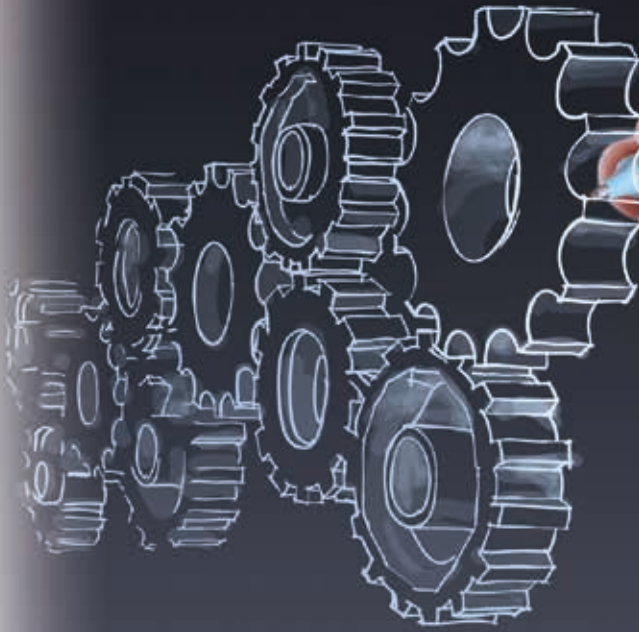


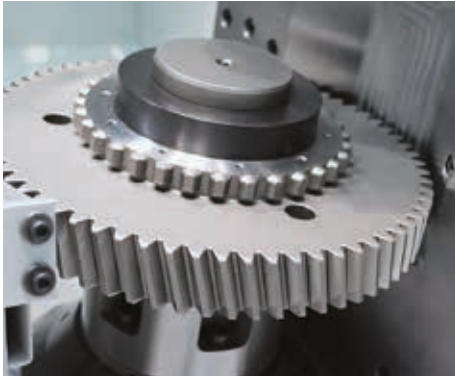
Cost Effectiveness
and Innovation
Made in Germany



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Gear grinding machines
Wheel dressing machines
Automations
Clamping tools



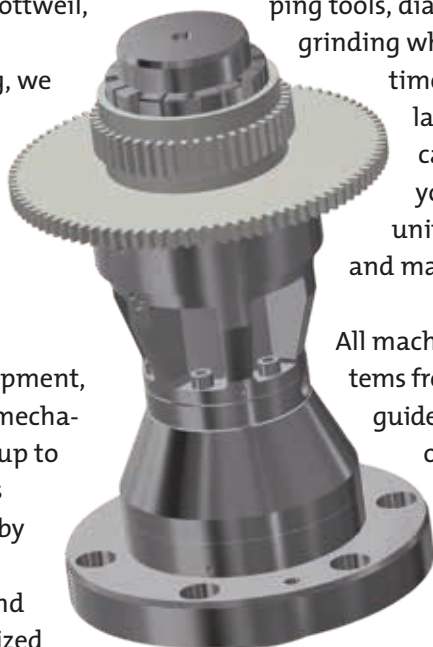


Welcome to Burri Werkzeugmaschinen – Your manufacturer for gear grinding machines, global market leader in upgrading Reishauer gear grinding machines and manufacturing grinding wheel dressing machines. Since the foundation in 2002, we have exported our technology and equipment to renowned gear manufactures and grinding wheel manufactures worldwide.

The company's headquarter is located in the heart of german machine tool industry, conveniently right by the A81 highway, between Stuttgart and the Lake of Constance. Here in Villingendorf, a village near Rottweil, the oldest town of Baden-Württemberg, we develop and manufacture our machine tools for worldwide export.

Everything from one source

The complete development, beginning with the mechanics to the software up to the clamping tools is made in our factory by a highly motivated team of engineers and technicians. Customized



We are the world market leader in upgrading Reishauer gear grinding machines and manufacturing grinding wheel profiling machines

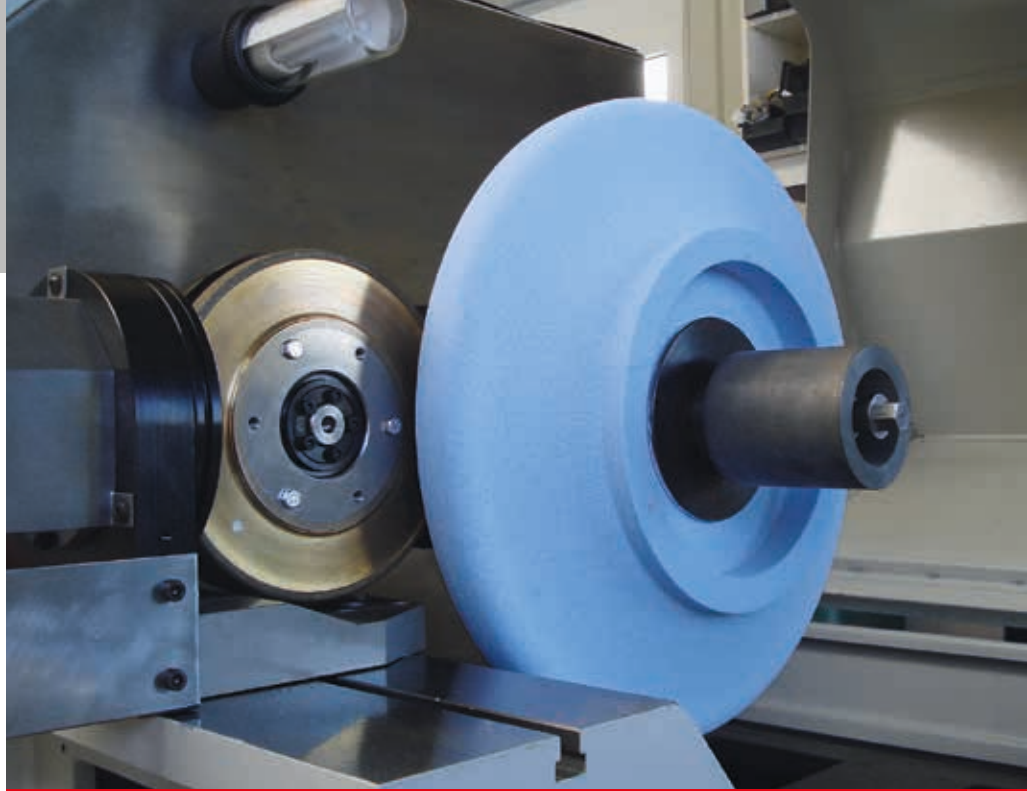
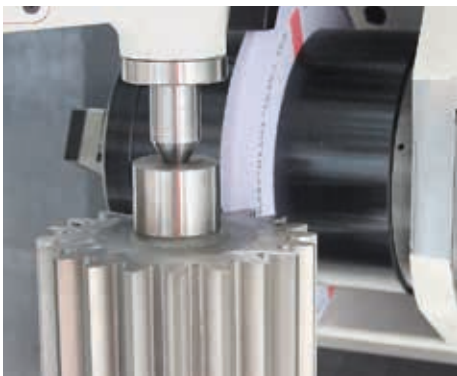
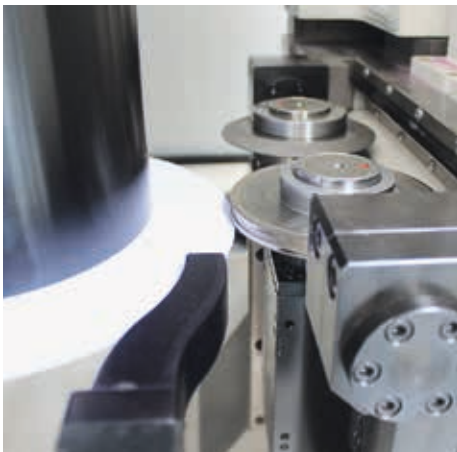
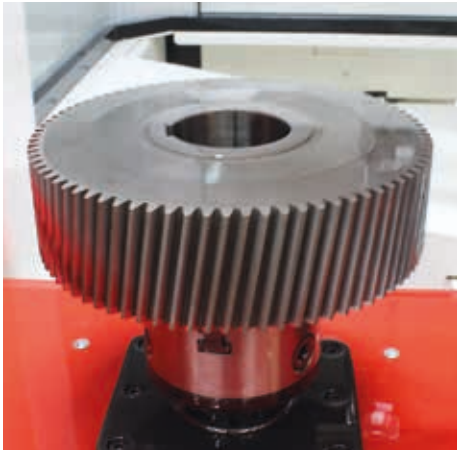
requirements can thus be met very quickly. You will receive consignment in a carefree package consisting of machine, automation, filtration, clamping tools, diamond discs and grinding wheels as well as cycle time calculation, precisely laid out for your application. Thus allowing you to reach an optimality of machine, tooling and manufacturing process.

All machines and loading systems from Burri have dialog-guided interfaces with good operator ergonomics, which can be operated without CNC knowledge within a short time.

Our state-of-art control system from B&R can be precisely adapted to the machine requirements. The highly precise B&R Acopos multi-drive system with regenerative feedback is unbeatable in energy efficiency.

Burri high-tech machine tools are exported across the whole world. We have permanent offices in India, USA, China, Taiwan, Russia, Korea, South America and Turkey. Find out more online at www.burri.de





Dear business partners,
after gaining lots of experience and know how in the gear grinding field while working as a service engineer for more than a decade at Reishauer I founded Burri Werkzeugmaschinen in 2002.

In year 1997 (5 years before Burri Werkzeugmaschinen was founded), I replaced the change gears of the Reishauer machines by NC-controlled axes.

Thus, the world's first Reishauer gear grinding machine RZ 362 without change gears was retrofitted by Burri.

Since 2003 we have been supplying our innovative and economical grinding wheel profiling machine to many reputable manufacturers of gears and grinding wheel manufacturers all over the world.

Since 2009 we have been upgrading the old generation of Reishauer machines. The machines are technically on the level of a new machine and are delivered with a CE declaration, new documentation and warranty.

In 2015 at the EMO in Milan, we were able to display our first completely self-developed double spindle spindle grinding machine BZ 130. Since 2019 we are building different gear grinding machines from BZ 70 H to BZ 300 on our own platform.

To opt for a Burri machine – I personally guarantee the best quality along with high efficiency.

With best regards

A handwritten signature in black ink, which appears to be "D. Burri".

Dieter Burri - Managing Director and owner

Generating -, Profile - and Worm grinding machine **BZ 300**

Gear grinding center with loading station and integrated gantry loader for workpiece loading in parallel with machining operations



Technical data:

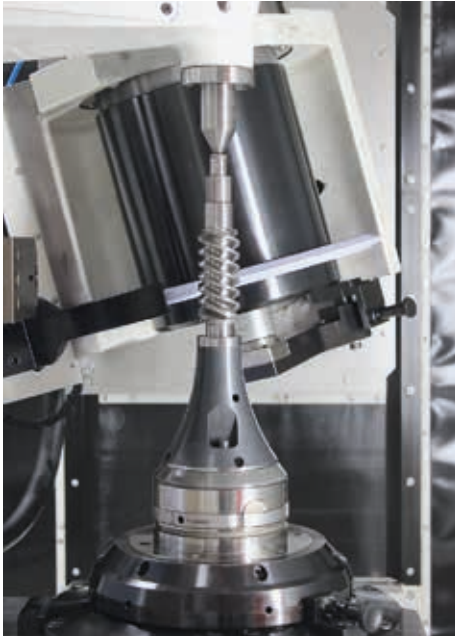
Workpiece Ø:	5 – 300 mm*
Module:	0,5 – 7 mm
Workpiece length:	650 mm from table to tailstock**
Helix angle:	+45° to -45°
Workpiece weight:	max. 60 kg (30 kg with loader)
Workpiece speed (max.):	3.000 rpm

Grinding pass:	400 mm
Cutting speed (max.):	80 m/sec.
Grinding wheel Ø (max.):	300 mm (275 mm)
Grinding wheel width:	200 mm (104 – 200 mm)
Dressing disc Ø:	120 – 140 mm

*larger diameters on request

**depending on clamping tool

Our products



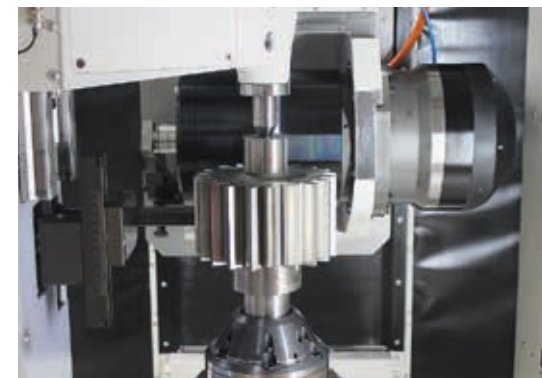
The BZ 300 gear grinding center is another Burri innovation built on our unique module-based system and suitable for generating grinding, profile grinding and worm grinding.

A loading station with gantry loader with 4 axes is integrated in the machine concept and allows manual or automatic workpiece loading in

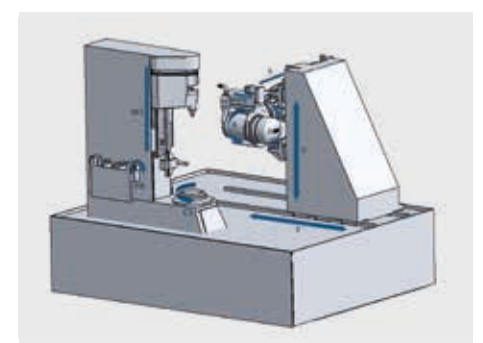
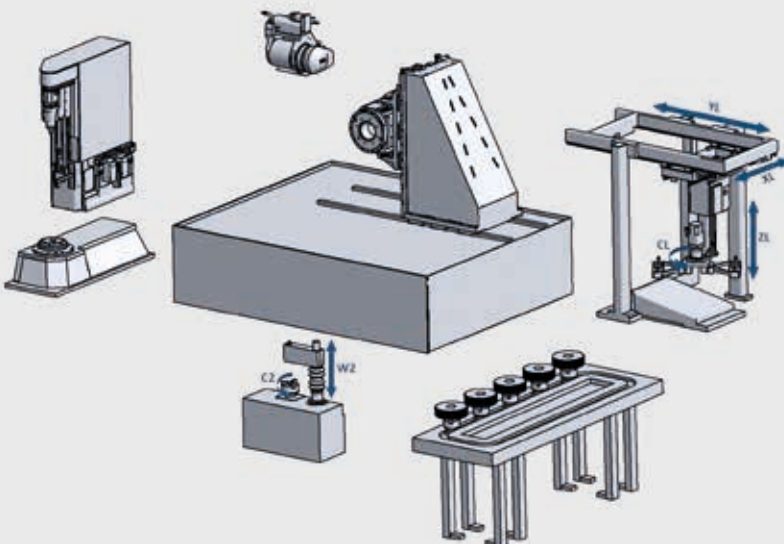
parallel with machining operations. With this highlight, the machine is therefore suitable for prototypes, small and large series.

The loading station includes the oil centrifuge and can be upgraded with additional functions such as measuring, brushing, laser marking, etc. All this is done simultaneously during machine operation.

For more flexibility, a second dressing spindle can be integrated for holding the dressers for profile and worm grinding or a radius dresser for root fillet.



The machine bed and the main slide are made of mineral casting, which has a high rigidity and damping as well as a good thermal stability.



Gear Grinding Machine

BZ 130

Double spindle high production gear grinding machine with patented axes configuration and integrated loading system



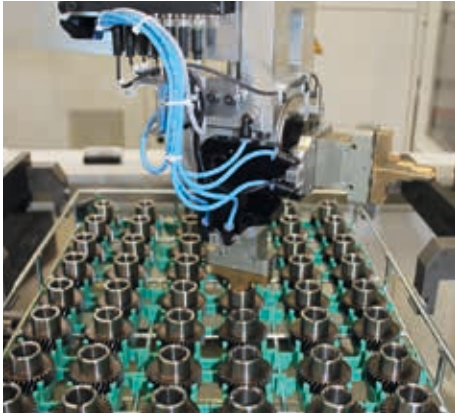
Technical data:

Workpiece \varnothing:	5 – 130 mm
Module:	0,5 – 3 mm
Helix Angle:	+45° to -45°
Workpiece length:	500 mm from table to tailstock*
Workpiece weight:	max. 10 kg (5 kg with loader)
Workpiece speed (max.):	4.000 rpm

Grinding pass:	300 mm
Grinding wheel speed (max.):	80 m/sec.
Grinding wheel \varnothing (max.):	220 mm
Grinding wheel width:	160 mm
Dressing disc \varnothing :	120 – 140 mm

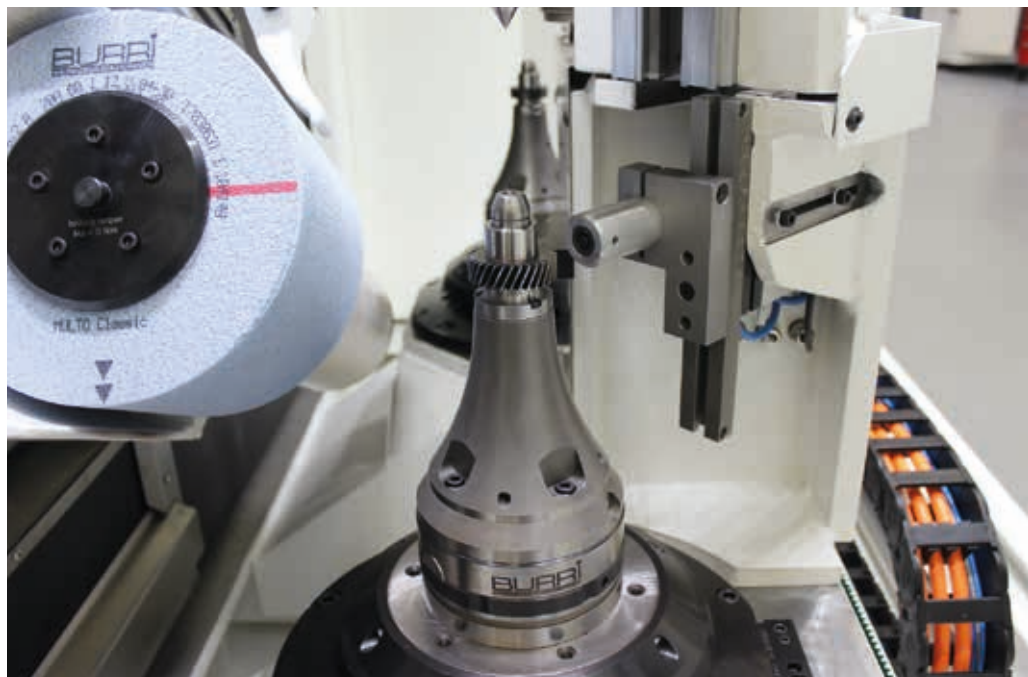
*depending on clamping tool

Our products



The BZ 130 is the first complete gear grinding machine self-developed by Burri and sets new standards in generating grinding. The patented axes configuration stands out from the standard and allows for a very compact design. As a double spindle machine with a chip-to-chip time of 2 seconds and an integrated loading system, the machine is optimally designed for mass production. The complete space requirement is only 4.2 m².

As a workpiece storage, Burri offers the basket cell BC2 as well as various conveyer belts. Customized gear storage can also be integrated.



Our standard-workpiece store is a basket cell or various conveyer belts.

Gear grinding machine BZ 70 H



Technical data:

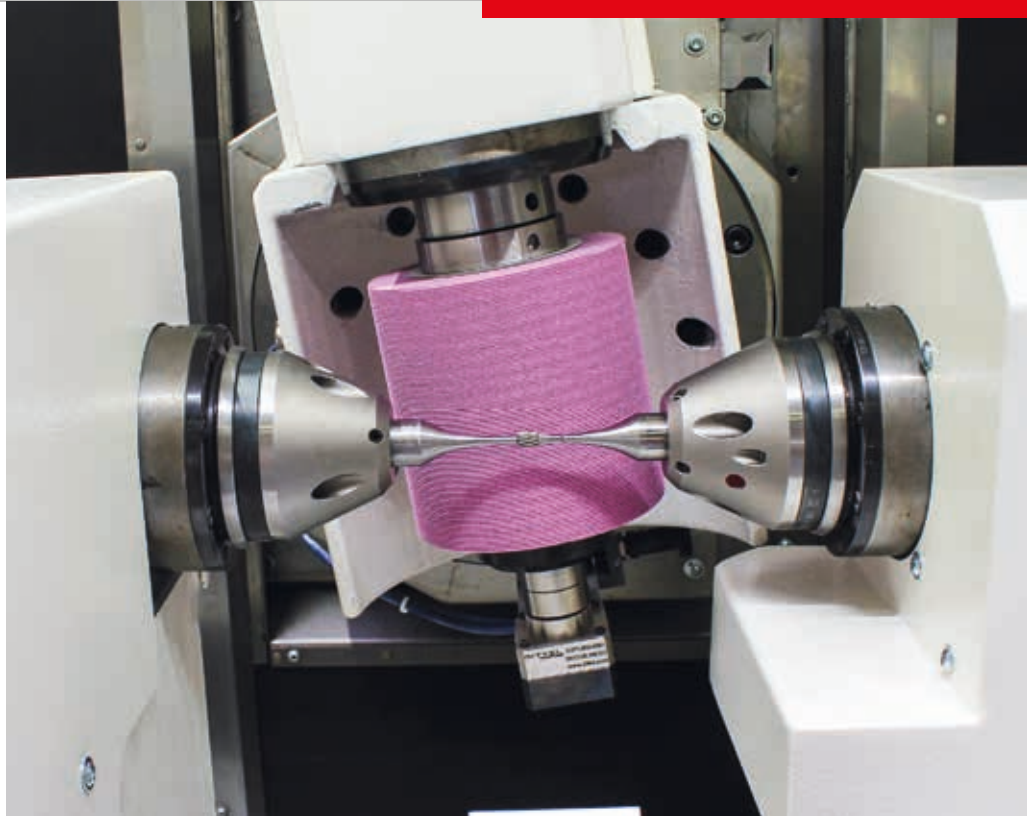
Workpiece \varnothing:	0 – 70 mm
Module:	0,3 – 2 mm*
Helix Angle:	+35° to -35°
Workpiece length:	150 mm
Workpiece weight:	max. 0,5 kg
Workpiece speed (max.):	4.000 rpm

Grinding wheel speed (max.):	80 m/sec.
Grinding wheel \varnothing (max.):	120 mm
Grinding wheel width:	120 mm
Dressing disc \varnothing :	120 – 140 mm

*it's possible to grind into solid, specially for smaller modules

Our products

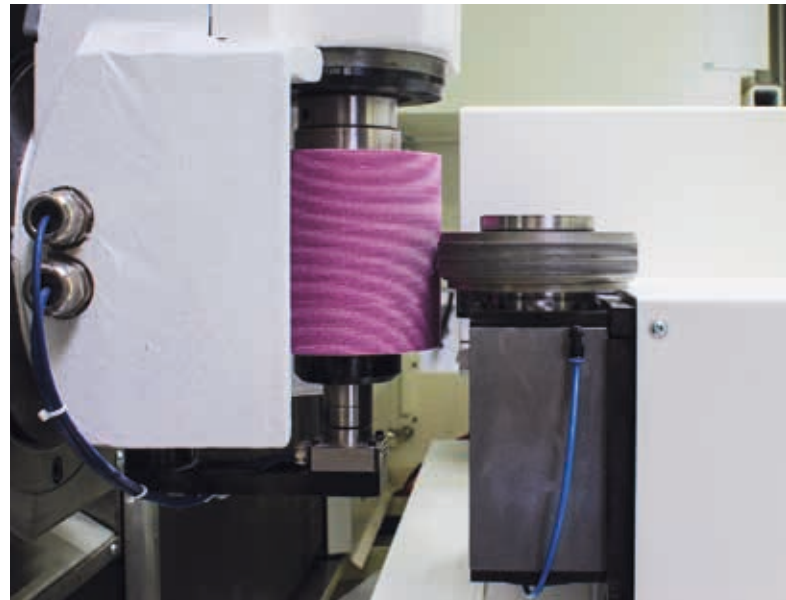
The BZ 70 H gear grinding machine is another innovation of Burri. The machine is designed for very small planet gears and sun gears. Due to the mini grinding worm, very short clamping equipment can be used. The horizontal design allows very fine adjustment of the tailstock center. Two synchronous workpiece spindles eliminate the unstable rotating tailstock centers and guarantee a very effective workpiece driving. The BZ 70 H is the first non-hydraulic gear grinding machine and therefore also the most energy-efficient on the market.



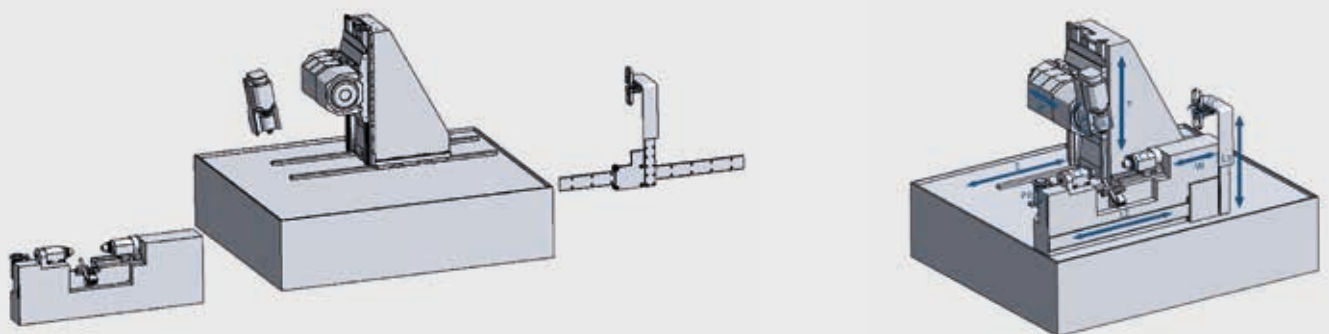
Horizontal design with two synchronous workpiece spindles



Range of parts



Dressing position



Gear grinding machine BZ 220



Technical data:

Workpiece Ø:	10 – 220 mm
Module:	0,5 – 5 mm
Helix Angle:	+45° to -45°
Workpiece length:	600 mm from table to tailstock*
Workpiece weight:	max. 60 kg

Grinding pass:	200 mm
Cutting speed:	63 m/sec.
Grinding wheel Ø (max.):	350 mm
Grinding wheel width:	104 mm
Dressing disc Ø :	120 – 130 mm

*depending on clamping tool

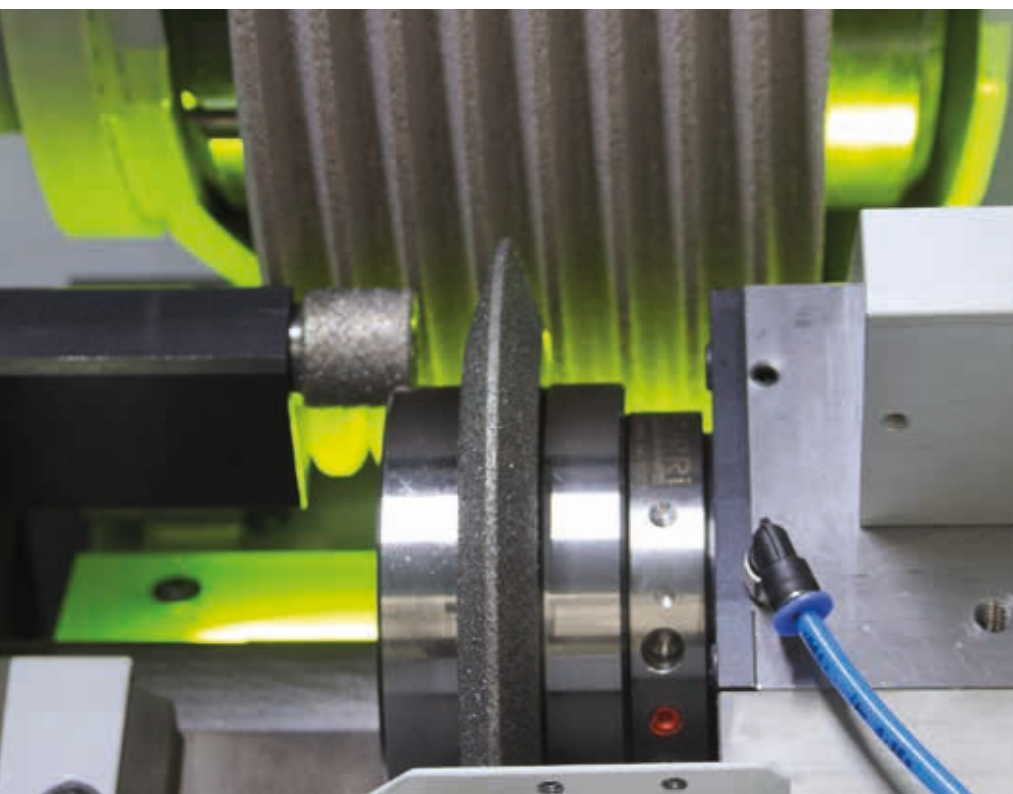
Our products

The BZ 220 machines have the following standard equipment: Direct drives in grinding and workpiece spindle, linear guides and ball screws on all axis. Heidenhain-linear scales, completely new z-slide converted from hydraulic to servo drive, new tailstock with adjustable center pressure, new grinding support, new profiling unit with a hydro tension quick-change system for (diamond) dressing discs, new compact hydraulic unit (mounted on the machine also during transport), centering sensor, balancing system with integrated acoustic touch control, automatic loading door, completely new control with new control cabinet (mounted on the machine also during transport), new wiring and new drive system. A compact flash-card serves as a data storage for more than 1000 gears. Remote service via internet.



The machines are pure white (RAL9010) as standard or can be re-painted according to customer's request.

The basis for the BZ 220 machine is from Reishauer types RZ 300 E, NZA and OZA. Of these machines, we only use the machine bed and the work head excluding the work slide. All other parts are new developments. Various types of automation systems are available as an option. Our standard automation for the BZ 220 machine is a robot cell which is located at the backside of the machine. Thus there is free access on the frontside for the set up and manual loading of the machine. The robot cell includes a Kuka robot (or similar one) and different workpiece storages (drawer, conveyer belt, stack cell). For the Burri automations a touchpanel with dialogue controlled interface is available and no robot knowledge is necessary.



Gear grinding machine BZ 331 / BZ 362



Technical data:

Workpiece Ø:	10 – 330/360 mm
Module:	0,5 – 7 mm
Helix Angle:	+45° to -45°
Workpiece length:	600 mm from table to tailstock*
Workpiece weight:	max. 60 kg

Grinding pass:	200 mm
Cutting speed:	63 m/sec.
Grinding wheel Ø (max.):	350 mm
Grinding wheel width:	104 mm
Dressing disc Ø :	120 – 130 mm

*depending on clamping tool

Our products



The BZ 331/BZ 362 machines have the following standard equipment: Direct drives in grinding and workpiece spindle, linear guides and ball screws on all axis. Heidenhain-linear scales, completely new z-slide converted from hydraulic to servo drive, new tailstock with adjustable center pressure, new profiling slide, new profiling unit with a hydro tension quick-change system for (diamond) dressing discs, new compact hydraulic unit (mounted on the machine also during transport), centering sensor, balancing system with integrated acoustic touch control,

automatic loading door, completely new control with new control cabinet (mounted on the machine also during transport), new wiring and new drive system. A compact-flash-card serves as a data storage for more than 1000 gears. Remote service via internet.

The machines are pure white (RAL9010) as standard or can be re-painted according to customer's request.



The basis for the BZ 331/BZ 362 machine is from the Reishauer types RZ 362, RZS, RZ 361, RZ 301 and AZA. Of these machines, we only use the machine bed and the work head excluding the work slide, the housing from the grinding support and parts of the machine hood. Various types of automation systems are available as an option. Our standard automation for the BZ 331/BZ 362 machines is a move cell with a Kuka robot (or similar one)

with different workpiece storages (drawer, conveyer belt, stack cell). If the automation is not required it can be simply pushed aside. For the Burri automations a touchpanel with dialogue controlled interface is available and no robot knowledge is necessary.



Profiling machine PM 550 T



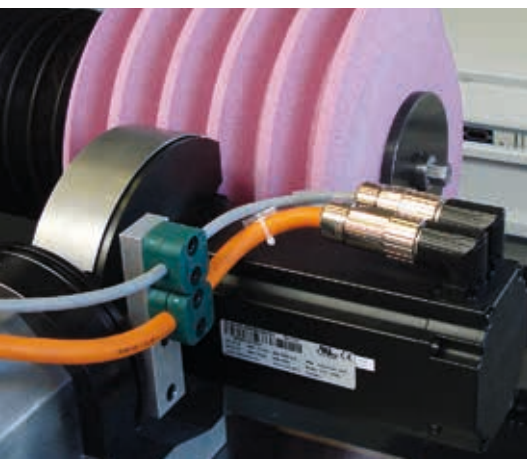
Technical data:

Worm grinding wheel specifications:

Module:	0,5 – 16 mm
Number of starts:	1 – 9
Grinding wheel \varnothing:	up to 450 mm
Width:	up to 230 mm

Form wheel specifications:

Module:	up to 40 mm
Grinding wheel \varnothing:	up to 550 mm
Width:	up to 150 mm



Our grinding wheel profiling machine has a stable machine bed in welded construction, stress relieved and designed stiffness by finite element method. Mounting plate in the working chamber for receiving the profiling unit with outlet for abrasive dust and connection for industrial vacuum cleaner. Cross slide with precision linear guide and ball screw with AC Servomotors, completely dust-free enclosed. Operation of the machine is user-friendly and thus easy to learn in a short time: a dialogue-based user interface features easy menu naviga-

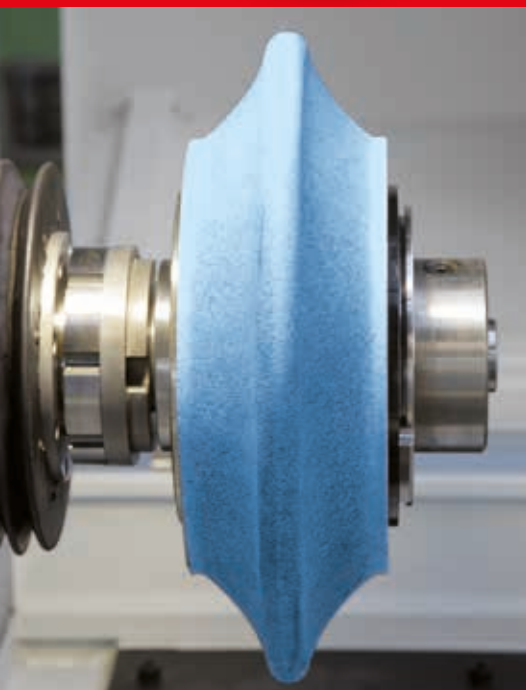
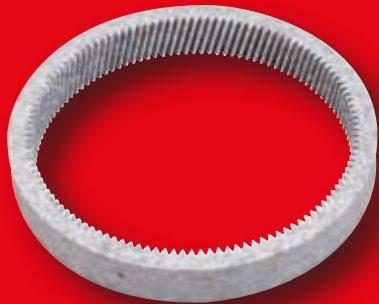
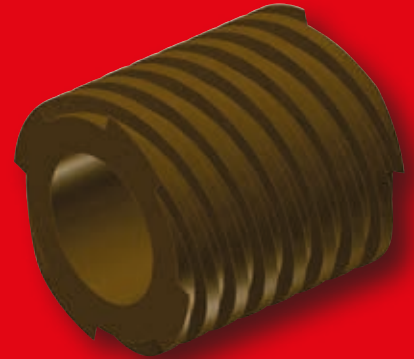
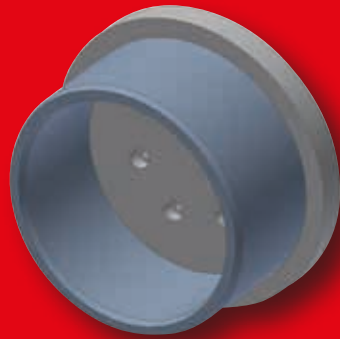
tion and a logical structure. It proposes automatically a program for the grinding worm to be processed. The program sequence is fully automatic. Optionally, a CNC software is available. Thus, all profile shapes can be realized. Digital drives and absolute measuring systems meet the highest standards.

Profiling examples

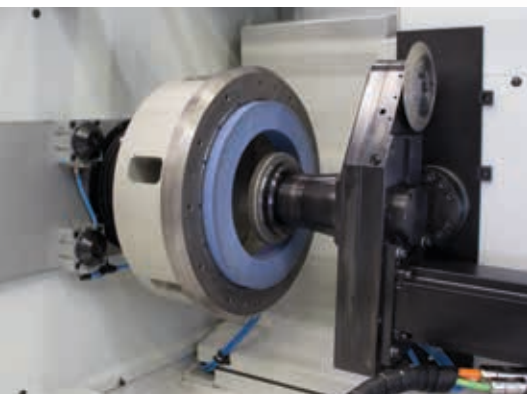
Our profiling machine can profile the most grinding wheels on the market. Here are some examples of applications. You have any questions about specific applications? We would be happy to offer you customized solutions.

We profile grinding wheels for:

- Gear Grinding Machines
- Profile Grinding Machines
- Bevel Gear Grinding machines
- Rack grinders
- Flat and cylindrical grinding machines
- Honing rings for teeth Honing machines
- Razor blades



Honing ring dressing machine PM 400 H



With the PM 400 H all standard honing rings up to 400 mm* and a width of 60 mm* can be slotted.

The profiling head with 2 NC axes has a double function.

Function 1:

turn off the worn internal tooth splines.

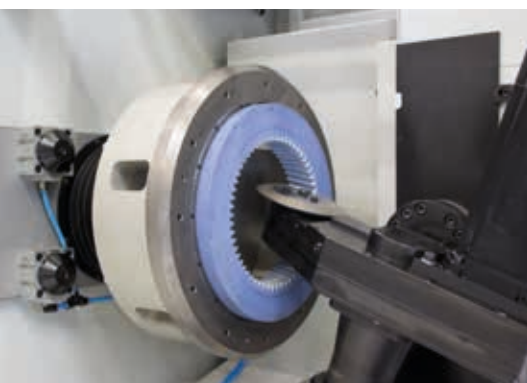
Function 2:

dressing of a new tooting. This feature allows the honing rings to be used more than once, thus considerably

reducing the payback period (ROI) of the machine.

The machine has a dialog-driven surface and the honing rings can be fully automatic turned off and re-dressed.

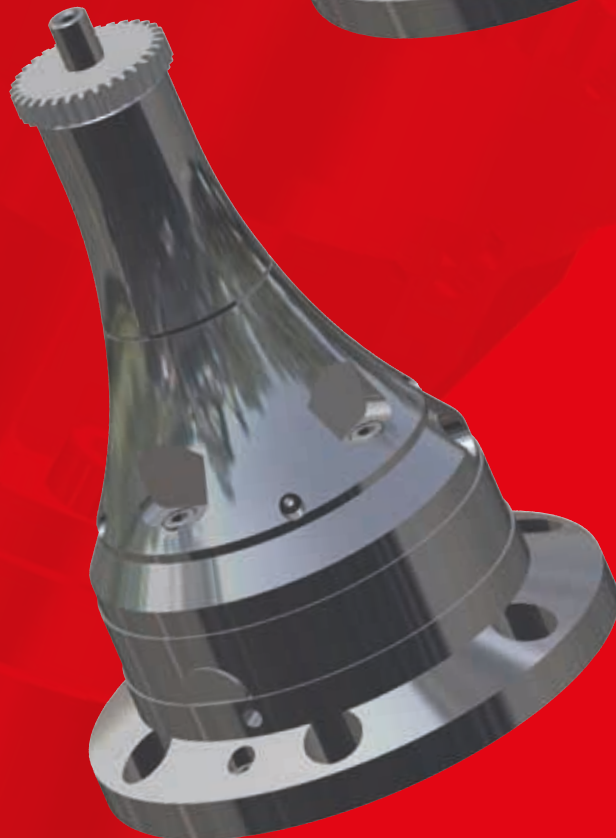
*Other dimensions on request



Clamping tools

We also supply a complete range of mechanically and hydraulically operated clamping tools, which are precisely matched by our engineering department to meet your requirements.

Our standard product range consisting of quicklock base adaptors convinces through high clamping force, fast set up and short delivery times.





Burri - Impressions







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