



PRODUCTION AND SALES LOCATIONS OF THE LEITZ GROUP

- Bilz
- Boehlerit
- Leitz

Clamping Technology for Precision Tools



Product Overview 10.2022

Welcome to Bilz.

Today, around 450 employees worldwide develop and produce advanced high-quality solutions for tool clamping.

In cooperation with our sister companies in the Leitz Group we are part of a stable ownership structure. Our unique product portfolio offers solutions for standard applications and special tools including the specific challenges of our customers in the automotive and aerospace industry, general metalworking and the machine building industry.

In the focus of our work stand our core values quality, customer orientation and solution finding competence. This has been our principle since 1919 and will continue to be so in the future.



Manufacturing quality at the highest level.



In order to master complexity and top-level requirements for our customers advantage, processes have been improved and simplified through knowledge and expertise. Our combination of highly automated production machines and the manual skill of our specialists is unique.

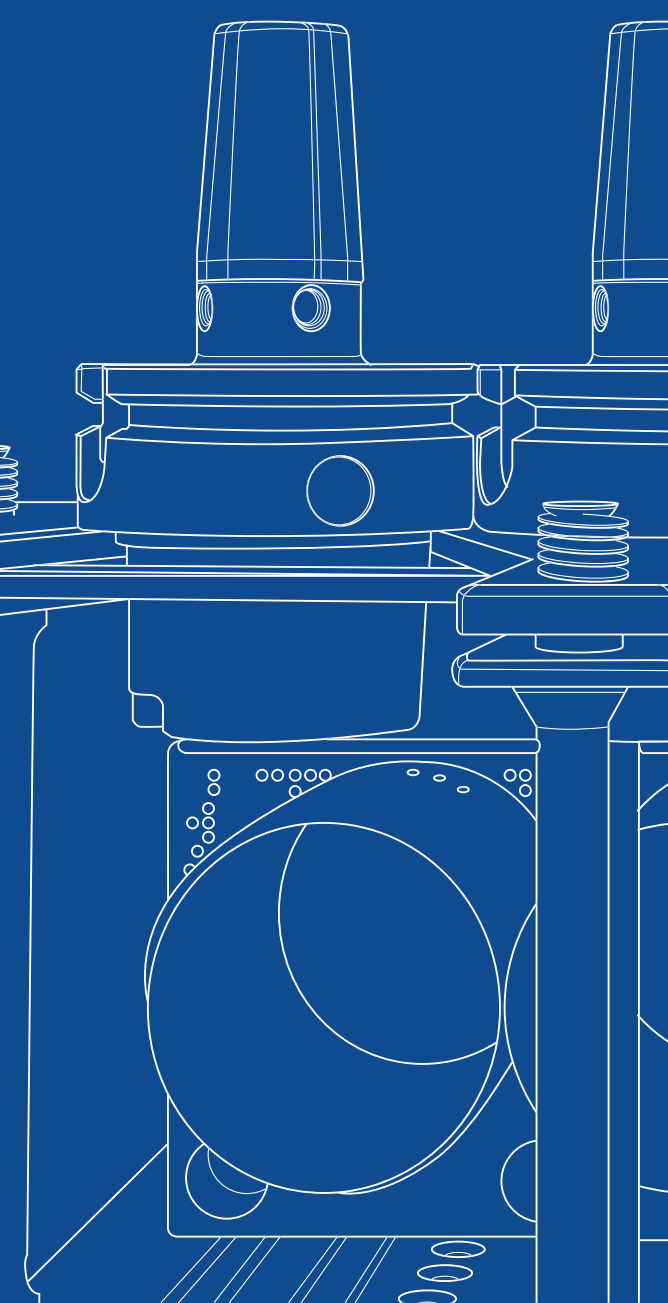
Knowledge gained by our employees over many years together with the right manufacturing facilities and the will to move in new directions mean that every day, Bilz is able to attain manufacturing quality on the highest level.

A Firm Hold on Innovation.

With eyes and ears constantly on the market: the complete innovation chain from the initial draft right through to the final operational prototype is carried out by Bilz.

Close cooperation with research and science makes it possible for us to find and apply suitable solutions for what seem to be the most extreme demands of our customers. The combination of our experience in classical engineering and electronics coupled with a network of creative partners gives us a wide basis for technical innovation.

In cooperation with our customers, mechatronics is actively promoted at Bilz. Bilz is an innovative partner for all kinds of tool clamping.





TAPGRIP

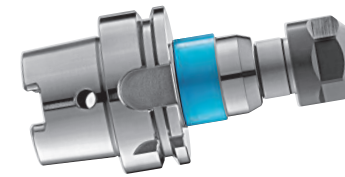
LEADER IN CLAMPING TECHNOLOGY.

From the invention of the world's first quick-change chuck onwards, Bilz is still setting the benchmark for tapping today.

The product range covers a unique range of tapping chucks and adaptors for all applications, machine types, shanks and sizes and of course the newest developments for synchronized tapping or minimum quantity lubrication are in our program.

Bilz products have always been the worldwide standard for threading products.

SYNCHRO CHUCK SCK



The latest generation SCK-Synchro Chucks has been optimised and adapted to the current market requirements. Tap presetting can be achieved from the machine side or the tap side of the synchro chuck. Due to the optimisation of the lubricant feed, a free from leakage transfer to the tap can be guaranteed.

APPLICATION

- Tapping (both cutting and form threading) on spindles with synchronised feed rates. This is also known in industry as rigid tapping.



BENEFITS

- Reduction of the pressure on the thread flanks when tapping in and especially tapping out
- Increased tap life
- Stronger threads with improved surface finish for longer as a result
- Compensation of synchronisation errors – reduced risk of breakage

TAPPING ATTACHMENT GNCK



High performance tapping attachment with integrated reverse gear. Bilz tapping attachments are of a modular design and can therefore be adapted to the machine. They can be used on machining centres with automatic tool change as well as special purpose machines.

APPLICATION

- Tapping, threading without the need to reverse the spindle to exit the tap.



BENEFITS

- No reversing of the machine spindle necessary reducing cycle times by a minimum of 25%
- High concentricity
- Reduces early spindle wear – less maintenance
- Exact disengaging position – exact thread depths, high repeat accuracy

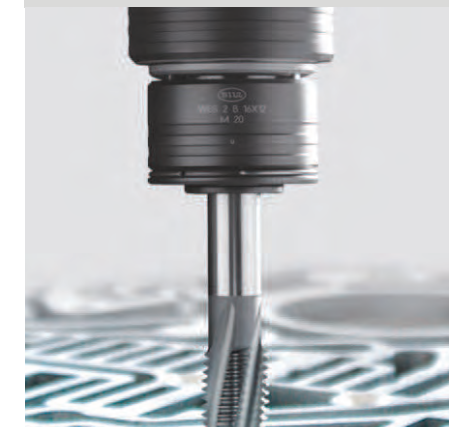
QUICK-CHANGE CHUCK – WFLC



For decades chucks/adaptors from Bilz with a perfected design are tried and tested in global operations and are considered as a worldwide standard. Special features such as length adjustment on tension/compression, quick change, radial floating qualities which function in combination with the chuck's axial movement, internal or external coolant feed can be realised in various chuck combinations.

APPLICATION

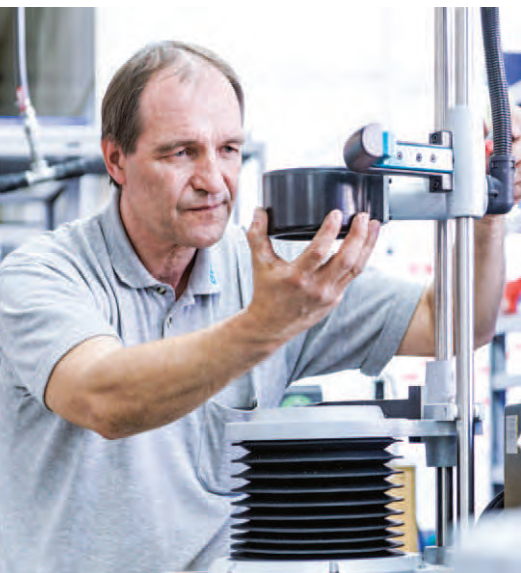
- Tapping, threading for all types of machines with all common interfaces on the machine side.



BENEFITS

- Tension/compression compensation
- Safety clutches
- Initial cut pressure intensifier
- Quick change system

Our Thermogrip® ISG Shrink Units



SHRINK UNITS

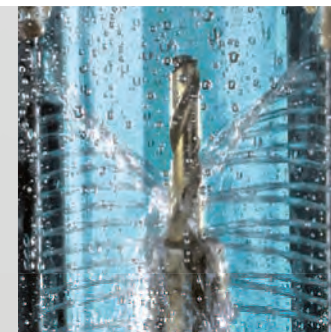
Tool Clamping in perfection.

Bilz machine technology with patented ferrite disc system and the unique, highly efficient “Cool Down” technique.

The shrink unit series ISG3400 was awarded with the “Red Dot Award 2012” for product design. Experts in a high ranking jury particularly praised the focus on individual customer requirements shown by the modular concept and the economic technology. This prestigious award proves once again that our modular and modern unit concepts meet most individual customer requirements, because the most successful solutions at Bilz are always achieved through close cooperation with our customers.

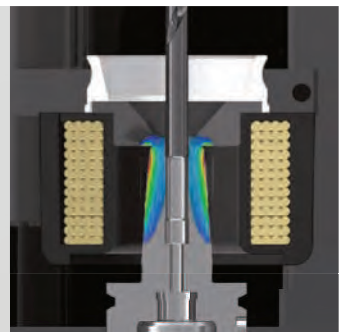
1 – COOL DOWN COOLING SYSTEM

The Thermogrip® series is ten times more effective than contact cooling systems, available as Allrounder or Professional versions.



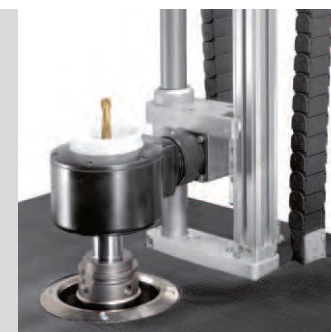
2 – ADVANTAGE INDUCTION TECHNOLOGY

Modular shrink system with perfect combination between holder and shrink unit.



3 – MORE SAFETY

Heating and cooling in one position, therefore no moving of hot shrink holders necessary.



4 – OPERATION IS LANGUAGE INDEPENDENT

This guarantees a safe and accurate operation, also when using protective gloves.





SHRINK CLAMPING TECHNOLOGY

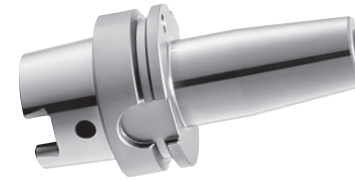
Tailored suit for the tool.

Choosing the right clamping device offers enormous savings potential for the production, in order to meet the constantly rising quality requirements of the customer and the market and as well as the increasing production costs.

The efficiency in terms of productivity, time savings and reject rate is optimal and amortizes the low initial investment in the shortest possible time. One of the main reasons: the patented cylindrical counterbore. It is the exclusive trademark of all ThermoGrip® shrink chucks and serves for the automatic centering of the tool. In addition, thanks to the patented counterbore, the ThermoGrip® shrink chuck uses around 15-20% less energy when heating the chucks. This is not only energy-efficient, it also protects the material.

OPERATIONAL SECURITY

SHRINK CHUCKS



Our ThermoGrip® shrink system stands for process secure tool change by perfect synergy between shrink unit and holder. It offers best surface quality, long tool life, higher feed rate and rotational speed – due to μ -precise concentricity, high rigidity and extremely high retention forces.

APPLICATION

- All industrial applications catered for.



BENEFITS

- Highest process security
- Cutter insertion into the cold chuck thus offering a hands free shrink process
- Integrated counterbore for centering the tools
- All geometric designs available
- Industrial standard design

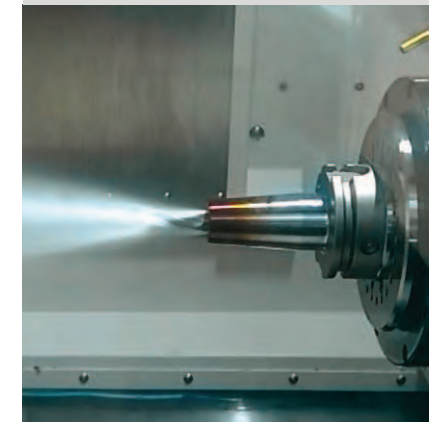
CORONA JET



ThermoGrip® CoronaJet is an ideal coolant supply feature bringing best swarf evacuation to all cutting applications. Allows optimised cooling control to the cutting edge with minimum centrifugal coolant displacement away from the cutting edge compared to conventional coolant supply systems.

APPLICATION

- General engineering application to high-tech aerospace and mold and die, especially suited to deep cavities.



BENEFITS

- Targeted and consistent coolant supply
- Longer tool life due to the constant cutting temperatures
- Better product quality

SHRINK ADAPTOR TER



With the TER, the forces exerted due to an unbalance of the tool are nearly eliminated when compared to conventional ER collets. The tool is precisely clamped in the centre of the clamping bore and therefore runs smoothly and builds a compact and stable unit with the TER collet when shrunk in.

APPLICATION

- Standard ER Collet chucks
- Driven tool holders



BENEFITS

- Very high transmittable torque values, best concentricity and highest stability
- Improved surface quality and excellent precision
- Maximum retention forces and rigidity
- Low-wear monoblock qualities

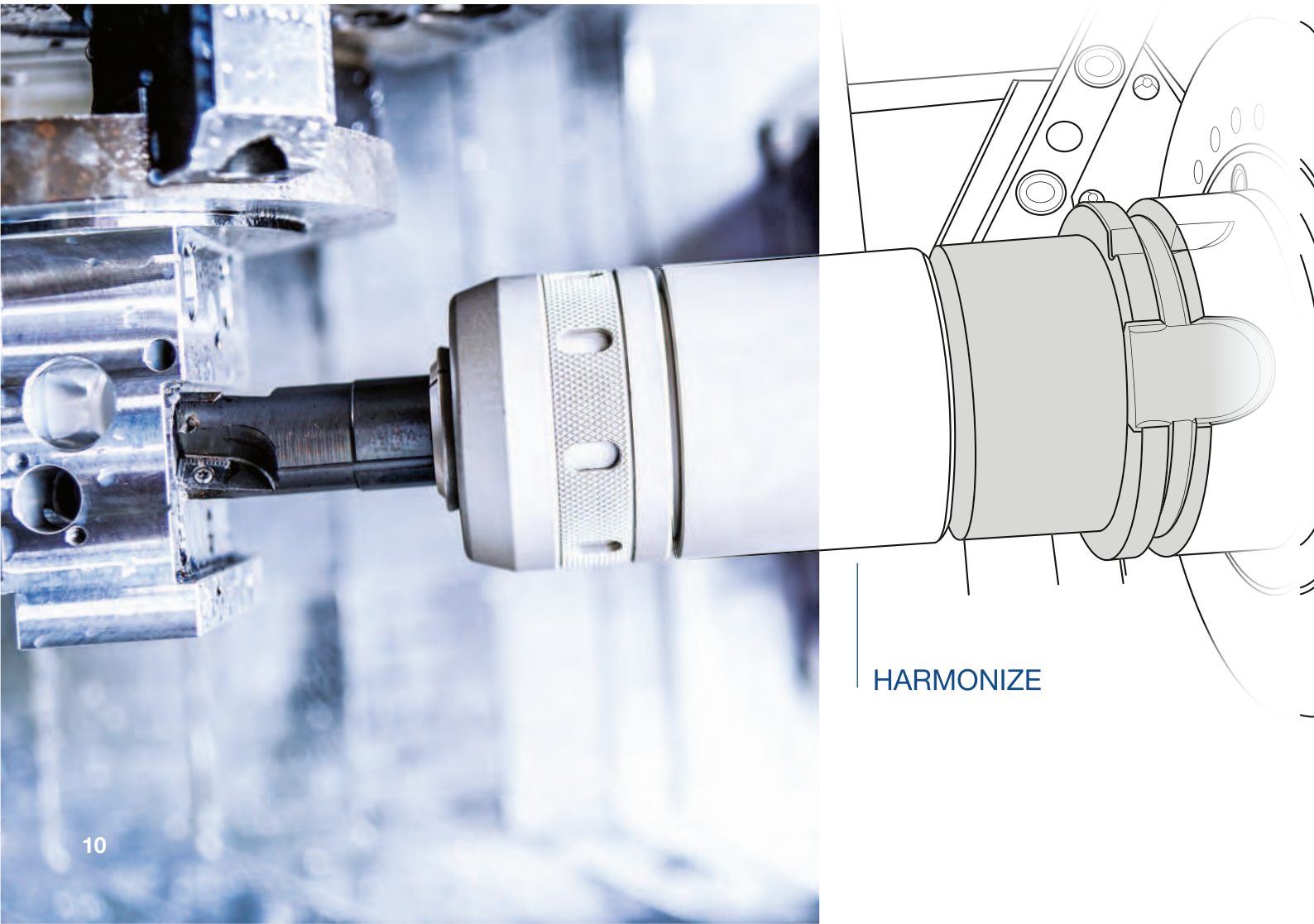


TOOL HOLDERS

For perfect connections

A commonly acknowledged statement in the machining branch is that “the money is earned at the cutting edge”. However, while the productivity of the cutter considerably influences the total costs of the machining process, it makes up only about 4–6% of these costs.

Bilz tool holders are the key factor in utilizing the performance capability of the cutters, optimizing their tool life. Our years of experience help us to develop products which you can trust.



HARMONIZE

CNC



With our wide product range of CNC tool holders, we are looking back on many years of successful market presence. Whether Weldon, Hi-Power milling chucks, End mill holders, Whistle-Notch holders, Shell mill holders, Super collet chucks, Hydraulic chucks or boring bar blanks, BILZ have them all.

APPLICATION

- For every processing when it comes to cost reduction.



BENEFITS

- High stock availability
- Wide product range
- Competitive pricing
- High standard percentage

HIGH POWER MILLING CHUCK



- Double clamping with a wide clamping range
- Reduced friction due to construction with roller bearing
- High run-out accuracy, 5µm @ 3D
- Protected with an anti-corrosion coating
- Special mechanism to prevent contamination through the fine chips and cooling liquid

APPLICATION

- Drilling and milling



BENEFITS

- Excellent surface quality due to reduced vibrations
- Increased productivity and longer tool life because of a very high clamping force

SUPER COLLET CLAMPING CHUCK



Our new Super collet chucks are perfect for high speed machining and for milling. Because of the optimized collet geometry we are able to design our collet chucks very slim and with a higher retention force.

APPLICATION

- For high speed spindles and for general milling processes.



BENEFITS

- Excellent runout accuracy, up to 5µ at 4D
- Clamping force is twice as high as ER collet chucks
- Compact design
- Dynamically balanced G2.5 @25 000 U/min

MICROBORE

Special Boring Solutions

Standard solutions

We offer standard solutions,

- Modular system
- Rough boring system
- Fine boring system



Special / Customized solutions

Bilz special boring bar solution with ISO Cartridge, ISO Insert and Microbore unit have been field proven successfully in producing multiple bores and chamfers to customer specific tolerance, which gives improved productivity to the customer.

We offer special boring solutions like rough boring tools, combinations tools, finish boring tools, OD turning tools, back boring tools, tools for SPM, tool for large diameter, turning tool holder, special drills, special cutters, etc.



TAPS

Special Taps

Standard solutions

DIN & ISO standards offered

- Spiral fluted taps for general application
- Straight fluted taps for cast iron and aluminium
- Spiral point taps for through holes
- Form taps (TiN, TiCN)



Special / Customized solutions

- UNF / UNC Taps with Straight, Spiral and Spiral point flutes
- DIN / ISO / JIS standards are available
- Uncoated Taps / TiCN / TiN / TiAlN
- Thread tolerance - 4H/5H, 6H, 6HX, 7H/8H, 7G, 8G, 1B, 2B & 3B
- Left Hand Taps
- Internal coolant Taps
- ACME Taps, Taper taps like NPT, BSPT, Multistart taps, Interrupted taps, Spiral lock taps and Hollow taps can be supplied upon request





BOEHLERIT

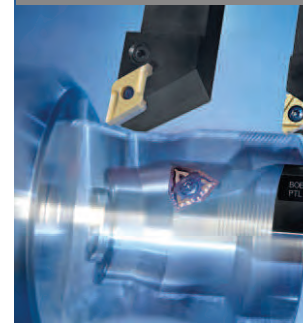
The Carbide & Tool Specialist

With cutting materials, semi-finished products, precision tools and tool systems for milling, turning, drilling and forming, Boehlerit ensures process safety and efficiency on a global scale.

The company's extensive product portfolio includes highly specialised tools for the machining of crankshafts as well as for the mining industry, for bar peeling, tube and sheet metal processing and heavy-duty machining. The Boehlerit product range also features carbides for construction components and wear protection.

CUTTING TOOLS

Turning



Milling



Drilling



Tapping



HEAVY DUTY MACHINING

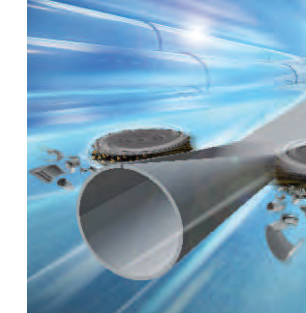
Crankshaft machining



Bar peeling



Tube processing



Rail & Turnout machining

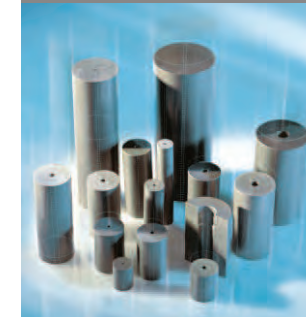


WEAR PROTECTION & SEMI-FINISHED PRODUCTS

Precision Tools production



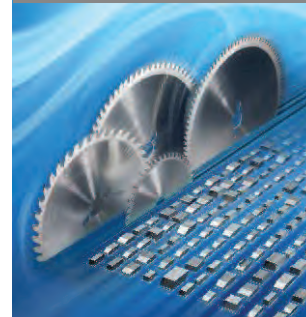
Forming Industry



Tool Making



Wood Processing



TOOL MAKERS

Inserts



Metal & Wood Working



Product Range

- Milling
- Turning
- Parting and Grooving
- Reaming
- Threading
- Drilling
- Forming tools
- Carbide extensions
- Solid carbide hobs
- Carbide rods