

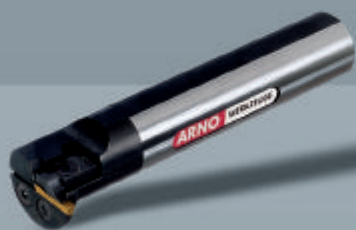
ARNO[®]

WERKZEUGE



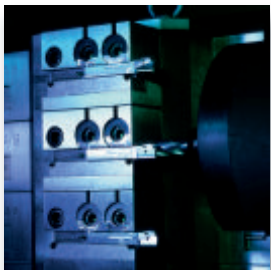
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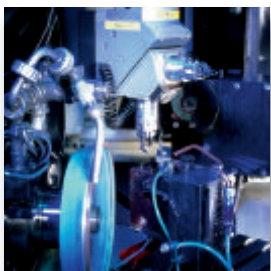
ARNO®-Werkzeuge – looking back over the last 40 years.



Since the company's establishment in 1962 **ARNO®-Werkzeuge** has been manufacturing and selling high-quality products in line with the requirements of customers in the machine tools sector. It has always been important to us to meet our customers' needs in all areas. Thanks to this focus we are now able to offer you complete solutions in all fields of metal processing.



Our customers are our feedback. To feel that we have given satisfaction to our customers and got the best out of what is possible gives us and our employees the greatest pleasure. In spite of what we have achieved so far, we are always looking for something new. If we stand still we shall not progress.



We thank you for your confidence in us and will continue to stay focussed.

Klaus-Michael Arnold

Josef Storf

ARNO®-Werkzeuge

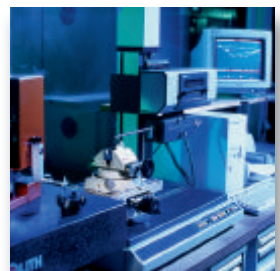
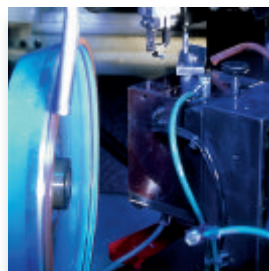
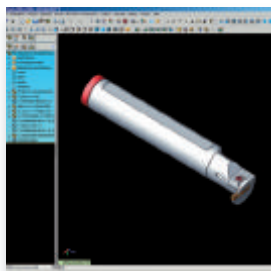
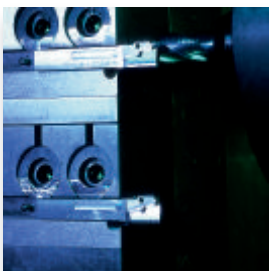
... a system of reliable technology!

The simplest possible assembly together
with the greatest versatility – from the
standard tool to the individual solution –
universally applicable tool systems.



Profile

Strength through experience, competence
and development





Anywhere in the world

To meet the increasing international demand for **ARNO®-Werkzeuge** tools we are expanding into other countries. Since 2005 subsidiaries in Great Britain and Italy have been supporting us by looking after our customers locally. Our export share has increased remarkably within a short time. 40% speaks for itself and shows that we are on the right path

Infinite possibilities

Many years of experience in machining technology, together with continual development of existing tools and research into new materials, have enabled us once again to introduce outstanding **ARNO®-Werkzeuge** tools this year.

Research and development is needed for new materials as well as to satisfy the demand for ever-faster machining speeds. The development and improvement of versatile tool systems that can withstand the forces exerted on indexable inserts and toolholders is essential.

The extremely powerful and efficient **SHARK-Drill®**, **SHARK-Drill²** and **SHARK-Cut®** drilling systems, the **CLIP-GROOVE®** for grooving and parting, the wide range of indexable inserts and many machining tools confirm the capabilities of our company: **ARNO®-Werkzeuge**.

It goes without saying that as soon as you have opted for **ARNO®-Werkzeuge** tools you are entitled to specialist consultancy and customer care. We use our state-of-the-art CAD technology to meet your individual requirements and this, when used by our competent team, forms an efficient person/machine combination.

ARNO®-Werkzeuge tools have an international reputation for reliability and performance.

Close cooperation with our customers is one of the factors that enable the continuous development and improvement of **ARNO® tool systems** to have such outstanding results. We should like to take this opportunity of thanking you for your support.



Grooving

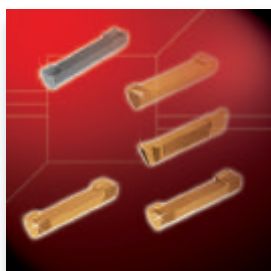
„Tools and cutting inserts for parting and grooving”

... includes a full range of tools for the external and internal radial and axial machining of a wide variety of workpiece shapes and materials.



ARNO® grooving system

- Modular grooving system with just one basic work holding tool
- For internal and external machining
- Special geometries as required
 - Aluminium machining
 - Clip grooves
 - Chip contraction



Strength through performance

The **ARNO®** modular grooving system is at the heart of things. A single basic toolholder can take different tool variants by simply changing the support blade and clamp.

The stability of the grooving tool means that chip removal is possible in all 3 main cutting directions, enabling combined operations with just one tool. Precision-ground two- or three-edged cutting inserts of various designs, different shapes and types, give the best cutting performance in respect of chip forming, cutting speed and efficiency.



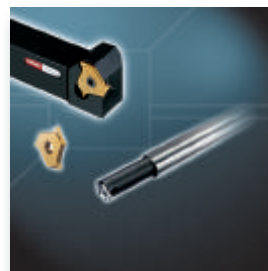
DROP-CUT®

- Twin Vee guides with fixed stop
- Ground or sintered cutting inserts
- Wide variety of types and chip breakers



Grooving

Strength through performance





SHORT-CUT®

- Whether axial or radial groove turning, our patented insert clamping offer maximum stability and efficiency
- Specially developed geometries for SHORT-CUT® applications
- AM geometry for medium machining
- Full radius cutting insert for machining aluminium

Innovation and development

The combination of optimum stability in the holding tool (short flute length, latest clamping technique) and pressed double-sided cutting insert (special chip geometry and cutting edge design) makes our **SHORT-CUT®** tools the best partners for high machining outputs in groove turning.

For parting, too, our tools in the **DROP-CUT®** range are in a class of their own.

ARNO® microtools are used for small diameters from 2.2 mm for various machining jobs such as thread turning, turning, chamfering, copy turning or grooving. Where grooving is concerned, we are not just the competent partner with a comprehensive, fully developed standard range, we also have something to offer in the area of special tools.

CLIP-GROOVE®

- Various shapes of groove are possible with a single tool
- Screw clamping provides optimum location of indexable inserts
- 3-edged indexable inserts in various groove widths
- Special profiles available up to 7 mm groove width
- Rapid clamping and changing of inserts



MICRO TOOLS®

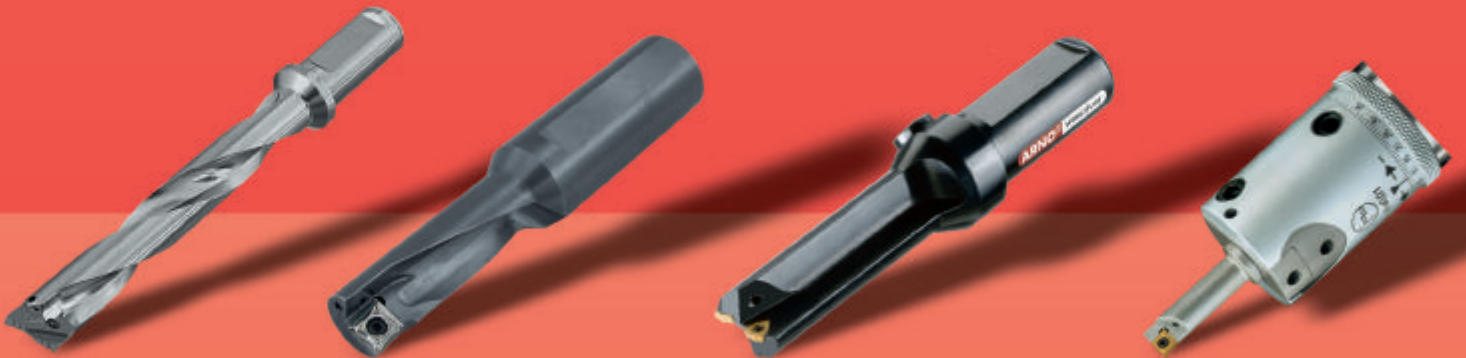
- For use with small diameters from 2.2 mm
- Applications:
 - Turning
 - Thread turning
 - Drilling
 - Chamfering
 - Copy turning



Drilling

„Drilling tools and indexable inserts for drilling“

We offer 4 different drilling systems and are fully equipped for all your drilling needs.





SHARK-Drill® / SHARK-Drill²

- Versatile and powerful drilling system
- One holder for range of drill diameters
- All holding tools have internal coolant supply
- CNC ground: for the greatest accuracy
- Edge protection chamfer for higher durability and edge stability



Strength through innovation

The SHARK-Drill® system of drill inserts offers the user even greater potential in high-performance drilling. The use of replaceable cutting inserts instead of standard HSS drills makes re-sharpening a thing of the past. Self-centring drill tips, optimum cutting geometry and long drilling depths are only some of the advantages that this system offers.

SHARK-Drill®

- Diameter range 9,5 - 114 mm
- Can be applied up to 30 x D
- Inserts available in 3 carbide and 3 HSS grades
- TiN, TiCN and TiAlN coatings available
- For deep drilling the **(-AS)** geometry offers low cutting forces and improved centring
- Use the **(-F)** geometry to produce a flat bottom hole.

SHARK-Drill²

- Diameter range 14 bis 32 mm
- Available in 3 x D and 5 x D drill depth
- Coated drill body for improved swarf evacuation and longer life
- Excellent drilling performance because of new insert geometry.



SHARK-Cut®

- Versatile and powerful drilling system
- All holding tools have internal coolant supply
- CNC ground: for extremely accurate repeatability
- Edge protection chamfer for higher durability and edge stability
- TiCN and TiAlN coatings can be supplied
- Pointed cutting edge, self-centring



Drilling

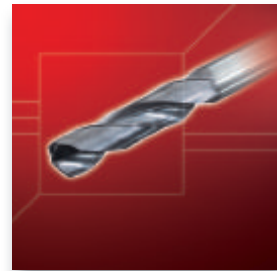
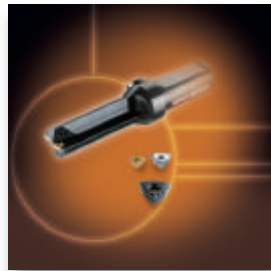
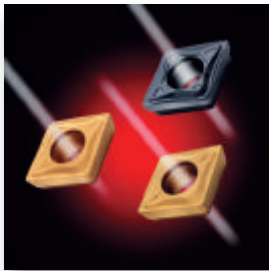
Strength through innovation

The **SHARK-Cut®** is a versatile and powerful tool that can be used for turning and drilling jobs. Only one tool is needed to execute four machining processes:

- > Drilling into solid
- > Internal turning
- > Facing
- > External turning.

The **indexable insert drill** for economic working with interchangeable inserts offers all the advantages of a powerful drilling tool.

The special arrangement and geometry of the indexable inserts achieves greater drilling depths with no loss of drilling quality and no axial variation.

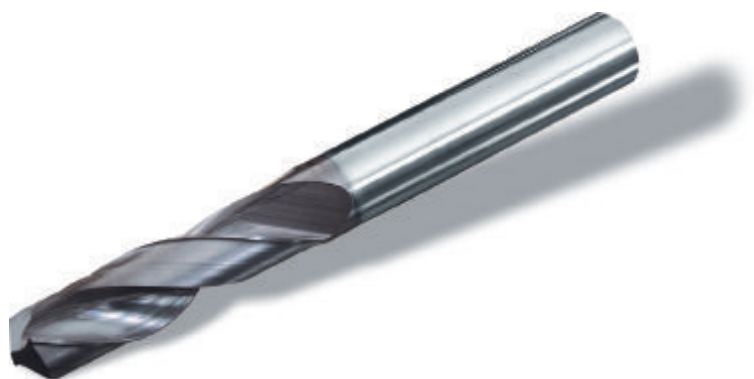


Indexable insert drills

- WCGT - 29 **"The strong one"** for steel and stainless steel
- WCGT - FN **"The sharp one"** for aluminium, non-ferrous metals
- WCGT - SN **"The ground one"** for steel and stainless steel
- WCMT **"The universal one"** for steel and cast materials

Solid carbide drills

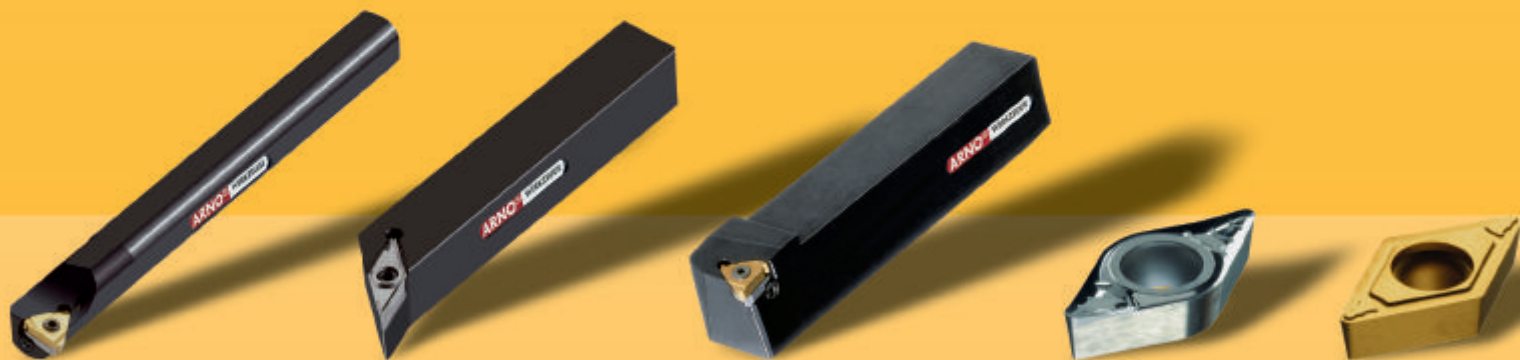
- With or without through tool coolant
- Available in drill depth 3 x D, 5 x D and 8 x D
- High accuracy
- Suitable for high speed drilling
- TiAlN coated for better tool life
- Self-centring



Turning

„Tools and cutting inserts for turning and threading“

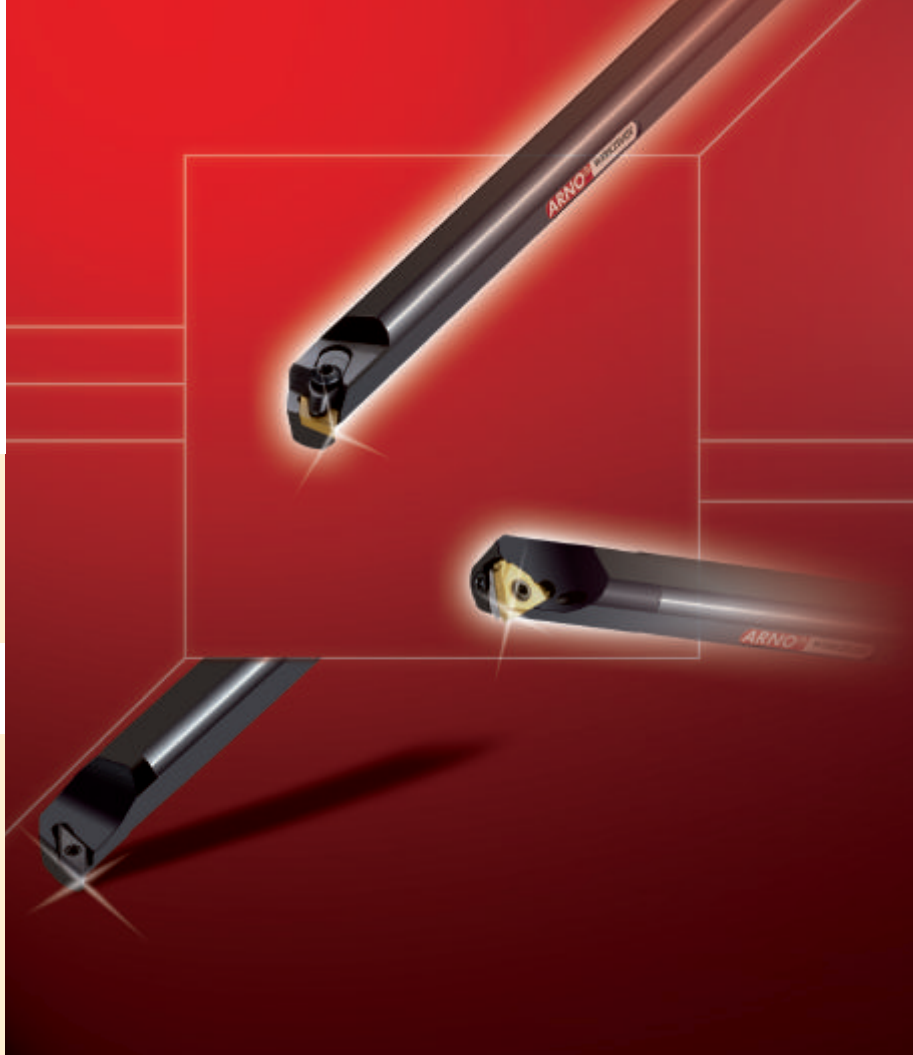
... this section includes a full range that meets all modern machining needs.





Internal machining

- Clamp locking - positive (solid carbide shank)
- Taper clamp locking
- Lever lock clamping; (steel shank or carbide shank with internal coolant supply)
- Screw clamping (steel shank or carbide shank with internal coolant supply)
- Screw clamping (recessed steel or carbide shank with internal coolant supply)



Strength through versatility

The **ARNO®** turning range comprises of a large selection of tool holders for internal and external machining with various types of clamping system for all machining tasks. The generally recognised process safety of our lathe tools is due in no small part to the versatility of our indexable inserts. Positive and negative **ARNO®** indexable inserts are available for machining a wide variety of materials, from rough machining to finish machining.

The standard range is characterised by specially developed chip form geometries and types, coated and uncoated, with advanced characteristics. Our special aluminium chip forming geometry represents an inevitable step in the direction of the efficient machining of aluminium and its alloys.

These indexable inserts are ground and polished; the highly positive design of their cutting edges guarantees qualitative and quantitative improvements in the machining of aluminium. In addition, our high-performance grade type "AD" with diamond coating offers a unique combination: outstanding machining efficiency together with an outstanding engineering solution.

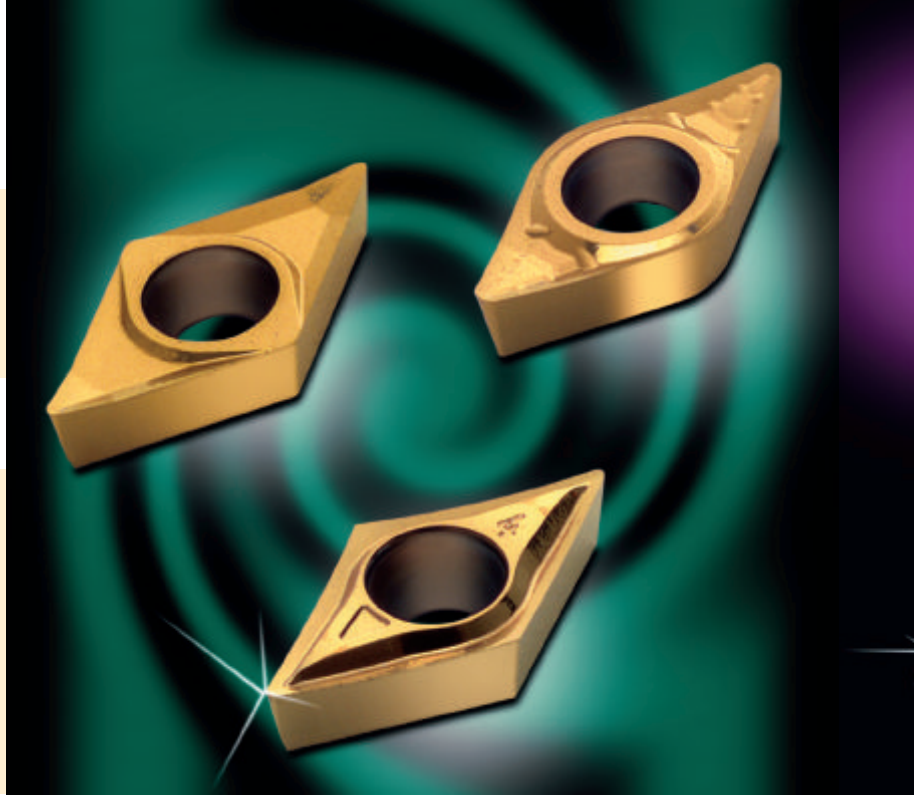


External machining

- Clamp locking - negative and positive
- Taper clamp locking
- Lever lock clamping
- Screw clamping

Indexable inserts

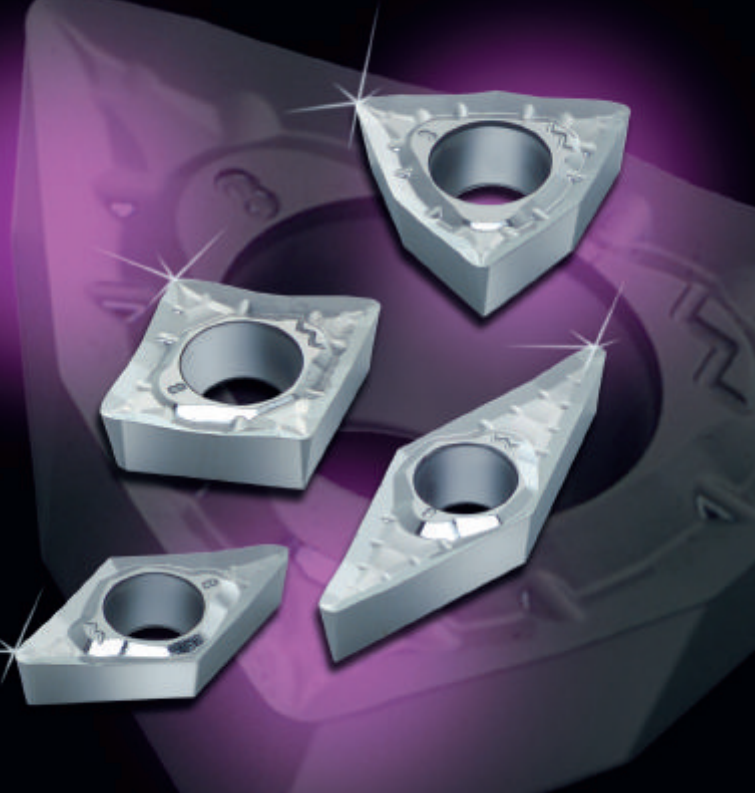
- Carbide grade coated and uncoated
- Carbide grade with ALU chip breaker
- CBN and PCD material
- HSS cutting material
- Cermet



Turning

Strength through versatility





Aluminium machining

- Grooving, turning and milling with powerful PCD cutting material
- Special chip contraction geometry
- Polished surface for optimum chip clearance
- Highly positive rake

Innovation and development

This comprehensive range of indexable inserts for machining non-ferrous metals and composite materials is not the only indicator that the engineering, performance and reliability of our tools places them at the top of the league. New technologies and the increasing variety of materials to be machined are leading to the use of even newer tools and cutting materials as well. One of the ways in which we meet this market require-

ment is our comprehensive range of **PCD and CBN indexable inserts**. Tool holders and indexable inserts for threading complete our turning range. Our standard range already covers turning a wide variety of thread types and sizes, including internal machining from 3.2 mm diameter.

Thread turning

- ISO-thread, BSW and UN thread
- American trapezoidal thread
- Aerospace thread
- Tapered fine pitch pipe thread
- Pg-thread
- Special thread forms available on demand.



Milling

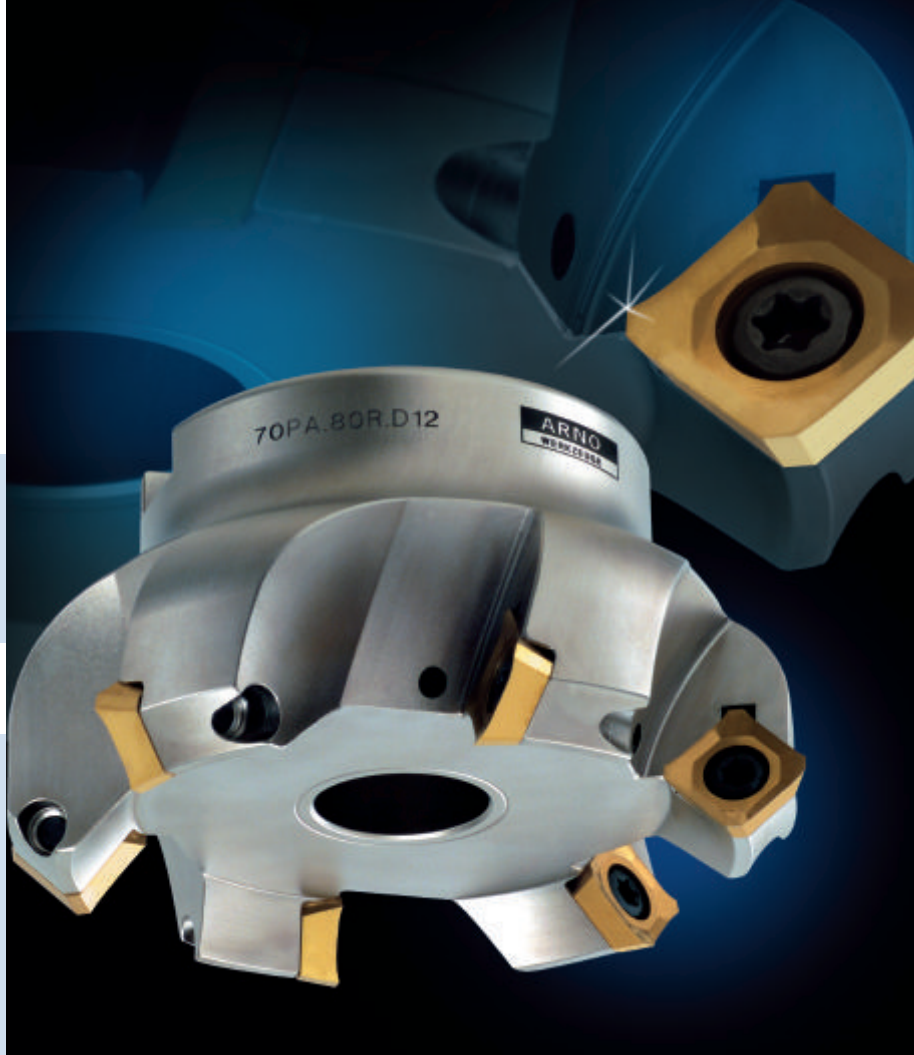
„Tools and cutting inserts for milling and thread milling”

Face milling, end milling, shell mills, side and face milling cutters, chamfer mills, T-slot mills and drilling slot mills are as much a part of our standard range as solid carbide mills.



Milling cutters

- Face mills
- End mills
- Chamfer mills
- Threaded copy mills
- Mills for round inserts
- Slot mills
- Roughing end mills

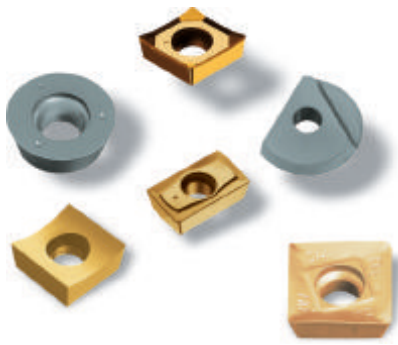


Strength through using inserts

ARNO® indexable inserts for the perfect wet and dry milling of steel and all cast materials as well as the milling of workpieces from stainless materials, heat-resistant alloys and nonferrous metals.

The ALU chip forming geometry in particular gives the best results when machining aluminium. Our large and varied range of indexable inserts is complemented with HSS, Cermet, PCD and CBN cutting materials.





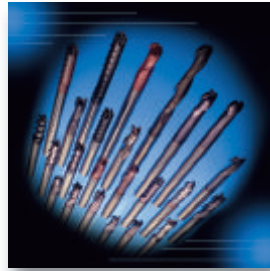
Indexable inserts

- Carbide grade coated and uncoated
- Carbide grade with ALU chip breaker
- Ultra-hard cutting materials
- HSS cutting material (CBN and PCD materials)
- Cermet

Milling

Strength through using inserts

Tools for thread milling with a comprehensive selection of associated indexable inserts, various sorts of coated and uncoated types, complete the **ARNO®** milling range.



Solid carbide end mills

Excellent price – quality ratio!

- High performance capabilities
- Improved tool life
- Maximized cutting geometries
- Reliable repeatability
- Wide range of dedicated cutters, for all materials.

Thread milling

- Coated and uncoated inserts
- ISO-threads
- American trapezoidal thread
- Aerospace thread
- Tapered fine pitch pipe thread
- Pg-thread
- and **solid carbide thread milling cutters**





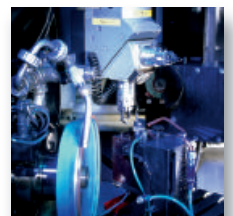
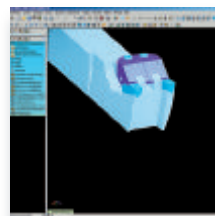
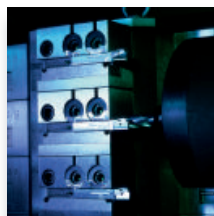
Possibilities

„We are not satisfied until you are.“

ARNO®-Werkzeuge tools

... A system of reliable technology

The simplest possible assembly together with the greatest versatility – from the standard tool to the individual solution – universally applicable tool systems.





ARNO®
WERKZEUGE

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