1	DF 4205
017401	017418	017425	1	DF 4211



Diamond riffler files





Diamond riffler files

Diamond riffler files are used for work in hard-to-reach areas and on complex geometries. The coating length is 25 mm on both sides of the files.

Accessories:

■ Riffler file holder RFH 150 (EAN 4007220**015322**)



Profile	Cross section		sided coating	Grit	size	\Rightarrow	Description
	with coating			D 91	D 126		
	[mm]	[mm] length EAN 4		EAN 4	007220		
crossing oval	3.2 x 2	150	25	017029	017036	1	DF 15
	3.7 x 2	150	25	017050	017067	1	DF 16
hand	3.1 x 3	150	25	017081	017098	1	DF 18
square	2.5 x 2.5	150	25	017111	017128	1	DF 20
three square	3	150	25	017142	017159	1	DF 22
round	3	150	25	017173	017180	1	DF 24
hand	3.8 x 1.6	150	25	016961	016978	1	DF 914
	4 x 2	150	25	016992	017005	1	DF 918



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:

1 piece each:

■ DF 16 (crossing oval)

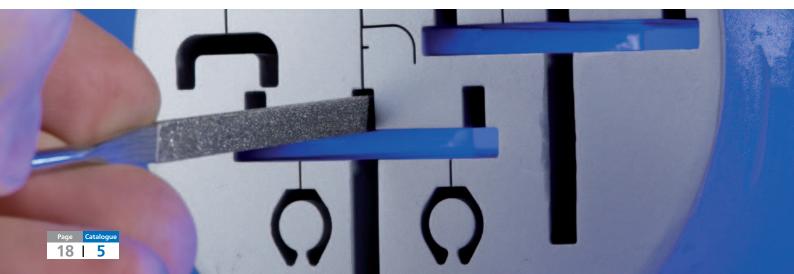
■ DF 18 (hand)

■ DF 20 (square)

■ DF 22 (three square)

■ DF 24 (round)

Grit size		Description		
D 126				
EAN 4007220				
355381	1	DF 1624 D 126		





Diamond handy files

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

PFERDVALUE:





Diamond and CBN tools electroplated bond

Profile	Profile Cross section Overall Coating Grit size		size	\Rightarrow	Description		
	with coating	length	length	D 126	D 181		
	[mm]	[mm]	[mm]	EAN 4007220			
hand	10.3 x 2.8	215	100	017302	535455	1	DF 2601
half-round	12.5 x 3.8	215	100	017319	535462	1	DF 2602
three square	10	215	100	017326	535479	1	DF 2607
square	5.5 x 5.5	215	100	017333	535486	1	DF 2608
round	6.7	215	100	017340	535493	1	DF 2610

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:

1 piece each:

■ DF 2601 (hand)

■ DF 2602 (half-round)

■ DF 2607 (three square)

■ DF 2608 (square)

■ DF 2610 (round)

PFERDVALUE:





Gri	t size	\blacksquare	Description	
D 126	D 181			
EAN	1007220			
017357	535585	1	DF 2627	

Conical diamond files

Conical diamond files

The conical diamond files are used on particularly narrow, deep contours in toolmaking. Because of the forged shank, they can be used without a handle.



Width	Thickness	Thickness	Overall	Coating		Grit size		\Longrightarrow	Description
A	В	B ₁	length	length	D 46	D 91	D 126		
[mm]	[mm]	[mm]	[mm]	[mm]		EAN 4007220			
4.0	2.0	0.5	170	50	070635	070659	070666	1	DF-K 170-4-2-0,5
6.0	2.4	0.5	170	50	070673	070680	070697	1	DF-K 170-6-2,4-0,5
8.0	2.4	0.5	170	50	070703	070710	070727	1	DF-K 170-8-2,4-0,5
10.0	2.5	0.5	170	50	070734	070741	070758	1	DF-K 170-10-2 5-0 5

Diamond machinist's files





Diamond machinist's files

Diamond machinist's files are used, among other industries, in large tool construction. Grit size D 251 is also suitable for work on fibre-reinforced plastics (GRP/CRP). Diamond machinist's files are supplied with an

Diamond machinist's files are supplied with an ergonomic handle.





Profile	Cross section	Overall	Coating length		Grit size		\Longrightarrow	Description
	with coating	length		D 126	D 151	D 251		
	[mm]	[mm]	[mm]	EAN 4007220				
hand	10 x 3.2	100	85	255117	805954	805961	1	DF 1112/100
	11.2 x 4.2	125	110	255131	955888	-	1	DF 1112/125
	13 x 5	150	135	255155	805978	805985	1	DF 1112/150
	22.5 x 5.5	200	180	-	017203	017210	1	DF 1112/200
three square	7	100	85	255179	955895	-	1	DF 1132/100
	14	200	180	-	017227	017234	1	DF 1132/200
square	7.5 x 7.5	200	180	-	017241	-	1	DF 1142/200
half-round pointed	12 x 4	100	85	255193	955901	-	1	DF 1152/100
	22 x 6.5	200	180	-	017265	017272	1	DF 1152/200
round	8	200	180	-	017289	-	1	DF 1162/200







Flexible diamond files

Flexible diamond files

The flexible diamond files perfectly adapt to the workpiece surface. Due to its flexibility, they can be used in convex and concave contours with small radii.

Recommendations for use:

■ Only use files up to a bending radius of 15 mm.



Cross section	Overall length	Coating type		Grit size	\triangleright	Description	
with coating	[mm]		D 76	D 126			
[mm]				EAN 4007220			
0.5 x 14	165	one side	004920	004951	004968	5	DF-FLEX 14-165

Diamond sheets

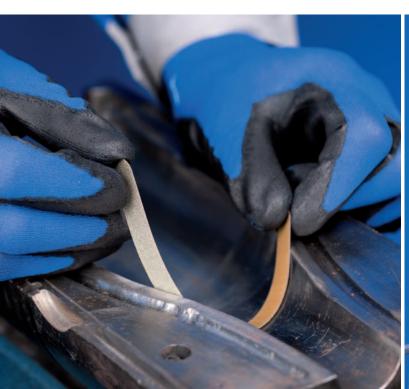
Diamond sheets

The diamond sheets are exceptionally well suited to work on larger surfaces. Convex and concave contours can be worked on with relatively little effort.



Cross section	Overall length [mm]	5 71	Grit	size	\longrightarrow	Description
with coating			D 64	D 126		
[mm]			EAN 4007220			
0.7 x 30	170	complete	806371	955925	1	DBL 30-0,7-170
1.3 x 35	350	complete	955918	806388	1	DBL 35-1,3-350







Diamond and CBN tools electroplated bondDiamond files for manual filing machines



	-				Diamond files for manual filing machines
DF 5301–5309	DF 5390–5392		DF 5352–5362	0	Diamond files for manual filing tools are suitable for use in machines, as well as for hand filing.
DF 5310-5314	DF 5331–5347	0	DF 5380-5382	∇	The shank diameter of the diamond files is 3 mm.
DF 5316	DF 5365–5375		DF 0103, DF 0106		Accessories: Air-powered filing machine PFGA 07/220 (EAN 4007220 657638): For detailed information and ordering data, please refer to catalogue section 9

Profile	Cross section with coating [mm]	Overall length [mm]	Coating length [mm]	Coating type	Grit size D 126 EAN 4007220		Description
hand	2 x 1	50	15	one side	256718	1	DF 5301 D 126
	3 x 1	50	15	one side	256749	1	DF 5303 D 126
	4 x 1	50	15	one side	256817	1	DF 5305 D 126
	5 x 2	50	15	one side	256848	1	DF 5307 D 126
	5 x 2	60	25	one side	256879	1	DF 5309 D 126
	2 x 1	50	15	both sides	256909	1	DF 5310 D 126
	3 x 1	50	15	both sides	256930	1	DF 5311 D 126
	4 x 1	50	15	both sides	256961	1	DF 5312 D 126
	5 x 2	50	15	both sides	256992	1	DF 5313 D 126
	5 x 2	60	25	both sides	257029	1	DF 5314 D 126
	0.5 x 4	50	15	face side	257050	1	DF 5316 D 126
square	1.5 x 1.5	50	15	complete	257296	1	DF 5390 D 126
	3 x 3	50	15	complete	257326	1	DF 5391 D 126
	4 x 4	50	15	complete	257357	1	DF 5392 D 126
round	1	50	15	complete	257418	1	DF 5331 D 126
	2	50	15	complete	257449	1	DF 5335 D 126
	3	50	15	complete	257470	1	DF 5339 D 126
	4	50	15	complete	257500	1	DF 5345 D 126
	2	60	25	complete	257531	1	DF 5337 D 126
	3	60	25	complete	257562	1	DF 5343 D 126
	4	60	25	complete	257593	1	DF 5347 D 126
three square	2	50	15	complete	257173	1	DF 5365 D 126
	3.5	50	15	complete	257203	1	DF 5367 D 126
	3.5	60	25	complete	257234	1	DF 5371 D 126
	4.5	60	25	complete	257265	1	DF 5375 D 126
crossing oval	2 x 1	50	15	complete	257623	1	DF 5352 D 126
	3.5 x 2	50	15	complete	257654	1	DF 5356 D 126
	6 x 3	50	12	complete	257685	1	DF 5360 D 126
	3.5 x 2	60	25	complete	257715	1	DF 5358 D 126
	6 x 3	60	25	complete	257746	1	DF 5362 D 126
knife	1 x 4	50	15	complete	257777	1	DF 5380 D 126
	2 x 6	50	15	complete	257807	1	DF 5382 D 126
flat conical	3.3 x 1	55	16	complete	665862	1	DF 0103 D 126
	6.3 x 1	55	16	complete	665879	1	DF 0106/55 D 126
	6.3 x 1	73	16	complete	665886	1	DF 0106/73 D 126



General information – Diamond and CBN grinding tools

Powered tools

Matching tool drives:

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

Conditions for use:

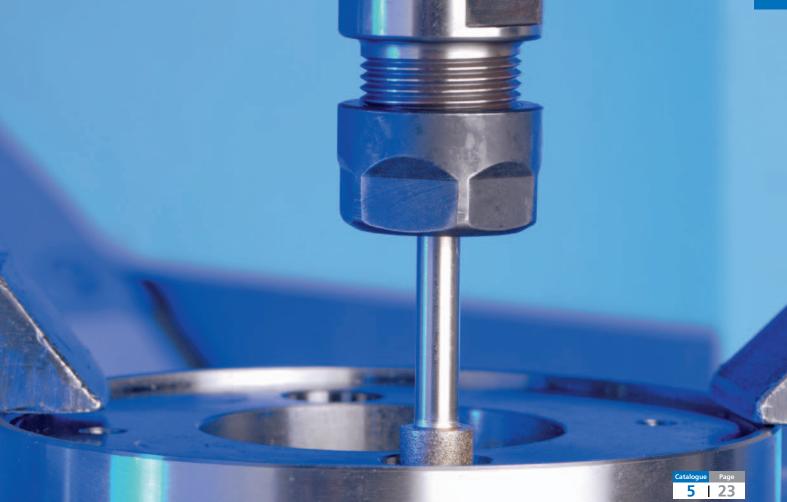
- Because of the monolayer coating, drive spindles and tool holders must have a high concentricity. The finer the grit size used, the more accurate the concentricity needs to be.
- The tool drive must have sufficient drive output on the grinding spindle to ensure the required rotational speed, even under load.
- For stationary tool drives, the tool machine, tool and workpiece holder must be sufficiently rigid.
- The workpiece must be mounted stable.

Recommendations for use:

- Electroplated diamond and CBN tools can be used for both dry and wet grinding. If possible, wet grinding is to be preferred in order to reduce tool wear and the risk of thermal damage.
- Generally, the following applies: For optimum profitability, select a grit size that is as coarse as possible and as fine as necessary. Influencing factors include the hardness of the material and the surface quality required.
- Loaded tools can be cleaned using ultrasound. In the event of strong contamination on the coating, please clean using the sharpening block DSB 2005025 (EAN 4007220**168332**). More detailed information and ordering data can be found on page 52.
- Select as large a tool diameter as possible, since this increases the number of diamond or CBN grit that engage the workpiece. For internal grinding, the maximum tool diameter is 3/4 of the diameter to be ground.
- The longitudinal feed rate for internal grinding must not exceed 2/3 of the total width per workpiece rotation. The infeed depends on the material to be machined, the cutting speed, the stability of the tool, its holder and the tool drive.

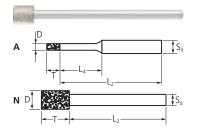








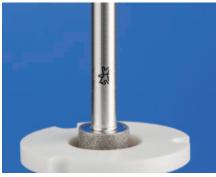




Cylindrical shape ZY

The cylindrical shape ZY is suitable for grinding bores, radii and contours using stationary or handheld equipment. Grinding points with a diameter of 8 mm or more have a recess on the front surface.

A = stepped shank N = non-stepped shank



Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s

Ordering notes:

■ Please complete the description with the desired grit size.











DxT	Sd	L,	L,		Grit	size		\Longrightarrow	Description	
[mm]	S _d [mm]	[mmj̈́	[mm]	D 64	D 91	D 126	D 181		·	
					EAN 40	007220				
Shank dia. 3 m	m									
0.5 x 2	3	38	5	354322	-	-	-	5	DZY-A 0,5-2/3	
0.8 x 2	3	38	5	354339	-	-	-	5	DZY-A 0,8-2/3	
1.0 x 4	3	36	9	354346	257883	257890	-	5	DZY-A 1,0-4/3	
1.2 x 4	3	36	9	354353	354360	354377	-	5	DZY-A 1,2-4/3	
1.4 x 4	3	36	9	354384	354391	354407	-	5	DZY-A 1,4-4/3	
1.6 x 4	3	36	10	-	354421	354438	-	5	DZY-A 1,6-4/3	
1.8 x 4	3	36	10	-	354452	354469	-	5	DZY-A 1,8-4/3	
2.0 x 4	3	36	10	354476	260784	119181	-	5	DZY-A 2,0-4/3	
2.2 x 4	3	36	14	-	354490	354506	-	5	DZY-A 2,2-4/3	
2.4 x 4	3	36	14	-	354520	354537	-	5	DZY-A 2,4-4/3	
2.6 x 4	3	36	14	-	354551	354568	-	5	DZY-A 2,6-4/3	
2.8 x 4	3	36	14	-	354582	354599	-	5	DZY-A 2,8-4/3	
3.0 x 4	3	36	19	354605	260821	119204	-	5	DZY-A 3,0-4/3	
3.5 x 5	3	45	-	-	260845	119211	-	5	DZY-N 3,5-5/3	
4.0 x 5	3	45	-	-	260869	119228	260876	5	DZY-N 4,0-5/3	
4.5 x 5	3	45	-	-	260883	119235	-	5	DZY-N 4,5-5/3	
5.0 x 5	3	45	-	-	260906	119242	260913	5	DZY-N 5,0-5/3	
5.5 x 6	3	44	-	-	257944	257951	257968	5	DZY-N 5,5-6/3	
Shank dia. 6 m	m									
6.0 x 6	6	54	19	-	260920	119259	260937	1	DZY-A 6,0-6/6	
7.0 x 8	6	52	-	-	-	119266	-	1	DZY-N 7,0-8/6	
8.0 x 8	6	52	-	-	260968	119273	260975	1	DZY-N 8,0-8/6	
9.0 x 8	6	52	-	-	-	258040	-	1	DZY-N 9,0-8/6	
10.0 x 8	6	52	-	-	260982	119280	260999	1	DZY-N 10,0-8/6	
12.0 x 8	6	52	-	-	261002	119297	261019	1	DZY-N 12,0-8/6	
15.0 x 10	6	50	-	-	-	119303	-	1	DZY-N 15,0-10/6	
18.0 x 10	6	50	-	-	-	258163	-	1	DZY-N 18,0-10/6	
20.0 x 10	6	50	-	-	-	258194	-	1	DZY-N 20,0-10/6	
Shank dia. 10 ı	mm									
15.0 x 10	10	110	-	-	-	355091	-	1	DZY-N 15,0-10/10	
Shank dia. 12 ı	nm									
25.0 x 10	12	110	-	-	-	355138	-	1	DZY-N 25,0-10/12	



Diamond and CBN tools electroplated bond Diamond grinding points

Special shape ZY

The special shape ZY is suitable for grinding slits and grooves in hard-to-reach areas.

Recommendations for use:

■ Dry grinding: 8–18 m/s

■ Wet grinding: 15–25 m/s

Ordering notes:

■ Please complete the description with the desired grit size.

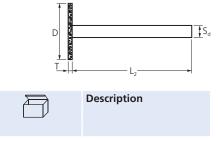
PFERDVALUE:











DxT	S _d	L_2	Grit	size		Description
[mm]	[mm]	[mm]	D 64	D 91		
			EAN 4	007220		
Shank dia. 3 mm						
8.0 x 0.5	3	35	353240	-	1	DZY-N 8,0-0,5/3
14.0 x 0.5	3	35	353257	-	1	DZY-N 14,0-0,5/3
14.0 x 1	3	35	353264	353271	1	DZY-N 14,0-1,0/3

Spherical shape KU

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

A = stepped shank

N = non-stepped shank

Recommendations for use:

■ Dry grinding: 8–18 m/s

■ Wet grinding: 15–25 m/s

Ordering notes:

■ Please complete the description with the desired grit size.

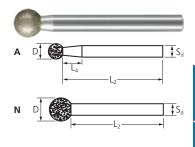










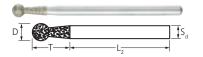


_									
D	S _d	L ₂	L ₄		Grit	size		\blacksquare	Description
[mm]	[mm]	[mm]	[mm]	D 64	D 91	D 126	D 181		
					EAN 40	007220			
Shank dia. 3 mi	n								
1.0	3	44	10	354926	258620	258637	258644	5	DKU-A 1,0/3
2.0	3	43	8	354933	258651	258668	258675	5	DKU-A 2,0/3
3.0	3	42	6	354940	258682	258699	258705	5	DKU-A 3,0/3
4.0	3	41	5	-	258712	258729	258736	5	DKU-A 4,0/3
5.0	3	40	2	-	258743	258750	258767	5	DKU-A 5,0/3
6.0	3	39	-	-	258774	258781	258798	1	DKU-N 6,0/3
Shank dia. 6 mr	n								
8.0	6	52	10	-	-	258842	-	1	DKU-A 8,0/6
10.0	6	50	5	-	-	258903	-	1	DKU-A 10,0/6
12.0	6	48	-	-	-	258965	-	1	DKU-N 12,0/6



Diamond grinding points





Special shape KU

The special shape KU is often used for deburring plastic profiles in manual applications. This shape is also coated with grit under the ball-shaped part of the grinding point on the stepped shank. The special shape of the tool provides optimum results when machining profiles.

Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s

PFERDVALUE:

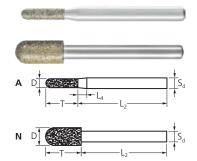








D x T [mm]	S _d [mm]	L ₂ [mm]	Grit size D 181		Description	
			EAN 4007220			
Shank dia. 3 mm						
3.0 x 10	3	40	353844	1	DKU 3,0-10/3 D 181	
4.0 x 10	3	40	353868	1	DKU 4,0-10/3 D 181	



Cylindrical shape with radius end WR

The cylindrical shape with radius end WR is best suited to manual applications and can be used for a wide variety of deburring and grinding tasks. Coarse grit size D 357 is especially well suited to use on fibre-reinforced plastics (GRP/CRP).

A = stepped shank

N = non-stepped shank

Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s

Ordering notes:

■ Please complete the description with the desired grit size.

PFERDVALUE:









DxT	S _d	L ₂	L ₄	L ₄ Grit size		\Longrightarrow	Description
[mm]	[mm]	[mm]	[mm]	D 126	D 357		
				EAN 40	007220		
Shank dia. 6 mm							
5.0 x 18	6	50	5	955932	353981	1	DWR-A 5,0-18/6
6.0 x 18	6	50	5	955949	353998	1	DWR-A 6,0-18/6
10.0 x 20	6	50	-	955956	354001	1	DWR-N 10,0-20/6



More PFERD tools and tips and tricks for work on plastics can be found in our PRAXIS brochure "PFERD tools for use on plastics". Please contact us.



Diamond grinding points

Pointed tree shape SPG

The pointed tree shape SPG is exceptionally well suited to machining small holes or bores as well as for engraving work.

Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s

PFERDVALUE:









D x T [mm]	S _d [mm]	L ₂ [mm]	Grit size D 126 EAN 4007220		Description
Shank dia. 3 mm					
3.0 x 7	3	43	536421	1	DSPG 3,0-7/3 D 126
3.0 x 13	3	37	806203	1	DSPG 3,0-13/3 D 126
Shank dia. 6 mm					
6.0 x 18	6	50	955963	1	DSPG 6,0-18/6 D 126

Cup shape KT

The cup shape KT is ideal for work on profiles, planar surfaces and ledges, without the cylindrical surface being damaged.

Recommendations for use:

- Dry grinding: 8–18 m/sWet grinding: 15–25 m/s



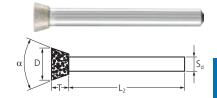












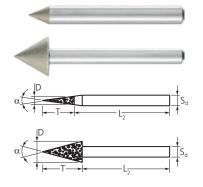


D x T [mm]	α	S _d [mm]	L ₂ [mm]	Grit size D 126 EAN 4007220		Description
Shank dia. 3 mm						
3.0 x 7	8°	3	43	354018	1	DKT 3,0-8°/3 D 126
Shank dia. 6 mm						
10.0 x 5	30°	6	50	354025	1	DKT 10,0-30°/6 D 126









Conical pointed shape SK

The conical pointed shape SK is exceptionally well suited to deburring bores, regrinding centring holes and chamfering.



Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s

Ordering notes:

■ Please complete the description with the desired grit size.

PFERDVALUE:









DxT	α	S _d	L ₂	Grit size		\longrightarrow	Description	
[mm]		[mm]	[mm]	D 64	D 64 D 126			
				EAN 4	007220			
Shank dia. 6 mm								
6.0 x 45	7°	6	50	354049	955970	1	DSK 6,0-7°/6	
6.0 x 26	12°	6	50	354056	955987	1	DSK 6,0-12°/6	
6.0 x 21	15°	6	50	354063	955994	1	DSK 6,0-15°/6	
6.0 x 11	30°	6	50	354032	354070	1	DSK 6,0-30°/6	
6.0 x 5	60°	6	50	393390	956007	1	DSK 6,0-60°/6	
10.0 x 9	60°	6	50	806128	806135	1	DSK 10,0-60°/6	
10.0 x 5	90°	6	50	806142	806159	1	DSK 10,0-90°/6	
15.0 x 13	60°	6	50	806166	806173	1	DSK 15,0-60°/6	
15.0 x 7.5	90°	6	50	806180	806197	1	DSK 15,0-90°/6	



Diamond grinding point set

The set contains 10 diamond grinding points with grit size D 126 in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 1 piece each:
- DZY-A 1,0-4/3 D126
- DZY-A 2,0-4/3 D126
- DZY-N 4,0-5/3 D126
- DZY-N 5,0-5/3 D126
- DZY-N 14,0-1,1/3 D126
- DKU-A 2,0/3 D126
- DKU-A 4,0/3 D126DKU-N 6,0/3 D126
- DSPG 3,0-7,0/3 D126
- DKT 3,0-8G/3 D126

Recommendations for use:

- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s









S _d [mm]	Grit size D 126 EAN 4007220		Description
3	103845	1	D-Set/3 D126

Diamond grinding discs

Grinding discs 1A1

Diamond grinding discs are intended for use on stationary machines. Grinding discs with an outer diameter of 18 mm or more have an additional centring shoulder which allows them to be accurately mounted and aligned on the machine spindle. Combined with a stable mandrel, these tools are ideal for work in deep-set or long bores.

Recommendations for use:

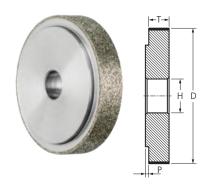
- Dry grinding: 8–18 m/s
- Wet grinding: 15–25 m/s











D x T [mm]	H [mm]	P [mm]	Grit size D 151 EAN 4007220		Description
12.0 x 10	8	-	665893	1	D1A1 12-10-8 D 151
14.0 x 10	8	-	665961	1	D1A1 14-10-8 D 151
16.0 x 10	8	-	665978	1	D1A1 16-10-8 D 151
18.0 x 10	8	2	665992	1	D1A1 18-10-8 D 151
20.0 x 10	8	2	354629	1	D1A1 20-10-8 D 151
30.0 x 10	10	2	354636	1	D1A1 30-10-10 D 151
40.0 x 10	10	2	354643	1	D1A1 40-10-10 D 151
50.0 x 10	10	2	354131	1	D1A1 50-10-10 D 151

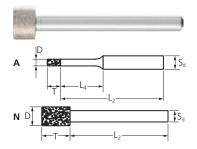








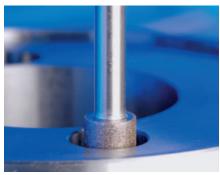




Cylindrical shape ZY

The cylindrical shape ZY is suitable for grinding bores, radii and contours using stationary or handheld equipment. Grinding points with a diameter of 8 mm or more have a recess on the front surface.

A = stepped shank N = non-stepped shank



Recommendations for use:

- Dry grinding: 15–25 m/s
- Wet grinding: 20–40 m/s

Ordering notes:

■ Please complete the description with the desired grit size.









						Energy Saving Waste Saving	Time Saving Resource Saving	
DxT	S _d	L,	L	Grit	size	\longrightarrow	Description	
[mm]	[mm]	[mm]	[mm]	B 64	B 126			
				EAN 4007220				
Shank dia. 3 mm								
0.5 x 2	3	38	5	354650	-	5	BZY-A 0,5-2/3	
0.8 x 2	3	38	5	354667	-	5	BZY-A 0,8-2/3	
1.0 x 4	3	36	9	354674	258224	5	BZY-A 1,0-4/3	
1.2 x 4	3	36	9	354681	354698	5	BZY-A 1,2-4/3	
1.4 x 4	3	36	9	-	354711	5	BZY-A 1,4-4/3	
1.6 x 4	3	36	10	354728	354735	5	BZY-A 1,6-4/3	
1.8 x 4	3	36	10	-	354759	5	BZY-A 1,8-4/3	
2.0 x 4	3	36	10	354766	119310	5	BZY-A 2,0-4/3	
2.2 x 4	3	36	14	-	354780	5	BZY-A 2,2-4/3	
2.4 x 4	3	36	14	354797	354803	5	BZY-A 2,4-4/3	
2.6 x 4	3	36	14	354810	354827	5	BZY-A 2,6-4/3	
2.8 x 4	3	36	14	-	354841	5	BZY-A 2,8-4/3	
3.0 x 4	3	36	19	354858	119334	5	BZY-A 3,0-4/3	
3.5 x 5	3	45	-	354865	119341	5	BZY-N 3,5-5/3	
4.0 x 5	3	45	-	354872	119358	5	BZY-N 4,0-5/3	
4.5 x 5	3	45	-	-	119365	5	BZY-N 4,5-5/3	
5.0 x 5	3	45	-	354896	119372	5	BZY-N 5,0-5/3	
5.5 x 6	3	44	-	-	258286	5	BZY-N 5,5-6/3	
Shank dia. 6 mm								
6.0 x 6	6	54	19	354919	119389	1	BZY-A 6,0-6/6	
7.0 x 8	6	52	-	-	119396	1	BZY-N 7,0-8/6	
8.0 x 8	6	52	-	-	119402	1	BZY-N 8,0-8/6	
9.0 x 8	6	52	-	-	258408	1	BZY-N 9,0-8/6	
10.0 x 8	6	52	-	-	119419	1	BZY-N 10,0-8/6	
12.0 x 8	6	52	-	-	119426	1	BZY-N 12,0-8/6	
13.0 x 10	6	50	-	-	258460	1	BZY-N 13,0-10/6	
14.0 x 10	6	50	-	-	258491	1	BZY-N 14,0-10/6	
15.0 x 10	6	50	-	-	119433	1	BZY-N 15,0-10/6	
18.0 x 10	6	50	-	-	258521	1	BZY-N 18,0-10/6	
20.0 x 10	6	50	-	-	258552	1	BZY-N 20,0-10/6	
Shank dia. 10 mm								
15.0 x 10	10	110	-	-	355145	1	BZY-N 15,0-10/10	



CBN grinding points

Cylindrical points with carbide shank

Cylindrical points with tungsten carbide shank are used for internal grinding on stationary

The elastic modulus of the tungsten carbide shank is approximately three times higher than that of a steel shank. The modulus of elasticity indicates the amount of deformation a body undergoes as a result of a given load.

In internal grinding applications, tools with a tungsten carbide shank offer higher stock removal rates, superior surfaces and more precise shape and position tolerances.

A = stepped shank N = non-stepped shank

Recommendations for use:

■ Dry grinding: 15–25 m/s

■ Wet grinding: 20–40 m/s

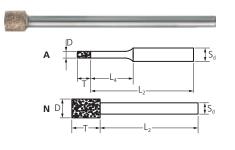












D x T [mm]	S _d [mm]	L ₂ [mm]	L ₄ [mm]	Grit size B 151 EAN 4007220		Description
Shank dia. 3 mm						
4.0 x 5	3	43	-	353714	1	BZY-N 4,0-5/3 HM B 151
5.0 x 5	3	43	-	353721	1	BZY-N 5,0-5/3 HM B 151
Shank dia. 6 mm						
6.0 x 6	6	98	19	353691	1	BZY-A 6,0-6/6 HM B 151
8.0 x 8	6	98	-	353738	1	BZY-N 8,0-8/6 HM B 151
12.0 x 8	6	98	-	956014	1	BZY-N 12,0-8/6 HM B 151

Spherical shape KU

Spherical shape CBN grinding points are often used for engraving, contour grinding and deburring work.

A = stepped shank

N = non-stepped shank

Recommendations for use:

- Dry grinding: 15–25 m/s
- Wet grinding: 20–40 m/s

Ordering notes:

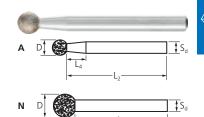
■ Please complete the description with the desired grit size.







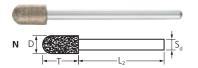




D	S _d	L ₂	L ₄	Grit size B 64 B 126			Description
[mm]	[mm]	[mm]	[mm]				
				EAN 4	007220		
Shank dia. 3 mm							
1.0	3	44	10	354957	258996	5	BKU-A 1,0/3
2.0	3	43	8	354964	259023	5	BKU-A 2,0/3
3.0	3	42	6	354971	259054	5	BKU-A 3,0/3
4.0	3	41	5	-	259085	5	BKU-A 4,0/3
5.0	3	40	2	-	259115	5	BKU-A 5,0/3
6.0	3	39	-	-	259146	1	BKU-N 6,0/3
Shank dia. 6 mm							
8.0	6	52	10	-	259207	1	BKU-A 8,0/6
10.0	6	50	5	-	259269	1	BKU-A 10,0/6
12.0	6	48	-	-	259320	1	BKU-N 12,0/6







Cylindrical shape with radius end WR

The cylindrical shape with radius end WR is best suited to manual applications and can be used for a wide variety of deburring and grinding tasks.

N = non-stepped shank

Recommendations for use:

- Dry grinding: 15–25 m/sWet grinding: 20–40 m/s

PFERDVALUE:

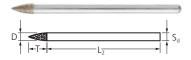








D x T [mm]	S _d [mm]	L ₂ [mm]	Grit size B 126 EAN 4007220		Description
Shank dia. 3 mm					
5.0 x 10	3	40	354087	1	BWR-N 5,0-10/3 B 126
6.0 x 10	3	40	354094	1	BWR-N 6,0-10/3 B 126



Pointed tree shape SPG

The pointed tree shape SPG is exceptionally well suited to machining small holes or bores as well as for engraving work.

Recommendations for use:

■ Dry grinding: 15–25 m/s

■ Wet grinding: 20–40 m/s

PFERDVALUE:











D x T [mm]	S _d [mm]	L _, [mm]	Grit size B 126 EAN 4007220		Description
Shank dia. 3 mm					
3.0 x 7	3	43	354100	1	BSPG 3,0-7/3 B 126
Shank dia. 6 mm					
6.0 x 18	6	50	354117	1	BSPG 6,0-18/6 B 126



Conical pointed shape SK

The conical pointed shape SK is exceptionally well suited to deburring bores, regrinding centring holes and chamfering.



Recommendations for use:

- Dry grinding: 15–25 m/s
- Wet grinding: 20–40 m/s











D x T [mm]	α	S _d [mm]	L ₂ [mm]	Grit size B 64 EAN 4007220		Description
Shank dia. 6 mm						
6.0 x 7	45°	6	50	393406	1	BSK 6,0-45°/6 B 64
6.0 x 5	60°	6	50	393413	1	BSK 6,0-60°/6 B 64



CBN grinding discs

Grinding discs 1A1

CBN grinding discs are intended for use on stationary machines. The grinding discs have an additional centring shoulder which allows them to be accurately mounted and aligned on the machine spindle

Combined with a stable mandrel, these tools are ideal for work in deep-set or long bores.



Recommendations for use:

■ Dry grinding: 15–25 m/s

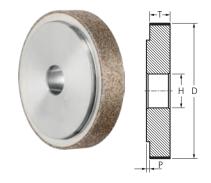
■ Wet grinding: 20–40 m/s











DxT	Н	P	Grit size	\triangleright	Description
[mm]	[mm]	[mm]	B 151		
			EAN 4007220		
20.0 x 10	8	2	355015	1	B1A1 20-10-8 B 151
30.0 x 10	10	2	355039	1	B1A1 30-10-10 B 151
40.0 x 10	10	2	355053	1	B1A1 40-10-10 B 151
50.0 x 10	10	2	355077	1	B1A1 50-10-10 B 151



Diamond cut-off wheels





Electroplated diamond cut-off wheels are characterized by their particularly efficient cutting performance because of their large chip spaces.

Matching tool drives:

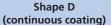
- Angle grinders
- Flexible shaft drives
- Straight grinders
- Stationary machines

Note

Other dimensions and CBN cut-off wheels are available on request. Further information on customer-specific tool solutions can be found on page 14.

Advice on tool selection:

- When cutting glass, ceramic or tungsten carbide, use fine grit sizes D 64 or D 151.
- When cutting pre-sintered ceramic, use coarse grit sizes D 357 or D 427.
- For cutting, trimming or cutting-to-length work on fibre-reinforced plastics (GRP/CRP), use coarse grit sizes D 357 or D 427. Fine grit sizes D 64 and D 151 can also be used for small geometries.
- The grit size D 852 is exceptionally wellsuited to machining grey cast iron and nodular cast iron (GG and GGG or GJL and GJS).





The continuous coating is particularly suitable for very fine separating cuts.

Shape G (with protective segments)



The continuous coating with protective segments facilitates optimum free-cutting.

Shape S 2 (segmented)



The segmentation allows particularly good chip removal.





Diamond and CBN tools electroplated bond Diamond cut-off wheels

Diamond cut-off wheels

Electroplated diamond cut-off wheels are used with grit sizes from D 64 to D 427 for cutting hard materials such as tungsten carbide or ceramics and fibre-reinforced plastics (GRP/CRP).

PFERDVALUE:

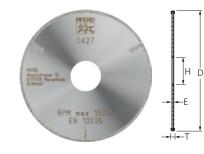










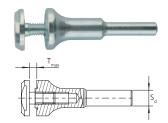


D	Т	Е	Н	Shape	Protective		Grit size		\square	Description				
[mm]	[mm]	[mm]	[mm]		segments	D 64	D 151	D 357	D 427					
					per side		EAN 40	007220						
Hard materials, e.g. glass, ceramics or tungsten carbide														
22	0.5	0.3	1.7	D	none	355190	-	-	-	1	D1A1R 22-0,5-1,7 D 64 GAD			
30	1.0	0.6	10	D	none	-	355206	-	-	1	D1A1R 30-1-10 D 151 GAD			
40	1.0	0.6	10	D	none	-	355213	-	-	1	D1A1R 40-1-10 D 151 GAD			
50	1.4	1.0	6	D	none	-	355220	-	-	1	D1A1R 50-1,4-6 D 151 GAD			
			10	D	none	-	666043	-	-	1	D1A1R 50-1,4-10 D 151 GAD			
125	1.4	1.0	20	D	none	-	355237	-	-	1	D1A1R 125-1,4-20 D 151 GAD			
Fibre-rei	nforced	plastics (GRP and	CRP) as	well as pre-	sintered a	and green	ceramic						
50	2.0	1.0	6	D	none	-	-	308790	-	1	D1A1R 50-2-6 D 357 GAD			
			6	G	3	-	-	168530	-	1	D1A1R 50-2-6 D 357 GAG			
						10	D	none	-	-	666067	-	1	D1A1R 50-2-10 D 357 GAD
			10	G	3	-	-	666050	-	1	D1A1R 50-2-10 D 357 GAG			
75	2.0	1.0	10	D	3	-	-	956038	-	1	D1A1R 75-2-10 D 357 GAD			
				G	3	-	-	393420	-	1	D1A1R 75-2-10 D 357 GAG			
100	2.0	1.0	22.23	D	none	-	-	-	805992	1	D1A1R 100-2-22,23 D 427 GAD			
				G	3	-	-	-	806005	1	D1A1R 100-2-22,23 D 427 GAG			
115	2.0	1.0	22.23	D	none	-	-	-	806012	1	D1A1R 115-2-22,23 D 427 GAD			
				G	3	-	-	-	806029	1	D1A1R 115-2-22,23 D 427 GAG			
125	2.0	1.0	22.23	D	none	-	-	-	806036	1	D1A1R 125-2-22,23 D 427 GAD			
				G	3	-	-	-	806043	1	D1A1R 125-2-22,23 D 427 GAG			
178	2.0	1.0	22.23	D	none	-	-	-	806050	1	D1A1R 178-2-22,23 D 427 GAD			
230	2.5	1.5	22.23	S2	none	-	-	-	806074	1	D1A1RSS 230-2,5-22,23 D 427 GAS2			
250	2.5	1.5	22.23	S2	none	-	-	-	806081	1	D1A1RSS 250-2,5-22,23 D 427 GAS2			
300	2.5	1.5	30	S2	none	-	-	-	806098	1	D1A1RSS 300-2,5-30,0 D 427 GAS2			
350	2.8	1.8	30	S2	none	-	-	-	806104	1	D1A1RSS 350-2,8-30,0 D 427 GAS2			
400	3.8	2.8	30	S2	none	-	-	-	806111	1	D1A1RSS 400-3,8-30,0 D 427 GAS2			

Arbors for diamond cut-off wheels

Accessories for mounting diamond cut-off wheels up to a diameter of 75 mm.

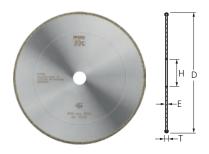
For safety reasons, it is imperative to remain within the stated rotational speed limit.



S _d [mm]	Suitable for centre hole dia. [mm]	T _{max.} [mm]	EAN 4007220			Description
3	1.7	1.0	443606	28,000	1	BO 3/1,7 1
6	10	3.0	956045	30,000	1	BO 6/10 3
8	10	3.0	806401	30,000	1	BO 8/10 3



Diamond cut-off wheels and grinding points for foundries



Diamond cut-off wheels for grey and nodular cast iron

Electroplated diamond cut-off wheels with grit size D 852 are exceptionally well suited to machining grey cast iron and nodular cast iron (GG and GGG or GJL and GJS) as well as for use in robots. The diameter of 230 mm is suitable for standard angle grinders; the diameter of 400 mm is suitable for stationary applications.

Advantages:

- Very long tool life.
- Ideal for work on deep-lying areas because of the constant tool diameter.
- Easy and quick elimination of metal contamination
- Minimized dust formation due to the monolayer coating and coarse chips.

Materials that can be worked: grey/nodular cast iron (GG/GJL, GGG/GJS)

Matching tool drives:

angle grinder, stationary machines

Accessories:

Clamping flange set SFS 76 for thin 180/230 mm cut-off wheels helps to reduce noise development during manual grinding (M14 thread: EAN 4007220**895856**).

PFERDVALUE:

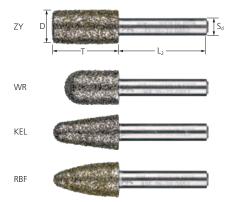








D [mm]	T [mm]	E [mm]	H [mm]	Shape	Protective segments per side	Grit size D 852 EAN 4007220		Description		
Grey and n	Grey and nodular cast iron (GG and GGG or GJL and GJS)									
230	3.8	1.8	22.23	D	none	956021	1	D1A1R 230-3,8-22,23 D 852 GAD		
400	4.5	2.5	40	D	none	947449	1	D1A1R 400-4,5-40,0 D 852 GAD		



Diamond grinding points for grey and nodular cast iron

Diamond grinding points with grit size D 852 are exceptionally well suited to machining grey cast iron and nodular cast iron (GG and GGG or GJL and GJS).

Advantages:

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

Materials that can be worked:

grey/nodular cast iron (GG/GJL, GGG/GJS)

Applications:

grinding out, weld dressing, deburring

Recommendations for use:

■ Dry grinding: 30–50 m/s

Matching tool drives:

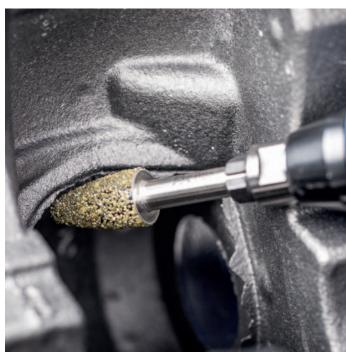
flexible shaft drives, straight grinder, stationary machines

D x T [mm]	S _d [mm]	L ₂ [mm]	Grit size D 852 EAN 4007220		Description				
Cylindrical shape ZY									
16.0 x 30	8	40	103708	1	DZY-N 16-30/8 D 852				
20.0 x 30	8	40	103753	1	DZY-N 20-30/8 D 852				
Cylindrical shape with r	adius end WR								
10.0 x 20	6	40	097366	1	DWR-N 10-20/6 D 852				
12.0 x 25	6	40	097373	1	DWR-N 12-25/6 D 852				
16.0 x 25	8	40	097472	1	DWR-N 16-25/8 D 852				
Conical shape with radi	us end KEL								
16.0 x 30	8	40	097489	1	DKEL-N 16-30/8 D 852				
Tree shape with radius end RBF									
12.0 x 25	6	40	102800	1	DRBF-N 12-25/6 D 852				
16.0 x 30	8	40	103692	1	DRBF-N 16-30/8 D 852				

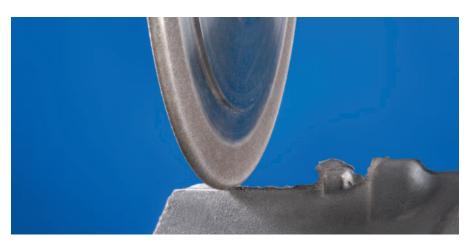


Diamond and CBN tools electroplated bond Customer-specific tool solutions for foundries





Customer-specific tool solutions for grey and nodular cast iron











More informationen about customer-specific tool solutions can be found on page 14.

Diamond and CBN tools electroplated bond









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.

Materials that can be worked:

scale, wear-resistant coatings (powder metal alloys and hardfacing alloys), technical ceramics, fibre-reinforced duroplastics (GRP, CRP), tungsten carbide, nickel- or titanium-based superalloys, grey/nodular cast iron (GG/GJL, GGG/GJS)

Recommendations for use:

- Only use the face of the disc, not suitable for peripheral grinding.
- To extend the tool life of the grinding disc on scale and wear-resistant coatings, reduce the cutting speed of the speed-adjustable angle grinder to 30 to 40 m/s.
- For optimum results, use with the CC-GRIND-SOLID/FLEX clamping flange set.
- When used on angle grinders with a 5/8-11 thread, the matching clamping flange set must be ordered separately.

Ordering notes:

■ Matching clamping flange set (M14 thread) is included in delivery.

PFERDVALUE









D	Н			Included clamping flange set			Description
[mm]	[mm]	D 427	D 852		RPM		
		EAN 40	007220				
100	16.0	068335	068366	SFS CC-GRIND-SOLID 100 M10	15,300	1	CC-GRIND-SOLID-DIAMOND 100-16,0
115	22.23	068342	068373	SFS CC-GRIND-SOLID 115/125 M14	13,300	1	CC-GRIND-SOLID-DIAMOND 115-22,23
125	22.23	068359	068380	SFS CC-GRIND-SOLID 115/125 M14	12,200	1	CC-GRIND-SOLID-DIAMOND 125-22,23



Matching clamping flange set with 5/8-11 drive spindle thread:

SFS CC-GRIND-SOLID 115/125 5/8" (EAN 4007220**887592**): For detailed information and ordering data, please refer to catalogue section 6.



For more information about the CC-GRIND product range, please refer to catalogue section 6.



Diamond sabre saw blades



Diamond sabre saw blades

Diamond sabre saw blades are exceptionally well suited to work on fibre-reinforced plastics (GRP/CRP), e.g. for making cut-outs in container construction or for cutting prefabricated slabs. They are characterized, in particular, by their flexible cutting lines for producing a wide range of geometries and by their long tool life. Suitable for all Bosch-socket sabre saws.

Materials that can be worked:

fibre-reinforced duroplastics (GRP, CRP)

Matching tool drives:

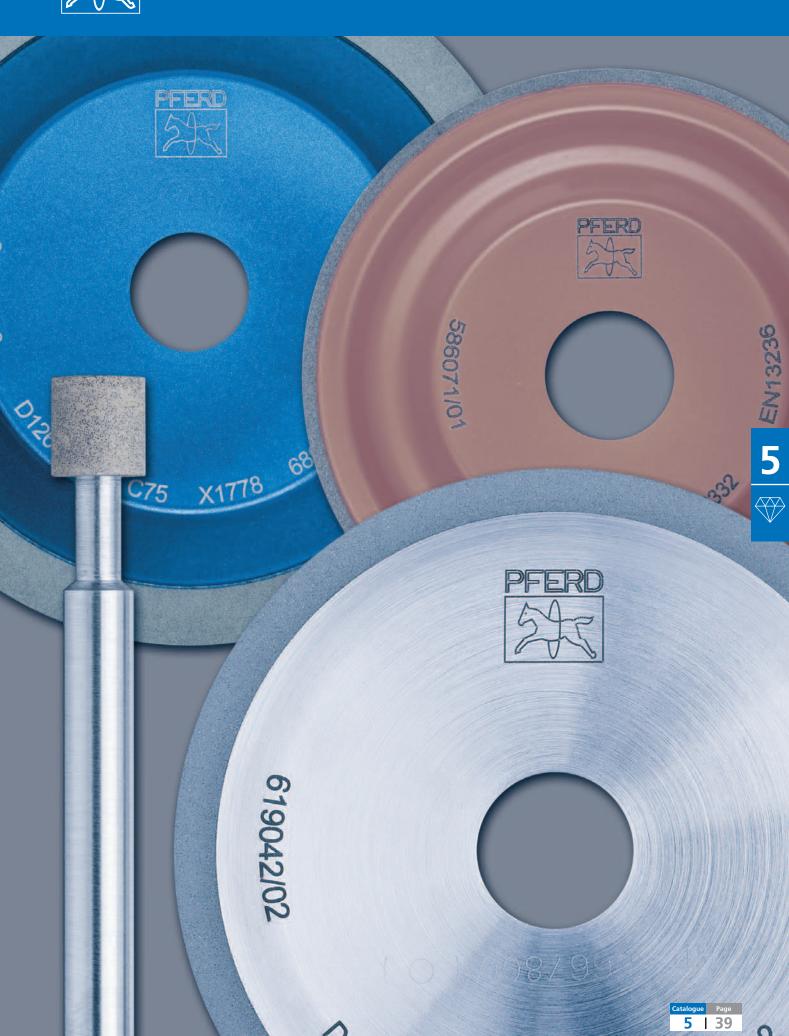
sabre saw

Applications:

cutting out holes, cutting

Overall length [mm]	Total width [mm]	Coating length [mm]	Grit size D 357 EAN 4007220		Description
75	2	50	535950	1	DIA-SSB 50/75 D 357
100	2	75	535967	1	DIA-SSB 75/100 D 357





General information





Resinoid-bonded diamond and CBN grinding discs are often used for grinding tungsten carbide or HSS tools, as well as in other production grinding processes. They are used in both wet and dry grinding.

Advantages:

- The characteristics of the resinoid bond can be optimally adjusted to the application.
- Easy to dress.

Matching tool drives:

■ Machine tool

Recommendations for use:

- A larger diameter D allows greater profitability thanks to the improved thermal and kinematic conditions.
- Always select a coating width, W or U, that is narrower than the workpiece to be ground.
- A larger coating thickness, X, affects the material cost for diamond or CBN and the bond. It has only little influence on production costs, however. A larger coating thickness, X, is therefore generally more economical.
- Please observe the recommended cutting speeds on page 10.

Dressing

Tools with resinoid bonds are easy to dress. Different tool contours can be worked with the same tools. After dressing, ensure that the coating is worked on using sharpening block SBL 1002413, so that the easy cutting characteristics of the tool are regained. More detailed information and ordering data can be found on page 43.

Coolant

If possible, wet grinding is to be preferred to dry grinding. This reduces tool wear and the risk of thermal damage to the workpiece. Bonds that are designed for dry grinding may, in exceptional circumstances, also be used for wet grinding.

Diamond grinding discs:

Emulsion 1–5 %

CBN grinding discs:

Low-viscosity mineral oils or emulsions (5–8 %) with FP additives

Concentration

The concentration is the amount of grit in carats [ct] (= 0.2 g) per cubic centimetre of abrasive coating. A concentration of C 100 corresponds to 4.4 ct/cm³ and around 25 % of the volume of the abrasive in the total bond. The usual spread of the concentration can be seen in the table on the left

A high concentration makes the tool more resistant to wear. This characteristic is particularly desirable in all profile grinding tasks.

As a rule, the longer tool life resulting from a high concentration compensates the higher tool costs (caused by the higher diamond or CBN grit volume). Please note that a high concentration can cause larger grinding forces and higher process temperatures. Therefore, it is not always the best solution in technological and economical terms.

of the information of coating volume abrasive coating [ct/cm³] C 25 6.25 1 1 C 1.65 9.50 38 C 50 2.2 12.50 C75 3.3 18.75 C 100 4.4 25.00 C 125 5.5 31.25

per cm³

Carat weight Grit volume

in %

Concentration						
low e.g. C 25	high e.g. C 125					

Bond types

Concen-

tration

PHT	PHN	PH 4.1 (only CBN)	PH 4.2 (only CBN)	PHST
Phenolic resin bond for high-performance dry grinding. The PHT bond is designed for dry grinding and allows cool grinding, even without coolant.	Phenolic resin bond for high-performance wet grinding. The PHN bond is designed for wet grinding. It is comparatively hard and offers an excellent tool life and dimensional stability.	Phenolic resin bond for the highest stock removal rates. Very long tool life. Suitable for dry and wet grinding.	High-performance bond for cool dry grinding at low infeed rates. Only for 11V9 and 12V9 up to diameter 150 mm.	Phenolic resin bond for dry grinding at very high stock removal rates. The PHST bond type can withstand higher loads, i.e. it allows a higher infeed per stroke without thermal damage to the workpiece. Inevitably, the reduction in grinding time is obtained at the expense of a slightly shorter tool life.

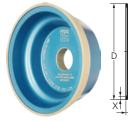
In addition to the listed bond types, a wide range of special bonds is available, which, in consultation with our technical advisers, can be used for special grinding work. Our technical advisers will be happy to provide a consultation at any time.

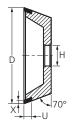


Diamond grinding tools

Shape 11V9

Shape	D - X - U - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
11V9	100 - 2 - 10 - 20	PHT	C 75	D 126	168592	1
	100 - 3 - 10 - 20	PHST	C 75	D 126	168622	1

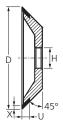




Shape 12V9

Shape	D - X - U - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
12V9	100 - 2 - 10 - 20	PHT	C 75	D 126	168646	1

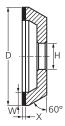




Shape 11A2/60°

Shape	D - W - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
11A2/60°	0° 100 - 8 - 2 - 20	PHT	C 75	D 64	261965	1
				D 126	261972	1

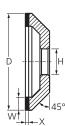




Shape 12A2/45°

Shape	D - W - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
12A2/45°	125 - 10 - 2 - 20	20 PHT	C 50	D 64	168677	1
			C 75	D 126	168660	1

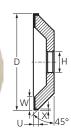




Shape 12C9

Shape	D - W - U - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
12C9	100 - 10 - 4 - 3 - 20	PHT	C 75	D 126	956052	1

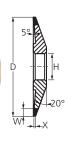




Shape 4BT9

Shape	D - W - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
4BT9	100 - 6 - 1 - 20	PHT	C 75	D 126	350119	1







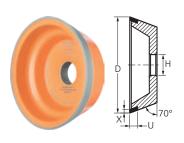




Shape 1A1R

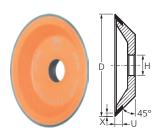
Shape	D - T - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
1A1R	100 - 1 - 5 - 20	PHT	C 75	D 151	350096	1
	150 - 1 - 7 - 20	PHT	C 75	D 151	806357	1

CBN grinding tools



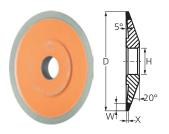
Shape 11V9

Shape	D - X - U - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
11V9	100 - 2 - 10 - 20	PH 4.1	C 75	B 126	350171	1
		PH 4.2	-	B 151	535646	1



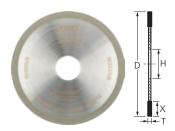
Shape 12V9

Shape	D - X - U - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
12V9	100 - 2 - 10 - 20	PHT	C 75	B 126	168707	1



Shape 4BT9

Shape	D - W - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
4BT9	100 - 6 - 1 - 20	PHT	C 75	B 126	350126	1



Shape 1A1R

Shape	D - T - X - H [mm]	Bond	Grit concen- tration	Grit size	EAN 4007220	
1A1R	100 - 1 - 5 - 20	PHT	C 100	B 151	350102	1



Sharpening block for diamond and CBN tools

Sharpening block for diamond and CBN tools

The sharpening block is used to restore the sharpness of resinoid-bonded diamond and CBN grinding discs (e.g. after dressing with a diamond dressing tool).

The sharpening block is first soaked in coolant and then in-fed manually or by means of a suitable feeding device. Grinding with the sharpening block will quickly restore the sharpness of your grinding disc.



L [mm]	B [mm]	H [mm]	EAN 4007220		Description
100	24	13	255605	5	SBL 1002413





5 | 43

Customer-specific tool solutions



In addition to the standard resinoid-bonded diamond and CBN grinding tools available from stock, customer-specific tool solutions are also possible.

In your request, please specify the material to be worked, the application and the tool drive

In the following tables, all the available shapes and dimensions are shown. For dimensions separated by slashes, please select the desired dimension.

Description explanation based on ISO 6104:

11V9 100 - 2 - 10 - 20 D126 PHT C75

0 0 0 0 0 0 0

Bond type

Grit concentration (C)

- Designation and shape of the tool according to ISO 6104
- ② Outer dia. D [mm]
- **❸** Usable abrasive coating thickness X [mm]
- 4 Coating width U [mm]
- Bore diameter H [mm]

	-	-K	<u>→</u>	
e.			↓ U	T
709			///	Т
70 <u>,</u>			<u>//</u> ‡E	\
	-	—H—►		

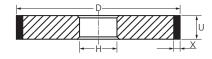
Abbreviation	Comment
α	Mount angle
D [mm]	Outer diameter
E [mm]	Bottom thickness
H [mm]	Bore diameter
J [mm]	Smaller diameter

Abbreviation	Comment
K [mm]	Internal diameter
L ₂ [mm]	Shank length
L ₄ [mm]	Reduced diameter length
R [mm]	Radius
S ₁ [mm]	Reduced diameter

Grit size (D = diamond, B = CBN)

Abbreviation	Comment
S _d [mm]	Shank diameter
T [mm]	Total width
U [mm]	Coating width
W [mm]	Mounted point width
X [mm]	Usable abrasive coating thickness

Shape 1A1



Shap	e 1	FF1

	-D	-
T (/////) ,
	H—	X

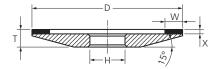
D [mm]	U [mm]	X [mm]	H [mm]
50	4/6/8/10/12	3/4/5/6	Please
75	6/8/10/12	3/4/5/6	specify
100	6/8/10/12	3/4/5/6	
125	8/10/12/15	3/4/5/6	
150	8/10/12/15/20	3/4/5/6	
175	10 / 12 / 15 / 20	3/4/5	
200	12 / 15 / 20 / 25 / 30	3/4/5/6	
225	12 / 15 / 20	3/4/5	
250	15/20/25/30/40/50	3/4/5	
300	15/20/25/30/40/50	3/4/5/6	
350	20 / 25 / 30 / 40 / 50	3/4/5/6	
400	25 / 30 / 40 / 50	3/4/5/6	
450	25 / 30 / 40 / 50	3/4/5/6	
500	30 / 40 / 50	3/4/5/6	
600	35 / 40	3/5	

Ordering example: 1A1 200-20-4-127 D 126 PHN C 75

D [mm]	T [mm]	X [mm]	R [mm]	H [mm]
50	6	2	3	Please
	8		4	specify
	10		5	
75	6		3	
	8		4	
	10		5	
100	100 6		3	
	8		4	
	10		5	
	12		6	
125	6		3	
	8		4	
	10		5	
	12		6	
150	6		3	
	8		4	
	10		5	
	12		6	

Ordering example: 1FF1 150-8/4R-2-32 D 126 PHN C 75

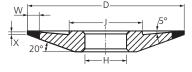
Shape 4A2



D [mm]	W [mm]	X [mm]	H [mm]	T - X [mm]
50	3/5	2/3/4	Please	5
75	3/5		specify	5
100	3/4/5/6/8/10			6
125	3/4/5/6/8/10			7
150	3/4/5/6/8/10/12.5			9

Ordering example: 4A2 100-4-2-20 D 64 PHT C 50

Shape 4BT9



D [mm]	W [mm]	X [mm]	H [mm]	T [mm]	J [mm]
75	6	1	Please	8	36
100	6/10	1	specify	10	50
125	6/10	1		12	65
150	6/10	1		15	80

Ordering example: 4BT9 100-6-1-20 D 126 PHN C 75

Other dimensions on request!

60



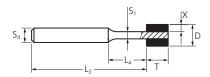
Diamond and CBN tools resinoid bond

[mm]

6

Customer-specific tool solutions

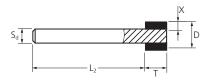
Shape 1A1W



Shape	1A1W	

D [mm]

10



D [mm]	T [mm]	X [mm]	S _d [mm]	L ₂ [mm]	S ₁ [mm]	L₄ [mm]
3	6	0.75	3	60	1.5	8
4	6	1	3	60	2	8
5	6	1.5	3	60	2	8
6	6	1.5	6	60	3	8
6	8	1.5	6	60	3	10
7	6	2	6	60	3	8
8	6	2	6	60	4	8
8	10	2	6	60	4	12
9	6	2	6	60	5	8

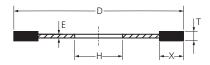
Ordering example: 1A1W 8-6-2-6-60-4-8 D 91 PHNT C 100

10 60 12 6 60 10 60 15 18 60 10 6 60 20 6 6 60

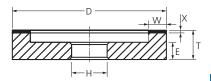
Ordering example: 1A1W 15-10-2-6-60 D 91 PHNT C 100

10

Shape 1A1R



Shape 6A2



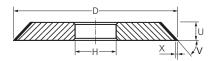
D [mm]	T [mm]	X [mm]	H [mm]	E [mm]
75	1	5	H ≥ 20 mm	0.8
100	1	5		0.8
125	1	5	Please specify	0.8
150	1	7		0.8
175	1.2	7		0.9
200	1.2	7		0.9

Ordering example: 1A1R 150-1-7-20 D 151 PHT C 75

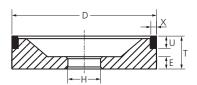
w D Χ н T - X [mm] [mm] [mm] [mm] [mm] 50 3/5 2/3/4 Please 20 specify 75 3/5/10 20 10 20 100 5/8/10/12.5/15 10 4/6/8/10/12.5/ 125 23 10 15/20/25 6/8/10/12.5/15/ 23 10 20/25

Ordering example: 6A2 125-10-2-20 D 126 PHT C 50

Shape 1V1



CI	ha	pe	60	a
9	IIa	ρe	U	



D	U	X	V	H
[mm]	[mm]	[mm]		[mm]
50 75 100 125 150 175 200 250 300	6/8 6/8/10 8/10 8/10 8/10 10 12/15 15/20	3/4	20° to 89° Please specify	Please specify

Ordering example: 1V1 150-8-3/60°-32 B 126 PHN C 75

D [mm]	X [mm]	U [mm]	H [mm]	T [mm]	E [mm]
75	1.5	6/10	Please	25	10
	2	6/10	specify	25	10
	3	6/10		25	10
100	1.5	6/10		30	10
	2	6/10		30	10
	3	6/10		30	10
125	1.5	6/10		30	10
	2	6/10		30	10
	3	6/10		30	10
150	1.5	1.5 6/10	35	10	
	2 6/10		35	10	
	3	6/10		35	10

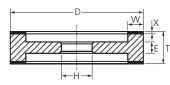
Ordering example: 6A9 100-2-10-20 D 126 PHN C 100

Other dimensions on request!

Customer-specific tool solutions



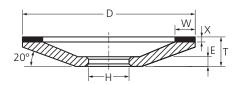
Shape 9A3



D [mm]	W [mm]	X [mm]	T [mm]	H [mm]	E [mm]
100	6/8/10	2/3	22	Please	10
125	6/8/10		22 specify	specify	10
150	4/6/8/10/15		25/35		14
175	3/4/6/8/10/15		25 / 35		14
200	8/10/15		30		18

Ordering example: 9A3 150-8-2-25-20 D 64 PHN C 75

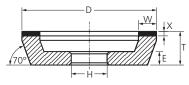
Shape 12A2/20°



D [mm]	W [mm]	X [mm]	H [mm]	T - X [mm]	E [mm]		
75	3/5/6/8/10	2/3/4	Please	8	5		
100	3/5/6/8/10		specify	10	6		
125	5/6/8/10			14	8		
150	5/6/8/10				16	9	
175	6/10					18	10
200	6/10				20	11	
250	6/10			23	13		

Ordering example: 12A2/20° 125-10-2-20 D 126 PHT C 50

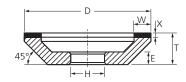
Shape 11A2



D [mm]	W [mm]	X [mm]		T - X [mm]	E [mm]		
50	3/6	2/3/4	Please	20	8		
75	3/6/10		specify	20	10		
100	4/6/8/10			20	10		
125	5/6/8/10/12.5/15					23	10
150	6/8/10/12.5/15			23	10		
175	6/10/12.5/15			25	12		

Ordering example: 11A2 125-10-2-20 D 126 PHT C 50

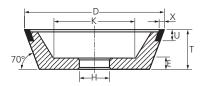
Shape 12A2/45°



D [mm]	W [mm]	X [mm]		T - X [mm]	E [mm]
50	3/6	2/3/4	Please	15	8
75	3/6/10		specify	20	9
100	4/6/8/10			23	10
125	5/6/8/10/12.5/15			23	10
150	6/8/10/12.5/15			23	10
175	6/10/12.5/15			25	12

Ordering example: 12A2/45° 125-10-2-20 D 126 PHT C 50

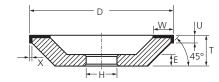
Shape 11V9



D [mm]	X [mm]	U [mm]	H [mm]	T [mm]	E [mm]	K [mm]
50	2	10	Please	30	10	22
75	1.5 / 2 / 3	10	specify	30	10	41
100	1.5/2/3	10		35	10	60
125	1.5/2/3	10		40	10	75
150	1.5/2/3	10		50	10	89

Ordering example: 11V9 100-2-10-20 D 126 PHT C 75

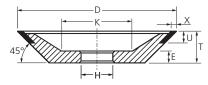
Shape 12C9



D [mm]	W [mm]	U [mm]	X [mm]	H [mm]	T [mm]	E [mm]
100	6/10	4	2	Please	26	10
	10	4	3	specify	27	10
125	6/10	4	2		26	10
	10	4	3		27	10
	12.5	5	2		26	10
150	10	4	2		26	10
	10	4	3		27	10
	12.5 / 15	5	2		26	10

Ordering example: 12C9 100-10-4-2-20 D 64 PHN C 75

Shape 12V9



D [mm]	X [mm]	U [mm]	H [mm]	T [mm]	E [mm]	K [mm]
50	2	6	Please	20	10	24
75	2/3	10	specify	20	10	41
100	1.5/2/3	10		20	10	62
125	1.5/2/3	10		25	10	76
150	2/3	10		25	10	97

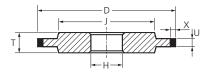
Ordering example: 12V9 100-2-10-20 D 126 PHT C 75

Other dimensions on request!

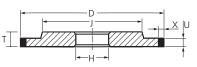


Customer-specific tool solutions

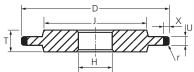
Shape 14A1



Shape 3A1



Shape 14F1



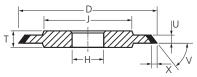
D [mm]	U [mm]	X [mm]	H [mm]	T [mm]	J [mm]
75	1/2	3/6	Please	6	50
	3/4/5	3/4/6	specify	6	50
100	1/2	3/6		6	80
	3/4/5	3/4/6		6	70
125	1/2	3/6		7	105
	3/4/5/6	3/4/6		7	100
150	1/2	3/6		8	130
	3/4/5/6	3/4/6		8	120
175	1/2	3/6		10	150
	3/4/5/6/8	3/4/6		10	140
200	1/2	6		12	175
	3/4/5/6/8/10	3/4/5/6		12	160
225	6/8/10	3/4/5		12	180
250	6/8/10/12	3/4/5		15	200
300	8/10/12	3/4/5/6		15	250
350	10 / 12 / 15	3/4/5/6		20	300
400	10 / 12 / 15 / 20	3/4/5/6		25	350
450	10 / 12 / 15 / 20	3/4/5/6		25	400
500	15/20/25	3/4/5/6		30	450
600	15 / 20 / 25 / 30	3/5		35	550

				1	ı	
D [mm]	U [mm]	X [mm]	R [mm]	H [mm]	T [mm]	J [mm]
40	2	3/4/5/6	1	Please	6	25
	3		1.5	specify	6	25
	4		2		6	25
50	2		1		6	30
	3		1.5		6	30
	4		2		6	30
75	2		1		6	50
	3		1.5		6	50
	4		2		6	50
100	2		1		6	70
	3		1.5		6	70
	4		2		6	70
125	2		1		8	100
	3		1.5		8	100
	4		2		8	100
150	2		1		8	120
	3		1.5		8	120
	4		2		8	120

Ordering example: 14F1 150-2/1R-6-32 D 107 PHN C 125

Ordering example: 14A1 150-6-3-32 D 107 PHN C 100

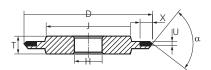
Shape 14V1



C	h	-	n	_	1	Л	Е	۵

[mm] [mm] [mm]

50 1/2



Please

specify

[mm] [mm] [mm]

6

6

6

8

32

50

70

100

8 120

D [mm]	U [mm]	X [mm]	V	C [mm]	T [mm]	J [mm]
50	3/4/5	2/3/4	20° to	Please	6	30
75	3/4/5		89°	specify	6	45
100	4/6				8	70
125	4/6		Please		8	100
150	4/6		specify		8	120
175	4/6/8				10	140
200	4/6/8/10				12	160
250	4/6/8/10/12				15	200
300	4/6/8/10/12				15	250

Ordering example: 14E9 150-2-6-60°-32 D 107 PHN C 125

75 1/2 6 35°/45°/60°/90°

100 1/2 6 35°/45°/60°/90°

125 1/2 6 35°/45°/60°/90°

150 1/2 6 35°/45°/60°/90°

6 35°/45°/60°/90°

Ordering example: 14V1 150-6-3/60°-32 B 126 PHN C 75





PFERD diamond cut-off wheels are manufactured in compliance with the highest quality and safety standards. They guarantee optimum cutting results and allow economic work on 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.

Advantages:

- High diamond qualities.
- Excellent cutting characteristics and short cutting times.
- Long tool life.
- High ease of cutting.
- High profitability.

Recommendations for use:

- If possible, wet grinding is to be preferred to dry grinding. This reduces tool wear, the risk of thermal damage to the workpiece and dust exposure.
- Cut using low pressure in order to stop the tool overheating.

Matching tool drives:

- Angle grinder
- Petrol cutter
- Table saw
- Joint cutter



Explanation of the order description

DS 230 x 2.8 x 22.23 SG

1 Description and shape of the tool

DS = Diamond, segmented type for fast cutting

DG = Diamond, continuous rim type for easy cutting (TURBO)

DG FL = Diamond, continuous rim type for very fine cutting, e.g. tiles and glazed tiles

2 Outer diameter

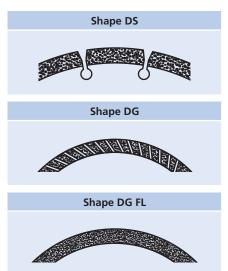
Outer dia. D in [mm]

3 Disc width Disc width T in [mm]

4 Bore diameter Bore dia. H in [mm]

PFERD product line Universal Line PSF Performance Line SG

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

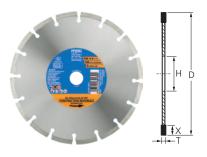


The fast way to the best tool

Application	► Material ►	Tools	>	Page
Aggressive, fast cutting	 Concrete (medium-hard, reinforced, hard) Aerated concrete Pumice Brick Soft clinker brick Sand-lime brick 	Cut-off wheels of the type DS PSF and SG		50
Easy cutting with high cutting quality	■ Fresh concrete ■ Screed ■ Firebrick	Cut-off wheels of the type DG SG		50
	SandstoneClay brickSlateGraniteMarble	Cut-off wheels of the type DG PSF and SG	6	51
	Glazed tilesCeramic tilesPorcelain stonewareSlateMarble	Cut-off wheels of the type DG FL PSF and SG	6 6	52







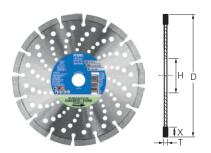
DS PSF type

Multi-purpose segmented tool for aggressive, fast cutting with high cutting performance and a long tool life.

Recommendations for use:

■ Suitable for use on angle grinders of all output levels.

D [mm]	T [mm]	EAN 4007220	H [mm]	X [mm]	Max. RPM		Description
115	2.2	641361	22.23	7	13,300	1	DS 115 x 2,2 x 22,23 PSF
125	2.2	641378	22.23	7	12,200	1	DS 125 x 2,2 x 22,23 PSF
178	2.4	641385	22.23	7	8,600	1	DS 178 x 2,4 x 22,23 PSF
230	2.4	641392	22.23	7	6,600	1	DS 230 x 2,4 x 22,23 PSF



DS SG type

High-performance segmented tool for aggressive, fast cutting of hard materials with high cutting performance and very long tool life.

Recommendations for use:

- The maximum operating speed for diamond cut-off wheels DS type with a diameter of 300 to 400 mm is 100 m/s.
- Suitable for use on angle grinders of all output levels.

Ordering notes:

All diamond cut-off wheels with a centre hole diameter of 25.4 mm are supplied with a reducing ring to 22.23 mm for use on angle grinders.

D [mm]	T [mm]	EAN 4007220	H [mm]	X [mm]	Max. RPM		Description
115	2.4	801086	22.23	10	13,300	1	DS 115 x 2,4 x 22,23 SG
125	2.4	801093	22.23	10	12,200	1	DS 125 x 2,4 x 22,23 SG
178	2.6	801109	22.23	10	8,600	1	DS 178 x 2,6 x 22,23 SG
230	2.8	801116	22.23	10	6,600	1	DS 230 x 2,8 x 22,23 SG
300	2.8	801123	20.0	10	6,400	1	DS 300 x 2,8 x 20,0 SG
		801147	25.4 (22.23)	10	6,400	1	DS 300 x 2,8 x 25,4 SG
350	2.8	801154	20.0	10	5,400	1	DS 350 x 2,8 x 20,0 SG
		801161	25.4 (22.23)	10	5,400	1	DS 350 x 2,8 x 25,4 SG
400	3.2	801178	25.4 (22.23)	10	4,800	1	DS 400 x 3,2 x 25,4 SG





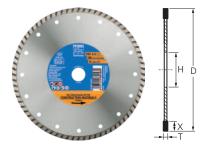
Continuous rim type for easy cutting (TURBO)

DG PSF type

Multi-purpose continuous rim tool for easy cutting with high cutting performance and long tool life

Recommendations for use:

Suitable for use on angle grinders of all output levels.



D [mm]	T [mm]	EAN 4007220	H [mm]	X [mm]	Max. RPM		Description
115	2.1	641408	22.23	7	13,300	1	DG 115 x 2,1 x 22,23 PSF
125	2.1	641415	22.23	7	12,200	1	DG 125 x 2,1 x 22,23 PSF
178	2.4	641422	22.23	7	8,600	1	DG 178 x 2,4 x 22,23 PSF
230	2.6	641439	22.23	7	6,600	1	DG 230 x 2,6 x 22,23 PSF

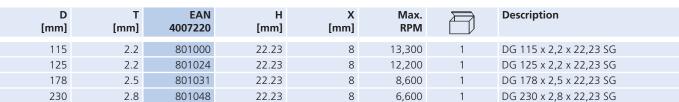
DG SG type

High-performance continuous rim tool for easy cutting with high cutting performance and very long tool life.

Recommendations for use:

■ Suitable for use on angle grinders of all output levels.



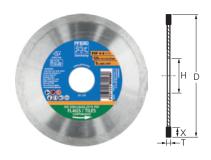








Continuous rim type for very fine cutting



DG FL PSF type

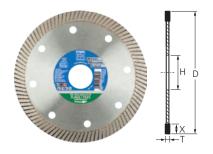
Multi-purpose continuous rim tool for cutting without edge breakages on workpieces with high-quality surfaces. High cutting performance and long tool life.



Recommendations for use:

Suitable for use on angle grinders of all output levels.

D [mm]	T [mm]	EAN 4007220	H [mm]	X [mm]	Max. RPM		Description
115	1.6	800973	22.23	7	13,300	1	DG 115 x 1,6 x 22,23 FL PSF
125	1.6	800980	22.23	7	12,200	1	DG 125 x 1,6 x 22,23 FL PSF



DG FL SG type

High-performance continuous rim tool for cutting without edge breakages on workpieces with high-quality surfaces. High cutting performance and very long tool life.



Recommendations for use:

■ Suitable for use on angle grinders of all output levels.

D [mm]	T [mm]	EAN 4007220	H [mm]	X [mm]	Max. RPM		Description
115	1.4	801055	22.23	8	13,300	1	DG 115 x 1,4 x 22,23 FL SG
125	1.4	801079	22.23	8	12,200	1	DG 125 x 1,4 x 22,23 FL SG

Sharpening block



Sharpening block DSB

The sharpening block is used to resharpen metal-bonded diamond cut-off wheels (e.g. after cutting lubricating materials).

Type:

Silicon carbide abrasive, soft polyurethane bond

Recommendations for use:

Cutting off thin slices of the sharpening block quickly restores the sharpness of your grinding disc.

L	В	Н	Grit size		Description
[mm]	[mm]	[mm]	80		
			EAN 4007220		
200	50	25	168332	1	DSB 2005025