

MONSTER PERFORMANCE

on any terrain



Tungsten carbide burs with OMNI cut

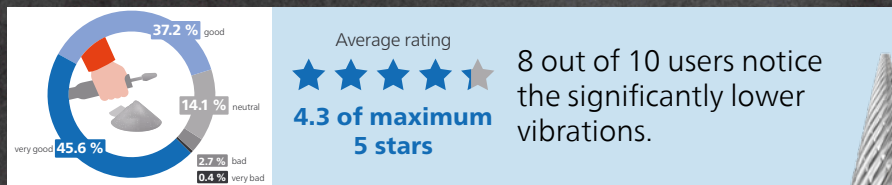
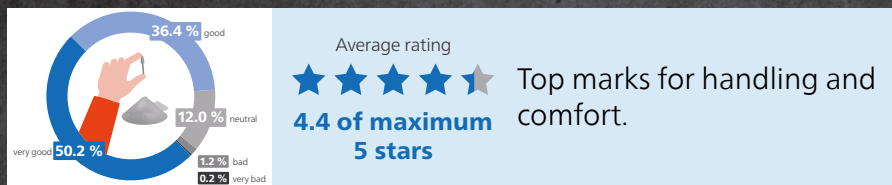
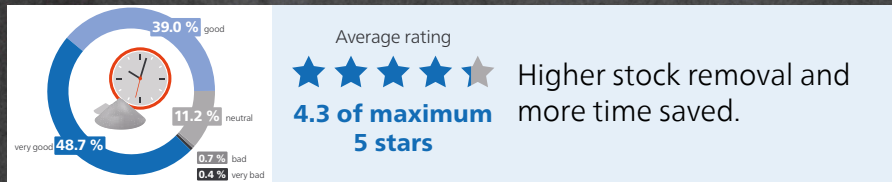
TC burs OMNI cut

Top remarks from customers across the globe



The innovative OMNI cut makes you a real expert on any application. Whether it's steel, stainless steel (INOX), cast iron or non-ferrous metals – OMNI makes sure you get off to a winning start on all these materials!

More than 1,000 users* from around the world have tested our tungsten carbide burs and can verify that the OMNI cut is far superior to conventional cross cuts in many respects.



*Europe-wide online survey (analysis of 1,364 items of feedback from the period 01/10 – 30/11/2021).



Top comments

The burs were recommended to me. I'm very pleased.

- Mercedes W.

It's great that you can guide it so smoothly! Very precise despite the high stock removal!

- Kai M.

The burs last longer than the tools we would otherwise use.

- Davide D.

I've improved my work.

- Xavier J.

They [the burs] are very durable and keep on going, even on hard materials.

- Marcel M.

They run very smoothly when machining. The lower vibrations are really great, you can definitely notice it.

- Hannes V.

Find out everything you need to know about our innovative OMNI cut, fascinating application videos and the entire range of tungsten carbide burs for high-performance applications online at www.pferd.com/omni



One cut – many applications

This practical example shows how the OMNI cut can significantly optimise even the most demanding milling work, such as work on fillet welds.

The most common problems when working on fillet welds

Working on fillet welds and narrow contours poses a particular challenge because the use of burs often results in impacts and chattering.

This places a lot of stress on the tool, leading to premature wear and damage in the form of tooth chipping/breakage. At the same time, the higher vibrations make the grinder more difficult to guide, meaning working is much less comfortable. These problems negatively affect both the work process itself and the results achieved, particularly when milling narrow contours in tight spaces where the grinder needs to be operated with just one hand.



The problem-solvers from PFERD

To eliminate impacts when working on fillet welds and narrow contours, PFERD recommends the use of tungsten carbide burs in a tree shape with radius end (Shape F) design with the STEEL and OMNI cuts, mounted on the PGAS 3/380 E-DV and PGAS 3/380 E-HV PFERD air grinders.

This system solution – comprising a high-performance bur and grinder with elastically mounted spindle – delivered an impressive performance in numerous customer tests, proving its worth as a real problem-solver.

The grinder is easy to guide, which significantly improves comfort – even when operating it with one hand. Narrow contours and corners can also be milled easily. What's more, the grinder's elastically mounted spindle guarantees a longer service life, especially when using tungsten carbide burs. This prevents tooth chipping/breakage on the bur and ensures high-quality results in next to no time.



Advantages:

- Impact-free milling when working on fillet welds and tight contours.
- Less damage to the cutting teeth.
- Comfortable to guide, even with one hand.
- High-quality results in next to no time.

Industries:

- Foundries
- Steel construction
- Silo and container construction
- Ship and yacht construction
- Wagon construction

Applications:

- Impact-free work on fillet welds

Safety notes:




- At 35,000 RPM, the rotational speed of the straight grinder is much higher than the recommended 20,000 RPM. However, this is not an issue as the diameter of the tungsten carbide burs in the tree shape with radius end design tapers sharply towards the tip and this area is used almost exclusively for work on fillet welds.
- Burrs from the Universal Line should not be used at this cutting speed as the higher rotational speed will cause overheating and higher wear.



PFERDVIDEO

Watch the high-performance PFERD problem-solver in a direct comparison with conventional tool solutions and see the benefits for yourself!

Scan the QR code with your mobile device to view the PFERDVIDEO.

Tungsten carbide burs	Matching tool drives
Shape F, dia. 1/4", OMNI cut, EDP 28012 	
Shape F, dia. 1/4", STEEL cut, EDP 24698 	

TC burs OMNI cut

for versatile use



With the innovative OMNI cut, PFERD has developed unique burs for versatile use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron. The OMNI cut offers all the benefits of the tried-and-tested Double cut, but its stock removal rate is up to 30 % higher for steel. It enables comfortable working with reduced vibration and less noise. They also offer significant time savings and a high economic value. PFERD also offers tungsten carbide burs with OMNI cut with a high-quality HICOAT coating.

Advantages:

- Significantly better stock removal rate than burs with a conventional cross cut.
- Saves money and time through its very high stock removal rate on key materials.
- Comfortable working with reduced vibration and less noise.
- Reduced wear on the tool drive due to impact-free work without chatter marks, due to the high concentricity.

Materials that can be worked:

- Steel, cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Applications:

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

Recommendations for use:

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

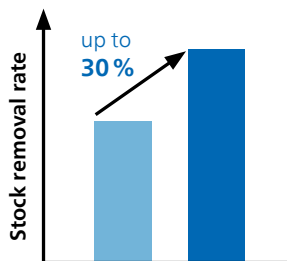
Matching tool drives:

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



Learn more about the advantages of using tungsten carbide burs with OMNI cut.

Performance values for applications on steel



- Conventional burs with cross cut
- Tungsten carbide burs, OMNI cut

PFERDVALUE®

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



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



Safety notes

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



= Wear eye protection!



= Wear hearing protection!



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



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



Note: Extended shank burs are not suitable for robotic or stationary applications.

Risk of bending. Use only rigid clamping systems/power tools. Extended shank burs can be shortened if required.

Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ① Select the material group to be machined.
- ② Establish the cutting speed range.

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

- ③ Select the required bur diameter.
- ④ The cutting speed range and the bur diameter determine the recommended rotational speed range.

① Material group		Application	Cut	② Peripheral speed
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	OMNI 1,500 - 2,500 SFPM
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	Coarse stock removal	OMNI 850 - 1,500 SFPM
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	OMNI 1,500 - 2,000 SFPM
Non-ferrous metals	Soft non-ferrous metals	Brass, copper, zinc	Coarse stock removal	OMNI 1,500 - 2,500 SFPM
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)	Coarse stock removal	OMNI 1,500 - 2,000 SFPM
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJM (GTW), black cast iron EN-GJMB (GTS)	Coarse stock removal	OMNI 1,500 - 3,000 SFPM

Example:

Carbide bur, OMNI cut, bur diameter 1/2".
Coarse stock removal on steels up to 370 HV.
Peripheral speed: 1,500 - 2,500 SFPM

Rotational speed range:
12,000 - 20,000 RPM

③ Burr dia. [Inches]	④ Peripheral speed [SFPM]				
	850	1,500	2,000	2,500	3,000
	Rotational speeds [RPM]				
1/4	13,000	24,000	32,000	40,000	48,000
3/8	8,000	14,000	19,000	24,000	29,000
7/16	8,000	13,000	17,500	22,000	29,000
1/2	7,000	12,000	16,000	20,000	26,500
5/8	5,000	9,000	12,000	15,000	18,000

Maximum rotational speed [RPM] for extended shank burs

When working with extended shank burs, it is critical that the bur is in contact with the workpiece (or inserted in the bore or slot to be machined) before the power tool is turned on. As a rule, the bur must remain in contact with the workpiece for as long as the machine is running. Failure to observe this procedure may result in shank failure (bending) and hence an increased risk of accidents. If continuous contact between the bur and the workpiece is not guaranteed, the ② maximum idling speeds stated in the table must not be exceeded.

For safety reasons, the maximum application speeds ② with contact with the workpiece require a reduction in the recommended speed of carbide burs with standard shanks. The reduced speeds are stated in the table below.

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

- ① Select the required bur diameter.
- ② For the maximum application speed [RPM] with contact with the workpiece, please refer to the right-hand side of the table.

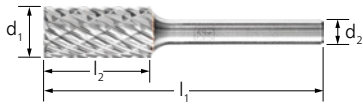
Example

Carbide bur, L6, double cut, bur diameter: 1/2".
Coarse stock removal on steels up to 370 HV.

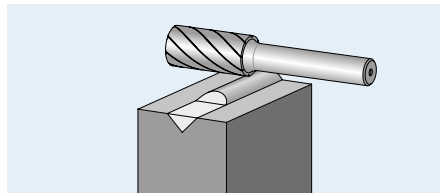
Recommended reduced speed with workpiece contact: 7,000 RPM

① Burr dia. [Inches]	③ Maximum rotational free speed [RPM] (No contact to the workpiece)	② Recommended reduced rotational application speed [RPM] (With contact to the workpiece)
	Shank length [Inches]	
	L6 (6")	L6 (6")
1/4	8,000	15,000
5/16	6,000	11,000
3/8	4,000	9,000
1/2	3,000	7,000

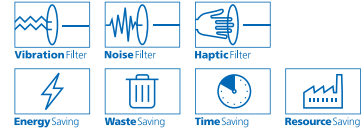
TC burs OMNI cut for versatile use



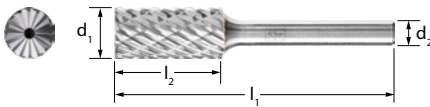
Cylindrical burr with plain end (uncut) – Shape A



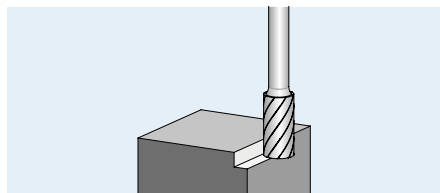
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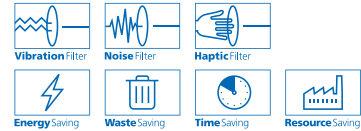
d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	Cut type and EDP number	
				OMNI 	
Shank dia. 1/4" [d₂]					
1/4	5/8	SA-1	1-15/16	28026	1
3/8	3/4	SA-3	2-1/2	28018	1
1/2	1	SA-5	2-3/4	28005	1



Cylindrical burr with end cut – Shape B

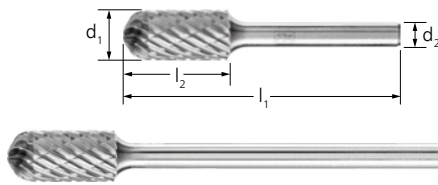


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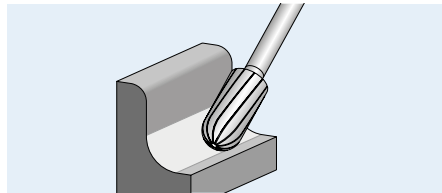


d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	Cut type and EDP number	
				OMNI 	
Shank dia. 1/4" [d₂]					
1/4	5/8	SB-1	1-15/16	28029	1
3/8	3/4	SB-3	2-1/2	28019	1
1/2	1	SB-5	2-3/4	28010	1
5/8	1	SB-6	2-3/4	28032	1





Cylindrical bur with radius end – Shape C



Safety notes:



Please observe the reduced rotational speeds for extended shank burs. They can be found on page 5.

PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving





Waste Saving



Time Saving

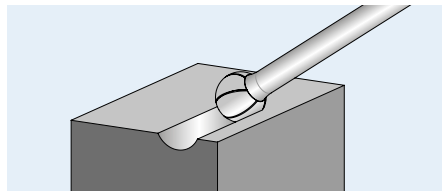


Resource Saving

d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	Cut type and EDP number		
				OMNI		
Shank dia. 1/4" [d₂]						
1/4	5/8	SC-1	1-15/16	28024		1
3/8	3/4	SC-3	2-1/2	28006		1
1/2	1	SC-5	2-3/4	28001		1
5/8	1	SC-6	2-3/4	28030		1
Extended shank – dia. 1/4" [d₂], SL 6" (L6)						
3/8	3/4	SC-3L6	6-5/8	28020		1
1/2	1	SC-5L6	6-7/8	28017		1



Ball bur – Shape D



PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving





Waste Saving



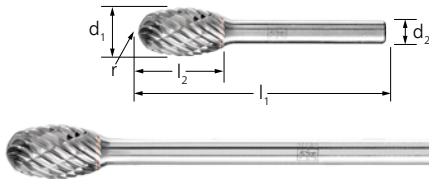
Time Saving



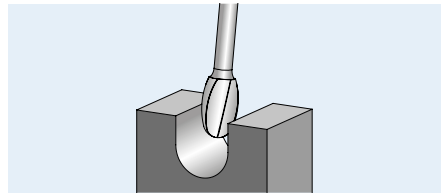
Resource Saving

d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	Cut type and EDP number		
				OMNI		
Shank dia. 1/4" [d₂]						
1/4	3/16	SD-1	1-15/16	28034		1
3/8	5/16	SD-3	2-1/16	28021		1
1/2	7/16	SD-5	2-3/16	28028		1

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Oval bur – Shape E



Safety notes:

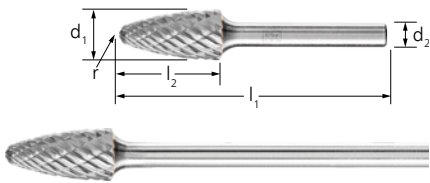


Please observe the reduced rotational speeds for extended shank burs. They can be found on page 5.

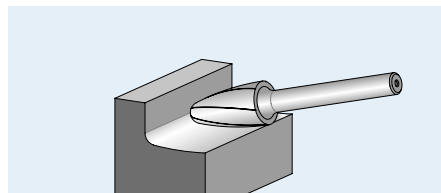
PFERDVALUE®:



d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	r [Inches]	Cut type and EDP number	
					OMNI 	
Shank dia. 1/4" [d₂]						
3/8	5/8	SE-3	2-3/8	.157	28035	1
1/2	7/8	SE-5	2-5/8	.196	28025	1
Extended shank – dia. 1/4" [d₂], SL 6" (L6)						
1/2	7/8	SE-5L6	6-3/4	.196	28022	1



Tree bur with radius end – Shape F



Safety notes:



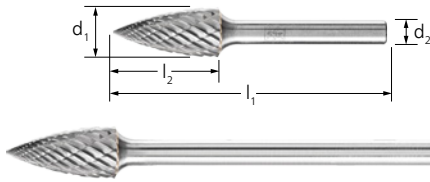
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 5.

PFERDVALUE®:

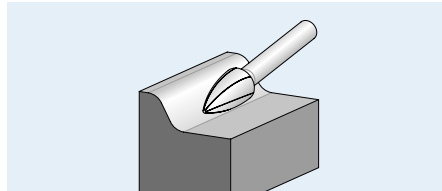


d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	r [Inches]	Cut type and EDP number	
					OMNI 	
Shank dia. 1/4" [d₂]						
1/4	5/8	SF-1	1-15/16	.059	28012	1
3/8	3/4	SF-3	2-1/2	.098	28007	1
7/16	1	SF-4	2-3/4	.012	28002	1
1/2	1	SF-5	2-3/4	.098	28000	1
5/8	1	SF-6	2-3/4	.141	28033	1
Extended shank – dia. 1/4" [d₂], SL 6" (L6)						
3/8	3/4	SF-3L6	6-3/4	.098	28027	1
1/2	1	SF-5L6	6-7/8	.098	28008	1





Tree bur with pointed end – Shape G



Safety notes:



Please observe the reduced rotational speeds for extended shank burs. They can be found on page 5.

PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving





Waste Saving

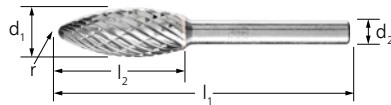


Time Saving

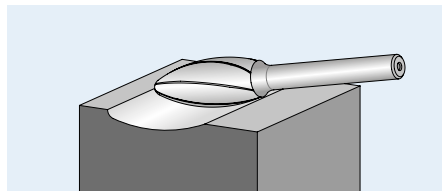


Resource Saving

d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	Cut type and EDP number	
				OMNI 	
Shank dia. 1/4" [d₂]					
3/8	3/4	SG-3	2-1/2	28015	1
1/2	1	SG-5	2-3/4	28009	1
Extended shank – dia. 1/4" [d₂], SL 6" (L6)					
3/8	3/4	SG-3L6	6-3/4	28031	1
1/2	1	SG-5L6	6-7/8	28023	1



Flame bur – Shape H



PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving





Waste Saving



Time Saving



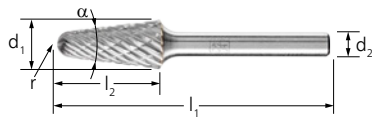
Resource Saving

d ₁ [Inches]	l ₂ [Inches]	SCTI no.	l ₁ [Inches]	r [Inches]	Cut type and EDP number	
					OMNI 	
Shank dia. 1/4" [d₂]						
1/2	1-1/4	SH-5	3	.082	28004	1

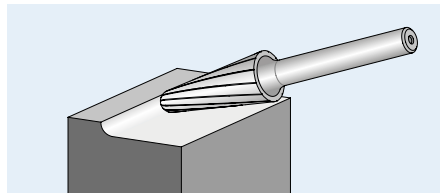


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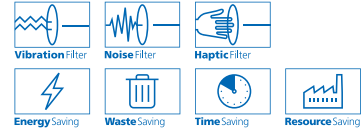
for versatile use



14° Taper bur with radius end – Shape L



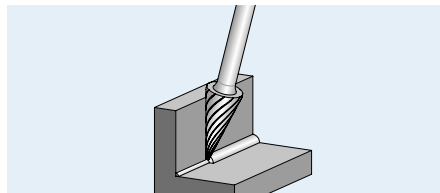
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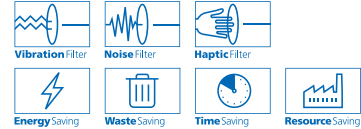
d ₁ [Inches]	l ₂ [Inches]	SCTI no.	α	l ₁ [Inches]	r [Inches]	Cut type and EDP number	
						OMNI 	
Shank dia. 1/4" [d₂]							
3/8	1-1/16	SL-3	16°	3	.114	28003	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	28014	1
5/8	1-5/16	SL-6	14°	3-1/4	.189	28013	1



Cone bur with pointed end – Shape M



PFERDVALUE®:



d ₁ [Inches]	l ₂ [Inches]	SCTI no.	α	l ₁ [Inches]	Cut type and EDP number		
					OMNI 		
Shank dia. 1/4" [d₂]							
1/4	1	SM-3	10°	1-15/16		28036	1
1/2	1	SM-5	28°	2-3/4		28016	1





8 piece carbide bur sets – OMNI cut



Contains eight carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Two additional unused slots are available for other burs.

EDP 28011

8 piece OMNI cut carbide bur set 1/4" shank (plastic case)

Contains 8 pcs. burs with 1/4" shank diameter and OMNI cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				OMNI 	Individual bur EDP's in set	
Cylindrical (plain end)	3/8	3/4	SA-3	28011	28018	1
	1/2	1	SA-5		28005	1
Cylindrical (radius end)	3/8	3/4	SC-3		28006	1
	1/2	1	SC-5		28001	1
Ball	3/8	5/16	SD-3		28021	1
Tree (radius end)	3/8	3/4	SF-3		28007	1
	1/2	1	SF-5		28000	1
Tree (pointed end)	3/8	3/4	SG-3		28015	1



5 piece carbide bur sets – OMNI cut



Contains five carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Five additional unused slots are available for other burs.

EDP 28037

5 piece OMNI cut carbide bur set 1/4" shank (plastic case)

Contains 5 pcs. burs with 1/4" shank diameter and OMNI cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				OMNI 	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	28037	28005	1
Cylindrical (radius end)	1/2	1	SC-5		28001	1
Oval	1/2	7/8	SE-5		28025	1
Tree (radius end)	1/2	1	SF-5		28000	1
14° Taper	1/2	1-1/8	SL-4		28014	1

TC burs OMNI cut

for versatile use

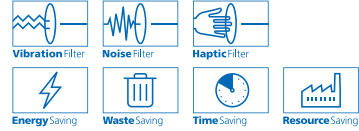


3 pc bur set, 1/4" shank, plastic case, OMNI cut

The set contains three versatile tungsten carbide burs for use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron in the most common shapes and dimensions. The sturdy plastic box protects the burs from dirt and damage.

Contents:
3 tungsten carbide burs,
shank dia. 1/4",
OMNI cut

PFERDVALUE®:



Set contents shape	Bur dia. d ₁ [Inches]	Bur length l ₂ [Inches]	SCTI no.	Cut type and set EDP number		
				OMNI	Individual bur EDP's in set	
Cylindrical bur with plain end	1/2	1	SA-5	28038	28005	1
Cylindrical bur with radius end	1/2	1	SC-5		28001	1
Tree bur with radius end	1/2	1	SF-5		28000	1

PFERD INC.
9201 W. Heather Ave. · Milwaukee, WI 53224
Phone: (262) 255-3200 · Toll-Free: (800) 342-9015
Fax: (262) 255-2840
e-mail: sales@pferdusa.com

PFERD CANADA INC.
5570 McAdam Road · Mississauga, ONT L4Z 1P1
Phone: (905) 501-1555 · Toll-Free: (866) 245-1555
Fax: (905) 501-1554
e-mail: sales@pferdcanada.ca



09/2023 Subject to technical modifications.