



ATB® – Advanced Technology Brush System

Automated, process-reliable
and reproducible deburring

Why Osborn?

120

countries served

130+

years of
experience

13

manufacturing locations
around the world

1.250+

employees
to serve

Osborn offers the best solutions for your mechanical surface treatment challenges. Our experts are highly trained to serve you with the optimum off-the-shelf or customised tools, when and where you need them. Unlike others, we help you optimise your process, meet the highest quality and safety requirements and reduce your costs.

Extra long life brushes. Reduce set-up time.

These long life brushes reduce set-up time and cost per part. Additionally, the performance of the brushes provide a high level of accuracy and repeatability.



Various mounting options

designed for direct adaptation to different tool holders.

Support collar

An optional flexible support collar can be added to ensure stability with longer filaments at high speeds.

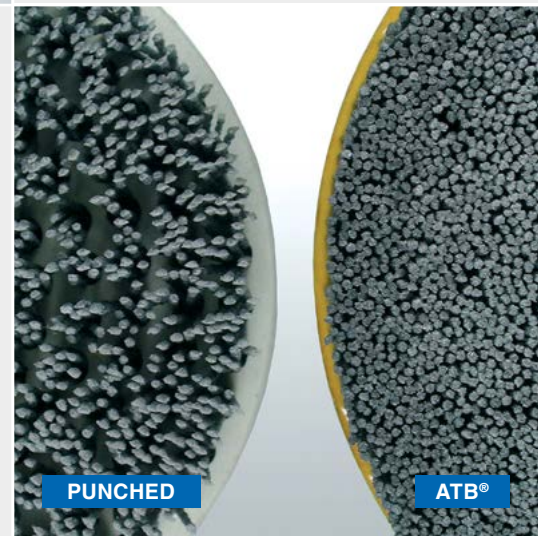


Maximum fill density

Unlike punched brushes, the fill material is firmly cast into the body of the ATB® brush. There are approximately 4 times more bristles, which significantly increases the service life.

Fill pattern

A variety of diameters and fill patterns are possible. The diameters range from 50 mm to 250 mm, whereby abrasive grains such as aluminum oxide, silicon carbide, ceramics and diamond are available in different sizes and various filament lengths. There are also fill density and segment fill options to vary the aggressiveness and brush flexibility.



PUNCHED

ATB®

High-tech brushes for automated deburring



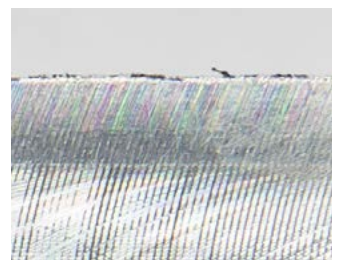
Edge rounding without changing the workpiece geometry

Technical brushes are precision tools that take a major part of the responsibility for the quality of end products. They can be tailored to virtually any material machined in a component-oriented manner.

Our ATB® brushes are available to you with a large selection of abrasive bristles having **silicone carbide** or **ceramic** filament, with different grit sizes and filament diameters.

ATB® brushes are designed for direct adaption on tool holders with **face mill arbors** (DIN 6357) and **shell mill mounts** (DIN 6358). This means they can be used on machining centres, CNC millers & lathes and robot cells for example.

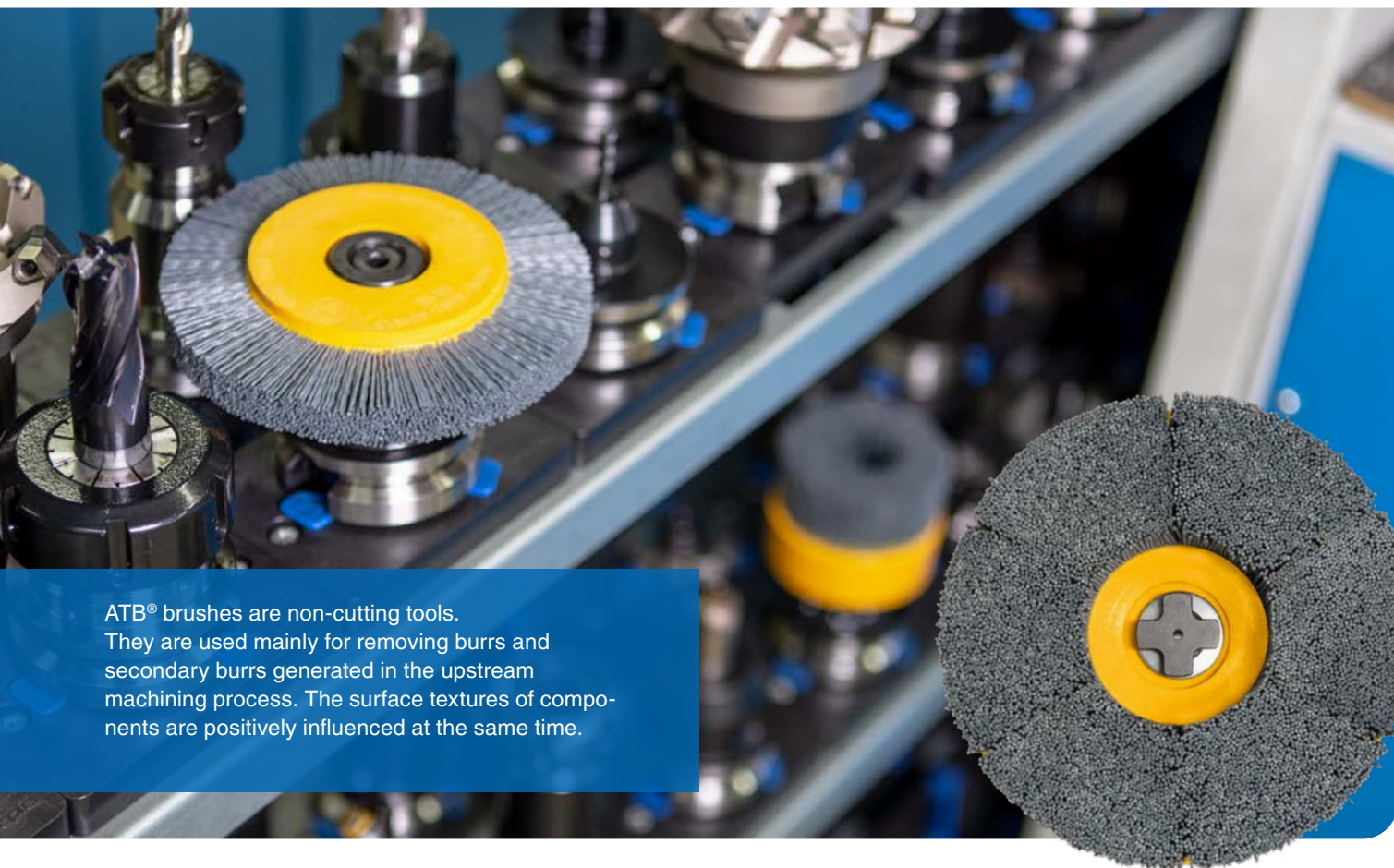
Brushes are deployed downstream of the machining process, and the use of cooling lubricants, emulsions and water poses no problems. This means the machined work pieces can be directly deburred and finished in a reliable and reproducible manner without reclamping on the machine.



Before machining - Distinct burrs on the edge.
Milling grooves on the surface.



After machining - Burrs have been reliably removed and the edges rounded. The surface has a uniform, brushed appearance.



ATB® brushes are non-cutting tools. They are used mainly for removing burrs and secondary burrs generated in the upstream machining process. The surface textures of components are positively influenced at the same time.

Deburring directly after the machining process

Shorter cycle times and very uniform edge rounding, and so particularly suited for the deburring of:

- Milled and turned parts
- Ground components
- Sinter parts
- Punched, nipples and pressed parts
- Pneumatic and hydraulic parts
- Engine components such as cylinder heads and cylinder blocks
- Die-cast parts
- Valve plates
- Parts ground flat
- Toothed parts
- Contact and sealing surfaces
- Finishes

Maximum filament density Minimum process costs

ATB® brushes have filament densities four times higher than disc brushes manufactured in the conventional way (punched). This means brush life is prolonged many times over - with at the same time quicker processing times and better and more efficient deburring results.

Features

- Bristles are securely casted
- Extremely dense filament surface
- Planar filament surface
- High abrasive grit content for effective deburring
- High levels of form stability and concentricity
- Aggressive brushing effect
- Can be tailored to any material machined
- Use with coolant possible/recommended
- Standardised face mill arbors and shell mill mounts
- Can be used on the same machining center/CNC machine directly after the upstream machining process

Features and benefits at a glance.

Resin cast body

The fill material is firmly cast into the bodies of our ATB®.

Benefit: ATB® can be run faster while maintaining its fill integrity, highly precise design with a high level of tilting rigidity while remaining lightweight.

Maximum bristle density

A maximum bristle density with up to 4 times more bristles.

Benefit: Longer service life, more aggressive brushing action. Even very complex components can be deburred quickly and effectively.

High tech filaments

Nylon threads interspersed with abrasive grit (e.g. silicon carbide or ceramic) are the ideal fill material for deburring. Other materials are also available on request (e.g. diamond grain).

Benefit: The use in combination with coolants, emulsions or water is possible and is recommended especially for higher speeds and very thin workpieces.

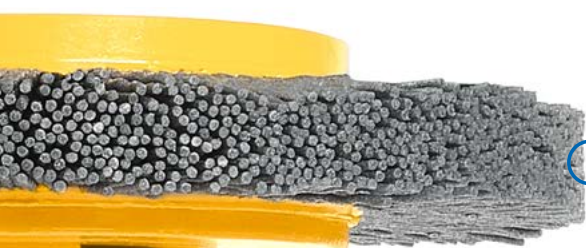




Many diameters and patterns

A wide range of diameters are available. In addition, both the fill length and the fill pattern can be individually adapted.

Benefit: With our individualized options, we can find you the best solution for your deburring application. An increase in the fill length can, for example, increase the service life and flexibility in order to deburr challenging components. Changing the fill pattern can increase the aggressiveness depending on the need.



Dimensionally stable and flat

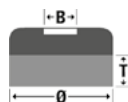
The surface of ATB® is flat.

Benefit: Even edge rounding can be achieved, wear characteristics are consistent and controllable. There is uniform contact and repeatability.

Direct adaptation to tool holders

For example HSK-/SK, face mill arbors and shell mill mounts.

Benefit: No separate handling/clamping. The ATB® brush can be stored in the tool magazine of the BAZ / CNC, deburring can be started immediately after the machining process without removing the part.



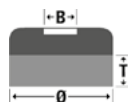
ATB® brushes with maximum fill density, compatible with clamping fixture

Evolution ★★★★★

Can be used for deburring components made of the most diverse of materials, such as steel, aluminium and cast iron.

Appearance can vary from picture depending on variant.

					NHS 80	NHS 120	NHS 180	NHS 320
Ø	T	B	For clamping fixture	PU	Order no.	Order no.	Order no.	Order no.
50	35	16 (hexagonal)	K = Fixture with shank	1	6701-604 912	5411-604 912	5431-604 912	5441-604 912
76	35	16 (hexagonal)	L = Fixture with shank	1	3111-604 913	9841-604 913	3311-604 913	3151-604 913
85	35	16 (hexagonal)	J = Fixture with shank	1	6201-604 914	1601-604 914	2211-604 914	6231-604 914
106	35	16 (hexagonal)	H = Fixture with shank	1	3101-604 914	3221-604 914	3321-604 914	3401-604 914
					NHC 80	NHC 120	NHC 180	NHC 320
Ø	T	B	For clamping fixture	PU	Order no.	Order no.	Order no.	Order no.
50	35	16 (hexagonal)	K = Fixture with shank	1	2201-604912	1301-604912	1311-604912	1321-604912
76	35	16 (hexagonal)	L = Fixture with shank	1	1321-604913	1331-604913	1351-604913	1361-604913
85	35	16 (hexagonal)	J = Fixture with shank	1	1341-604914	1351-604914	1361-604914	1371-604914
106	35	16 (hexagonal)	H = Fixture with shank	1	5891-604914	9901-604914	4411-604914	1381-604914



ATB® brushes with maximum fill density, for tool holders

Evolution ★★★★★

For the deburring of contact and sealing surfaces, and the functional areas of the most diverse of components. They should be used on stationary machines. Usage with cooling lubricant, water or oil is recommended.

Appearance can vary from picture depending on variant.

					NHS 80	NHS 120	NHS 180	NHS 320
Ø	T	B	For clamping fixture	PU	Order no.	Order no.	Order no.	Order no.
125	40	18 + Driving hole	C = Fixture for HSK/SK	1	3101-604 916	3201-604 916	3311-604 916	3401-604 916
150	40	18 + Driving hole	D = Fixture for HSK/SK	1	3111-604 916	3211-604 916	4341-604 916	3411-604 916
175	40	18 + Driving hole	E = Fixture for HSK/SK	1	3131-604 916	3231-604 916		
200	40	18 + Driving hole	F = Fixture for HSK/SK	1	8411-604 918	4021-604 918	5901-604 918	
250	38	18 + Driving hole	G = Fixture for HSK/SK	1	6511-604 919	6171-604 916	2401-604 919	
					NHC 80	NHC 120	NHC 180	NHC 320
Ø	T	B	For clamping fixture	PU	Order no.	Order no.	Order no.	Order no.
125	40	18 + Driving hole	C = Fixture for HSK/SK	1	0101-604916	0201-604916	0311-604916	0401-604916
150	40	18 + Driving hole	D = Fixture for HSK/SK	1	0111-604916	0211-604916	0341-604916	0411-604916
175	40	18 + Driving hole	E = Fixture for HSK/SK	1	0131-604916	0231-604916		
200	40	18 + Driving hole	F = Fixture for HSK/SK	1	1611-604918	0021-604918	0901-604918	
250	38	18 + Driving hole	G = Fixture for HSK/SK	1		8771-604919		



Clamping fixtures for ATB® disc brushes

Appearance can vary from picture depending on variant.

		INDEX K / Ø 50 mm	INDEX L / Ø 76 mm	INDEX L / Ø 85 mm	INDEX L / Ø 106 mm	
Clamping fixture	PU	Order no.	Order no.	Order no.	Order no.	Order no.
With shank (Ø 12 mm) and clamping DIN 6535-HB	1	5002-075 000	3642-075 000	9602-075 000	3652-075 000	
		INDEX C / Ø 125 mm	INDEX D / Ø 150 mm	INDEX E / Ø 175 mm	INDEX F / Ø 200 mm	INDEX G / Ø 250 mm
Clamping fixture	PU	Order no.	Order no.	Order no.	Order no.	Order no.
For including on clamping cones HSK/SK tool holder	1	3602-075 000	3612-075 000	3622-075 000	3692-075 000	1922-075 000



Tool holders

Appearance can vary from picture depending on variant.

Tool holders	for INDEX	PU	Order no.
HSK – A63, to DIN 69893	C, D, E, F, G	1	3603-604 000
HSK – A100 to DIN 69893	C, D, E, F, G	1	3633-604 000
SK – 40 to DIN 69871	C, D, E, F, G	1	3613-604 000
Weldon surface with shank 12 mm diameter, HSK - A63 to DIN 69893	H, J, K, L	1	4933-604 000
Weldon surface with shank 12 mm diameter, HSK - A100 to DIN 69893	H, J, K, L,	1	6303-604 000

Our ATB® brushes are also available in many other designs. Our application engineers will be happy to advise you: service@osborn.de

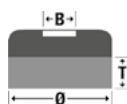




ATB® brushes with maximum fill density, for shell mill mount

Evolution ★★★★★

For the deburring of contact and sealing surfaces, and the functional areas of the most diverse of components. They should be used on stationary machines. Usage with cooling lubricant, water or oil is recommended. For direct mounting on shell mill holders without need of further clamp set / system.



Appearance can vary from picture depending on variant.

					■ NHS 80 ■	■ NHS 120 ■	■ NHS 180 ■
Ø	T	B	For fixture	PU	Order no.	Order no.	Order no.
50	35	Ø 16 with groove	Direct to shell mill holder	1	6601-604 912	6501-604 912	6401-604 912
76	35	Ø 22 with groove	Direct to shell mill holder	1	5521-604 913	5511-604 913	5501-604 913
106	35	Ø 22 with groove	Direct to shell mill holder	1	5501-604 914	5791-604 914	5521-604 914
125	35	Ø 22 with groove	Direct to shell mill holder	1	6721-604 916	6821-604 916	6621-604 916
125	35	Ø 27 with groove	Direct to shell mill holder	1	6761-604 916	6811-604 916	6641-604 916
150	35	Ø 22 with groove	Direct to shell mill holder	1	6771-604 916	6841-604 916	6651-604 916
					■ NHC 80 ■	■ NHC 120 ■	■ NHC 180 ■
Ø	T	B	For fixture	PU	Order no.	Order no.	Order no.
50	35	Ø 16 with groove	Direct to shell mill holder	1	1421-604912	1431-604912	1441-604912
76	35	Ø 22 with groove	Direct to shell mill holder	1	1451-604913	5991-604914	1461-604913
106	35	Ø 22 with groove	Direct to shell mill holder	1	1421-604914	1431-604914	1441-604914
125	35	Ø 22 with groove	Direct to shell mill holder	1	2431-604916	2441-604916	2451-604916
125	35	Ø 27 with groove	Direct to shell mill holder	1	6991-604916	2461-604916	2471-604916
150	35	Ø 22 with groove	Direct to shell mill holder	1	1061-604916	1071-604916	1091-604916





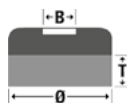
ATB® brushes with maximum fill density, Turbo-line

Evolution ★★★★★

Brushes for use on continuous deburring systems with planetary heads. They are used for flat parts that need to be produced and deburred using a punching, laser, fine blanking or forming method for example.

The filament position of ATB® Turbo-Line brushes can optionally be angled to the left or right at a defined angle. Depending on the direction of rotation, this can bring about more aggressive and effective deburring, or can limit the brush to a surface finish only.

Appearance can vary from picture depending on variant.



					■ NHS 80 ■	■ NHS 120 ■	■ NHS 180 ■	■ NHS 320 ■
Ø	T	B	For mounting	PU	Order no.	Order no.	Order no.	Order no.
150	25	Ø 25/35 + 2 Driving holes	TURBO – NEUTRAL	1	3141-604 916	3241-604 916	3351-604 916	3441-604 916
150	25	Ø 25/35 + 2 Driving holes	TURBO – angled RIGHT	1	3181-604 916	3281-604 916	3391-604 916	3481-604 916
150	25	Ø 25/35 + 2 Driving holes	TURBO – angled LEFT	1	3161-604 916	3261-604 916	3371-604916	3461-604916
					■ NHC 80 ■	■ NHC 120 ■	■ NHC 180 ■	■ NHC 320 ■
Ø	T	B	For mounting	PU	Order no.	Order no.	Order no.	Order no.
150	25	Ø 25/35 + 2 Driving holes	TURBO – NEUTRAL	1	0141-604916	0241-604916	0351-604916	0441-604916
150	25	Ø 25/35 + 2 Driving holes	TURBO – angled RIGHT	1	0181-604916	0281-604916	0391-604916	0481-604916
150	25	Ø 25/35 + 2 Driving holes	TURBO – angled LEFT	1	0161-604916	2191-604916		

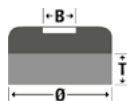


ATB® wheel brush with full trim, Cutter head holders/combined cutter arbor

Evolution ★★★★★

ATB® round brush with very dense abrasive nylon bristle trim and high concentricity for process-reliable use and long service life. tool life. With longitudinal groove for direct clamping on tool holders (e.g. HSK, SK, BT) as cutter head holders and combi milling arbor holders.

Appearance can vary from picture depending on variant.



Depending on the material of the component to be machined, the brush can be selected with ceramic grit (NH-C) or silicon carbide grit (NH-S). Please ask our application technicians about this.

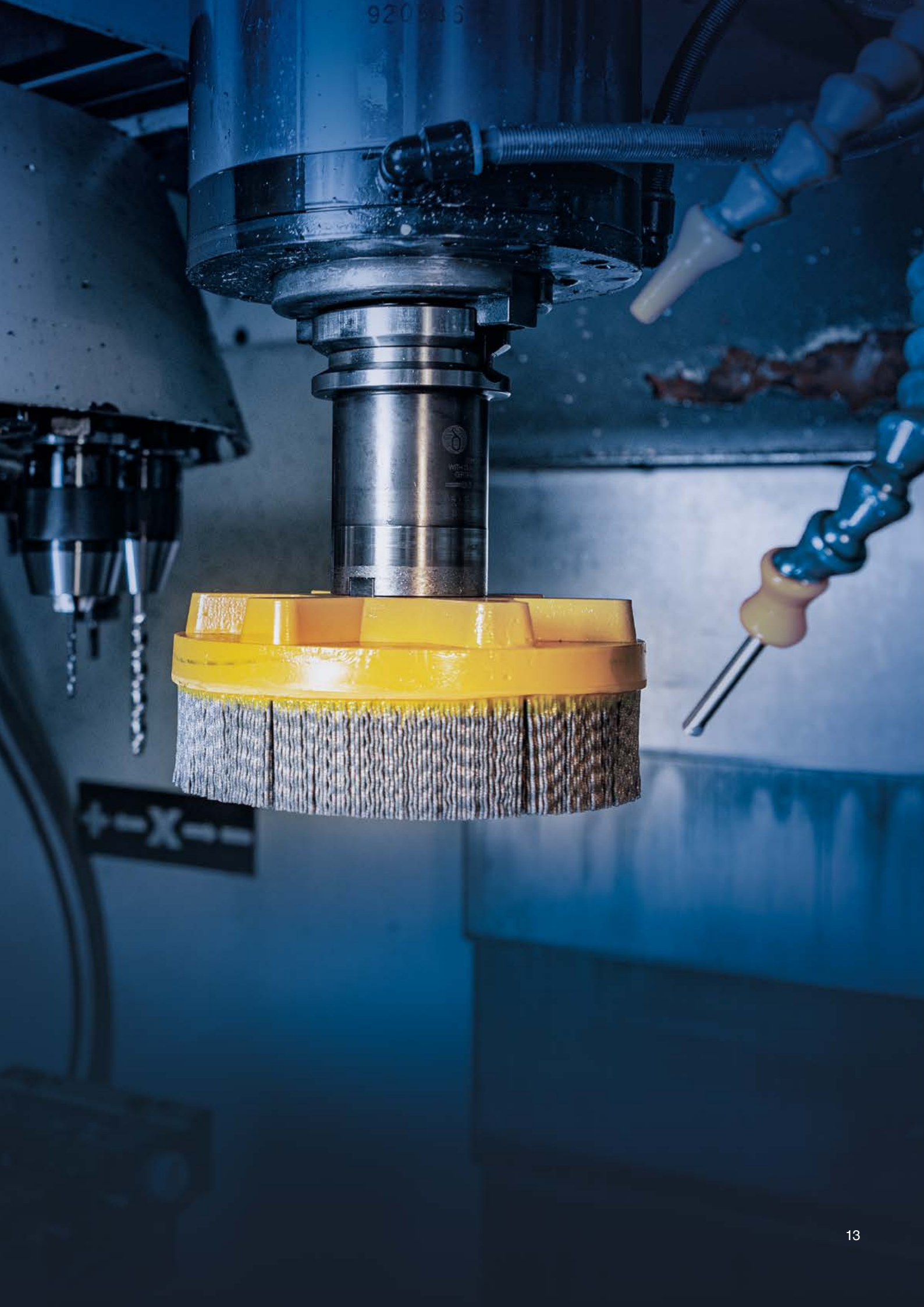
Application: On CNC machines, machining centres and on robot systems. Preferably to be used wet with cooling lubricant or oil. Suitable directly after machining for deburring and edge rounding on components with side and inner surfaces, as well as for fine machining of component contours.

					■ NHC 120 ■	■ NHC 180 ■	■ NHS 120 ■	■ NHS 180 ■
Ø	T	B	For fixture	PU	Order no.	Order no.	Order no.	Order no.
125	25	Ø 22 with NUT	Cutter head / combi bevel mandrel	1	2111401913			
125	25	Ø 22 with NUT	Cutter head / combi bevel mandrel	1		2121401913		
125	25	Ø 22 with NUT	Cutter head / combi bevel mandrel	1			2101401913	
125	25	Ø 22 with NUT	Cutter head / combi bevel mandrel	1				8401401913

We help you to identify undetected potentials.

There are many questions concerning the ideal process for deburring. If you find yourself with one of these questions, we would like to help you.

- Which tool is best suited for my deburring process?
- I would like to test alternatives to my current tools.
- Do I still have potential in my machining process?
- Which parameters can I still work on?
- How can I reduce the cost-per-part sustainably?
- The machining results are difficult to reproduce. What can I do?
- The brushes wear out too quickly and I there is too much time spent on changeover and downtime is too long.



Parts and sample processing

If you are in doubt whether you already have the ideal deburring tool for your machining process, we recommend our sample processing service.

This is an excellent opportunity to put the quality of your current deburring tools to the test and, if necessary, replace it with a more suitable tool for the application. With the appropriate fill material, and optimized design, we are confident we can help.

Machining of turned parts

We can process components such as axles and shafts in our test lab. The workpiece is in a clamping device or on a rotary table and can be deburred with a variety of ATB® brushes. Process-relevant parameters such as speed, cutting speed, feed rates, immersion depth, etc. can be set and results measured.



Complex parts

Complex geometries are no obstacle due to the large variation possibilities for ATB®. Special tools for testing can be produced on short notice.

Documentation

After the parts have been deburred we prepare detailed documentation of our test results for you. In our report we define the objectives, test procedure and the conclusions. Based on the results, you can compare the quality of the deburring tools that you use today versus our solutions and make your decision.

We will be happy to advise you.

Our application engineers will be happy to look at your application and help you choose the right tool to ensure that cycle time, machining results and cost-per-part are optimized. Get in touch with us today.

Put your deburring process to the Test

Request our service for parts and sample processing now:
service@osborn.de







[osborn.com](https://www.osborn.com)