Due to its particularly good forming and welding qualities, its resistance against corrosion and its attractive appearance, stainless steel (INOX) is becoming increasingly popular for various products. These properties also place special requirements and demands on the tools used to machine it.

PFERD wire qualities

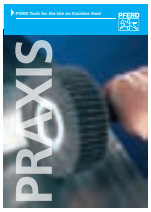
In order to fulfil the particular requirements for machining INOX, PFERD uses a wire quality of 1.4310 (V2A) on all its INOX brushes. Practical experience gained from industrial use confirm that this wire quality achieves excellent corrosion resistance with optimum tool life.

The wire quality of 1.4310 in INOX brushes tends to become ferromagnetic after cold processing (can be attracted using magnets). The reason for this is a change in the microstructure caused through deformation (e.g. in wire drawing process). This change in microstructure and the resulting ferromagnetic qualities have no influence on the quality and corrosion resistance of the INOX wire. It retains its corrosion-resistant properties.

All PFERD brushes with INOX wire are marked blue and are suitable for use on all stainless steels (INOX), such as V4A.

PFERD brushes INOX-TOTAL type
We offer a range of PFERD "INOX-TOTAL" type brushes for the most demanding of operating conditions. These brushes have been specially developed for stainless steel work and are characterised by the fact that, all brush parts are made from stainless steel, quality 1.4310 (V2A), ensuring optimum corrosion protection.
Please refer to pages 36-37 for detailed information and ordering data.

Stainless Steel (INOX) processing competence
PFERD provides a comprehensive range of tools which meet the demands for work on stainless steel. We are happy to help in finding solutions to your application problems. The PRAXIS "PFERD Tools for the Use on Stainless Steel" contains many valuable recommendations for use. Our experienced sales advisors are happy to answer your questions. Please contact us.



Standard INOX wire qualities

AISI	Short no. acc. to EN 10027-1	Material no. acc. to EN 10027-2
304	X5CrNi18-10	1.4301 (V2A)
301	X10CrNi18-8 (current standard)	1.4310 (V2A)
302	X12CrNi 17-7 (previous standard)	1.4310 (V2A)
316	X5CrNiMo17-12-2	1.4401 (V4A)
316	X3CrNiMo17-13-3	1.4436 (V4A)
316Ti	X6CrNiMoTi17-12-2	1.4571 (V4A)

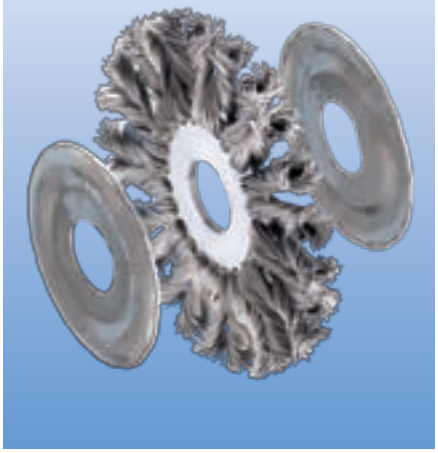
Note
To avoid possible problems, it makes sense to run preliminary tests to check the corrosion-resistance of the workpiece.

Finishing
General cleaning of the workpieces after brushing is recommended to prevent loose particles sticking to the workpiece.
For workpieces that are used in a heavily corrosive environment, processing with grinding tools or etching or passivation is recommended. This also applies when not only stainless steels but also non-alloyed steels are processed and it cannot be completely ruled out that particles will land on the stainless steel. For detailed information and ordering data on grinding and polishing tools please refer to catalogue 204.

Avoiding corrosion when brushing INOX components

Cause of corrosion	Solution
Structure changes through toothing heat build-up.	Avoid the heat build-up through: ■ Use of a lower speed. ■ Reduction in brushing pressure. ■ Oscillating brushing.
Apart from the trim all other brush parts are generally made of steel, (exception: INOX-TOTAL brush types), corrosion can occur through contact between these parts with the workpiece.	■ Use INOX-TOTAL type brushes. ■ Avoid contact between the side discs and workpiece. ■ Use pencil brushes with plastic coatings.
Using the same tool for work on steel and INOX.	■ Do not use brushes which have already been used on steel, copper or other metals. ■ Do not process steel near INOX.
Wire particle residues in the surface (crack corrosion).	■ Avoid a high brushing pressure. ■ Select a low speed.
Material removal rate is too low	Complete removal of structural changes by: ■ Extending brushing times. ■ Using grinding tools.

Wheel brush with arbor hole INOX-TOTAL

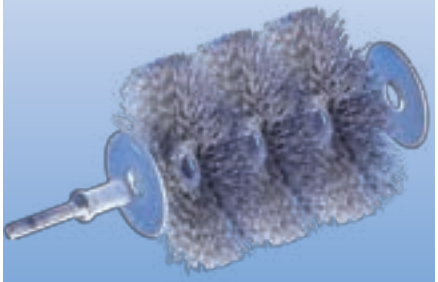


PFERD brushes INOX-TOTAL type

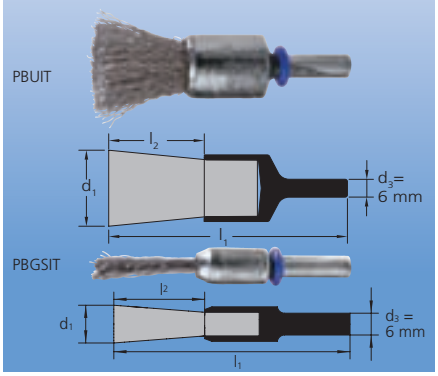
PFERD also offers brushes "INOX-TOTAL" as well as brushes with INOX fillings for machining stainless steel.
This design is characterised by the fact that not only the trim material, but rather all parts of the brush are made from stainless steel in quality 1.4310 (V2A). These brushes are perfectly suited for applications in extremely critical surroundings and for difficult conditions in the chemical and construction industries, or in the foodstuffs or nuclear industries.

Please refer to page 8 for futher information on machining stainless steel (INOX) and PFERD brushes in the INOX-TOTAL type.

Circular brush with shank INOX-TOTAL



PBUIT = Mounted pencil brushes, individual filament type
PBGSIT = Mounted pencil brushes, knotted type



Pencil brushes suitable for work in hard-to-reach places such as bores, hollow space and inner corners.

Individual filament type pencil brushes, PBUIT design, are suitable for all light brushing work. As they rotate, the wires spread out (fill expands).

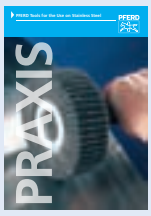
Knotted brushes, PBGSIT type, are mainly used to work on inside corners. The knot design is twisted against the brush running direction. This prevents the brush from unravelling during operation.

Ordering example:
EAN 4007220**808382**
PBUIT 1516/6 INOX 0,15 SGP

Stainless steel (INOX) wire, special line SGP

All stainless steel (INOX) brushes are degreased.

Order No.	EAN 4007220	Wire dia. d_6 [mm]	No. of knots	Brush dia. d_1 [mm]	Overall length l_1 [mm]	Trim length l_2 [mm]	Recom. speed [RPM]	Max. speed [RPM]		kg
Individual filament type										
PBUIT 1516/6 INOX 0,15 SGP	808382	0,15	-	15	65	22	7.200 - 11.700	18.000	10	0,366
PBUIT 1516/6 INOX 0,20 SGP	808399	0,20	-	15	65	22	7.200 - 11.700	18.000	10	0,366
PBUIT 2020/6 INOX 0,15 SGP	808405	0,15	-	20	70	25	7.200 - 11.700	18.000	10	0,662
PBUIT 2020/6 INOX 0,20 SGP	808412	0,20	-	20	70	25	7.200 - 11.700	18.000	10	0,662
Knotted type										
PBGSIT 1010/6 INOX 0,20 SGP	808429	0,20	1	10	65	25	4.000 - 6.500	10.000	10	0,170
PBGSIT 1010/6 INOX 0,35 SGP	808436	0,35	1	10	65	25	4.000 - 6.500	10.000	10	0,170



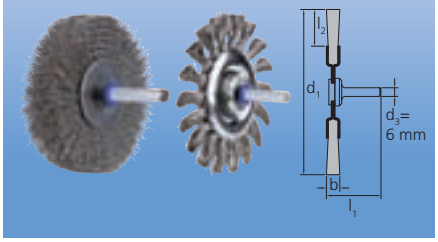
Please refer to the PRAXIS "PFERD Tools for Use on Stainless Steel".

Universally suitable for cleaning, deburring and removal of annealing colour.

The knotted type wire is more aggressive than the crimped wire.

Ordering example:
EAN 4007220**808443**
RBUIT 300/6 INOX 0,20 SGP

RBUIT = Mounted wheel bushes, individual filament type
RBGIT = Mounted wheel brushes, knotted type



Stainless steel (INOX) wire, special line SGP

All stainless steel (INOX) brushes are degreased.

Order No.	EAN 4007220	Wire dia. d_6 [mm]	No. of knots	Brush dia. d_1 [mm]	Trim width b [mm]	Trim length l_2 [mm]	Overall length l_1 [mm]	Recom. speed [RPM]	Max. speed [RPM]		kg
Individual filament type											
RBUIT 3006/6 INOX 0,20 SGP	808443	0,20	-	30	6	7	40	8.000 - 13.000	20.000	10	0,246
RBUIT 5015/6 INOX 0,20 SGP	808450	0,20	-	50	15	13	50	6.000 - 9.800	15.000	10	0,784
RBUIT 7015/6 INOX 0,15 SGP	808467	0,15	-	70	15	19	50	6.000 - 9.800	15.000	10	1,425
RBUIT 7015/6 INOX 0,30 SGP	808474	0,30	-	70	15	19	50	6.000 - 9.800	15.000	10	1,425
RBUIT 8015/6 INOX 0,15 SGP	808481	0,15	-	80	15	19	50	4.800 - 7.800	12.000	10	1,685
RBUIT 8015/6 INOX 0,30 SGP	808498	0,30	-	80	15	19	50	4.800 - 7.800	12.000	10	1,685
Knotted type											
RBGIT 7006/6 INOX 0,35 SGP	808504	0,35	18	70	6	16	42	10.000 - 16.300	25.000	10	1,256

Knotted type wheel brushes are suitable for heavy brushing work such as scale removal, rust removal, deburring and cleaning of weld seams. The slim design RBGIT PIPE is especially suitable for work in hard-to-reach areas e.g. root weld seams.

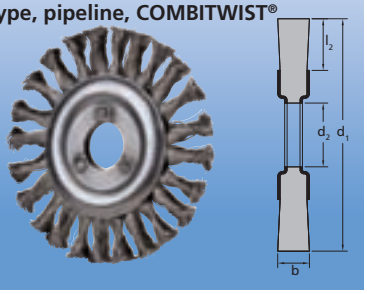
Advantages of the COMBITWIST® knot style:
- Smooth operation, even on corners and edges.
- No "recoiling" of the brush on edges.
- Enhanced tool life.
- Increased stock removal rate.
- Prevention of the knotting becoming "unravelled" in use.

Packaging unit: 1 piece

Recommendation for use:
Optimum operation with high power output, adjustable speed angle grinders.

Ordering example:
EAN 4007220**808511**
RBGIT 11506/22,2 CT INOX 0,50 PIPE SGP

RBGIT CT = Wheel brushes, knotted type
RBGIT PIPE CT = Wheel brushes, knotted type, pipeline, COMBITWIST®



Stainless steel (INOX) wire, special line SGP

All stainless steel (INOX) brushes are degreased.

Order No.	EAN 4007220	Wire dia. d_6 [mm]	No. of knots	Brush dia. d_1 [mm]	Trim width b [mm]	Trim length l_2 [mm]	Arbor hole dia. [mm]	Recom. speed [RPM]	Max. speed [RPM]	kg
RBGIT 11506/22,2 PIPE CT INOX 0,50 SGP	808511	0,50	36	115	6	19	22,2	5.000 - 12.500	12.500	0,322
RBGIT 11512/22,2 CT INOX 0,35 SGP	808528	0,35	24	115	12	28	22,2	5.000 - 12.500	12.500	0,275