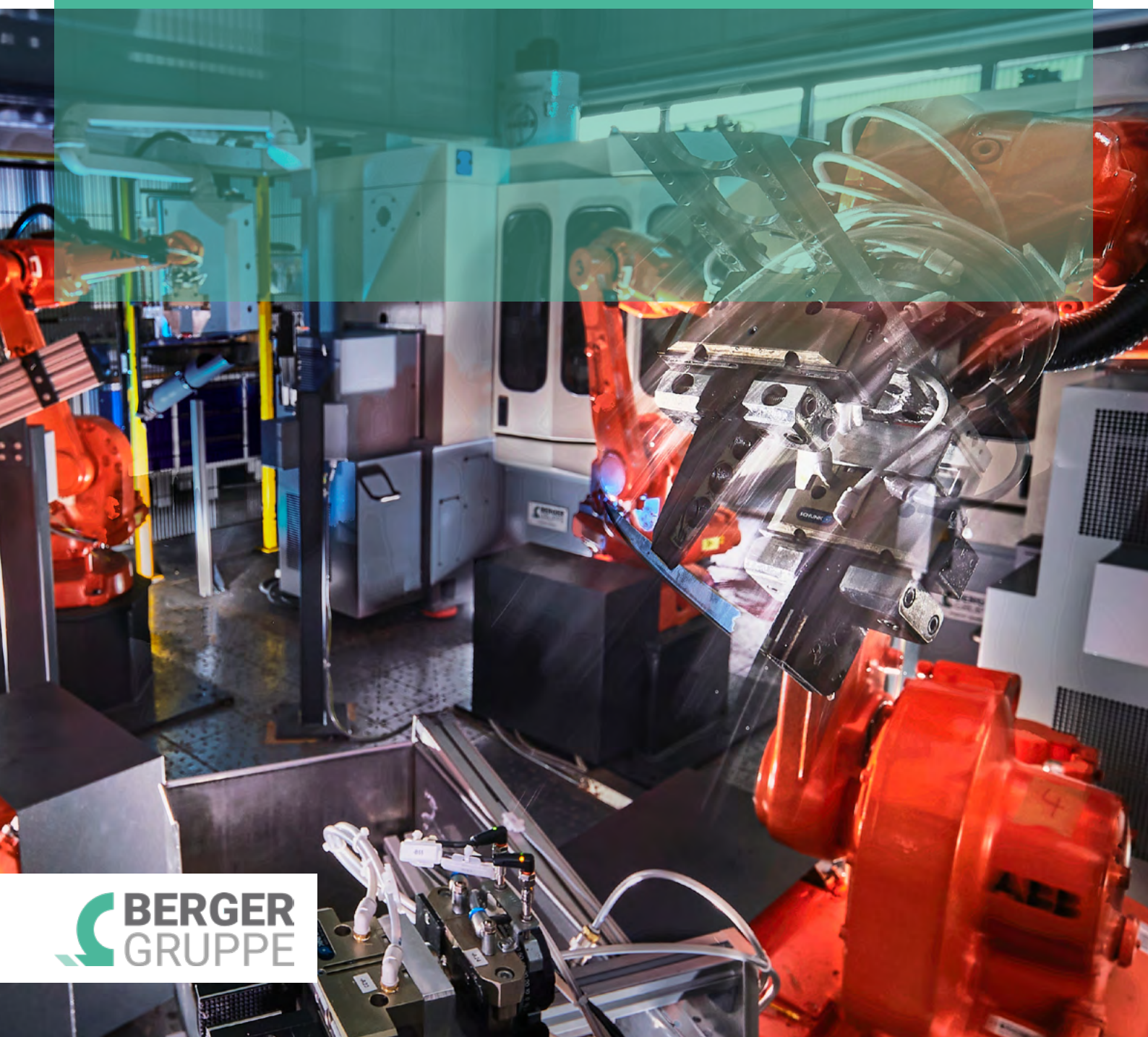




BERGER GRUPPE

WORKPIECE AND STRIP PROCESSING

Machines | Automation | Robotics





Berger Gruppe – the film



www.facebook.com/berger_gruppe/



www.instagram.com/berger_gruppe/



www.linkedin.com/company/berger-gruppe/



CONTENT

BERGER GRUPPE

THE BERGER GRUPPE

Review and outlook	4–5
An internationally positioned family business	6–7

PRODUCT CATEGORIES

CNC machines and robot cells	8–9
Grinding machines for single workpieces	10–11
Polishing machines	12–13
Metal cutting machines	14–15
Berger Drive Tech	16–17
Grinding machines for steel strip	18–19
Strip processing machines by metal-cutting	20–21
Robot grinding and polishing systems	22–23
Robot process technology / automation	24–25
Berger Connect	26–27
Service	28–29
Tools	30–31

SUSTAINABILITY

Resource-saving work	32–33
Energy generation through photovoltaics	34–35
Investing in the education and training of future generation	36–37

A REASON TO CELEBRATE

Prizes and awards	38–39
-------------------	-------

THE BERGER GRUPPE

REVIEW AND OUTLOOK

THE DEVELOPMENT OF THE HEINZ BERGER MASCHINENFABRIK

When we joined the company in 1994 and 1996, it had already experienced an eventful and highly productive period since its foundation in 1957. After mechanically driven machines without automatic loading were developed and built in the early years by the company founder Heinz Berger and a little later supported by our father-in-law Karlheinz Berger, there was an important development step towards hydraulically driven machines at the end of the 1960s. The majority of the machine types developed were converted to hydraulic drives. A short time later, a large number of machines were also equipped with automatic, pneumatically controlled feed systems. In 1993, the development of CNC-controlled grinding machines began in our company, still under the direction of Karlheinz Berger.

This pioneering step in the development of CNC technology was the basis for the drive generation of today's machines. Since then, the company has been able to develop further through operational growth, the acquisition of five mechanical engineering companies and, with a new administration building and two new halls, also increase its floor space. With a workforce of 185 highly specialized employees today, new machine types and geometries are constantly being developed.



Important technical, disruptive developments for our company since then include the use of robotics, initially for loading automation, then also for the guided processing of workpieces, laser and camera measurement technology and linear motor technology. With a development share of more than 30% of total sales today, we have developed an average of around ten new machine types or manufacturing processes in recent years. In doing so, we have strategically expanded our product range and reached new customers. As a result, we are diversifying the company's focus into different industrial sectors in order to be able to survive economic fluctuations in individual sectors in the future.

As a third-generation family business, other values are important to us in addition to economic indicators, such as our community involvement in the Junior University, the Bergisches Schul-technikum, the Deutschlandstipendium, Cronenberg handball, the Cronenberg community of companies and many other areas.

Our employees are the real value of the company, and their appreciation for the company is evident from the low fluctuation in recent years. It is a nice sign for us that out of ten employees, the respective sons, a married couple and two brothers work for us - a family business after all ...

In addition to the development of further machine types, the digitalization of the company with a new ERP system, the use of new technologies such as collaborating robots, mobile and self-propelled magazine systems, 3D printing, artificial intelligence for higher-level system control and other Industry 4.0 projects are planned for the coming years. Together with our technicians and engineers, we will make immediate use of available innovative technologies in order to maintain and expand our market leadership in our product segment.

Bild: Marco Chiesura (l.) and Dr. Andreas Groß (r.), managing directors of the Berger Gruppe

AN INTERNATIONALLY POSITIONED FAMILY BUSINESS

An entrepreneur with a pioneering spirit

In 1957, Heinz Berger founded Heinz Berger Maschinenfabrik GmbH & Co. KG, which focused on manufacturing grinding and polishing machines for processing steel goods and hand tools.

As the demand for grinding machines increased rapidly, the machine factory was relocated from its headquarters in Berghausen to the new premises on Kohlfurther Brücke in 1960. Production took place on around 1000 m² of production space and 250 m² of office space with around 50 employees.



The Berger Gruppe on course for expansion

Heinz Berger Maschinenfabrik GmbH & Co. KG has grown over the past 25 years through the acquisition of five other mechanical engineering companies. These have merged as brands in the Berger Gruppe.

The increase in the number of employees and the expansion of the product range led to a company expansion at the Wuppertal-Cronenberg site.

The core product range consists of approx. 250 mostly CNC-controlled machine types and over 1000 robot integrations.

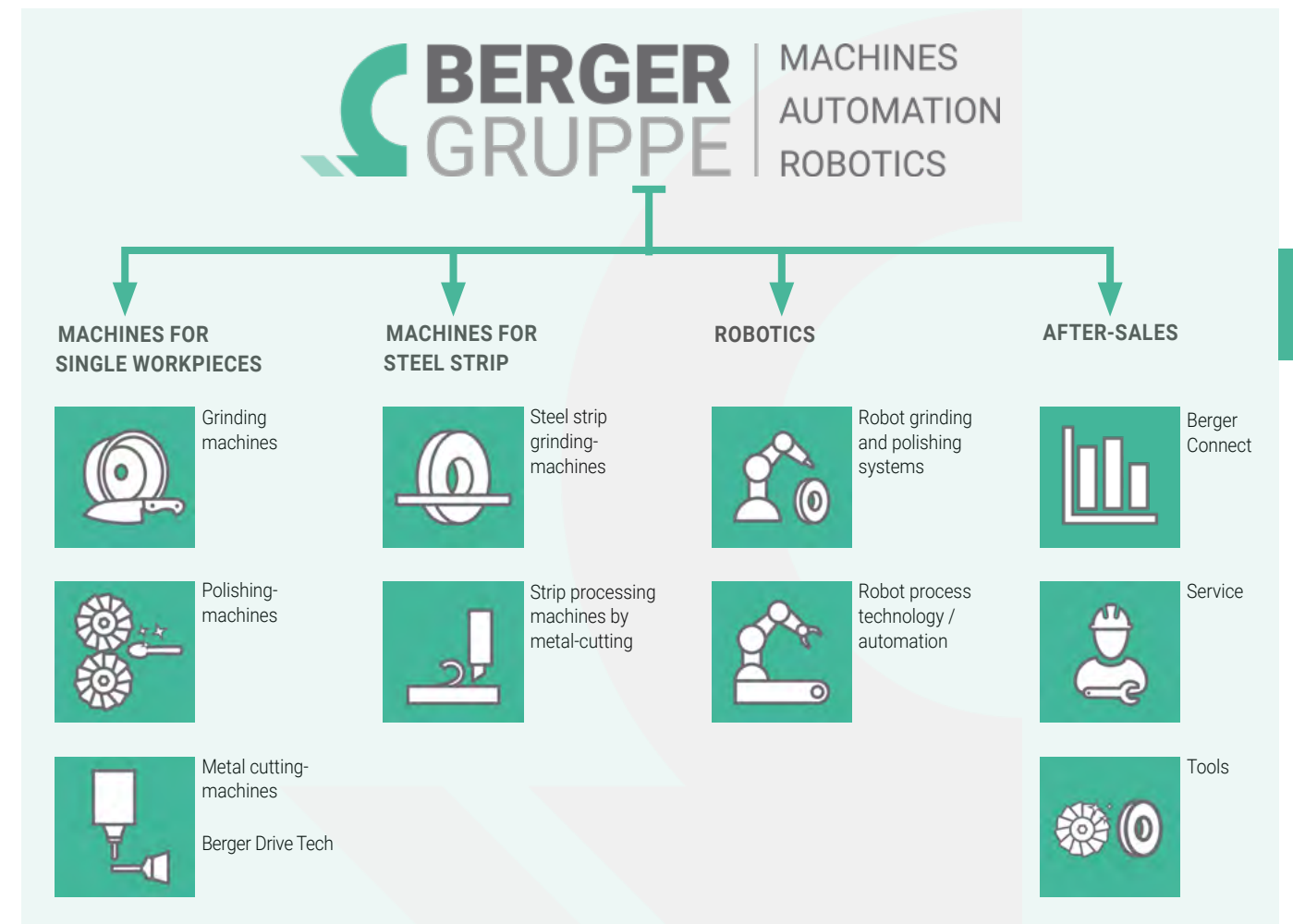
Today, the group employs 185 people on 6 500 m² of production space and 1 500 m² of office space and generates an annual turnover of around €28 million.

PRODUCT CATEGORIES

CNC MACHINES AND ROBOT CELLS

MACHINES AUTOMATION ROBOTICS

The Berger Gruppe develops and builds CNC-controlled machines and robot cells for various industries. Every year, 10-12 new types of machines or new production processes are completed from a total of 80-110 new systems.



Thanks to the latest possibilities of broadband connectivity and digitalization in production, interfaces for Industry 4.0 applications with networked sensors, signal evaluation and integration of driverless transport systems have been developed for the machines.

Product range

- **Machines for single workpieces**
 - grinding machines
 - polishing machines
 - metal-cutting machines
- **Machines for steel strip**
 - steel strip grinding machines
 - strip processing machines by metal-cutting

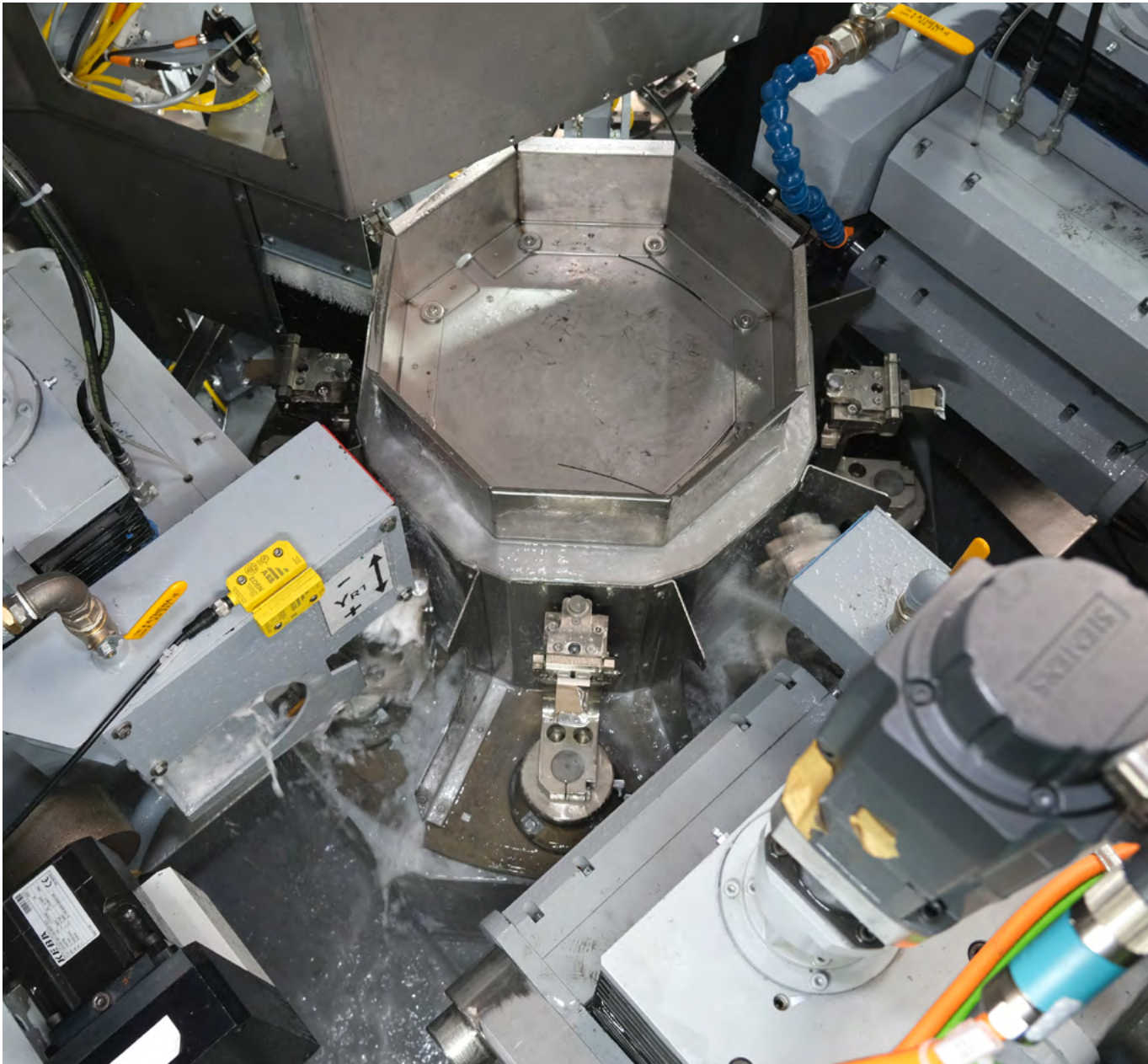
- **Robot grinding and polishing systems**
 - cells for robot-guided workpiece
 - cells for robot-guided tool
- **Robot process technology / automation**
 - process automation
 - measuring technique
 - Industrie 4.0
- **After-Sales**
 - Berger Connect
 - service
 - tools

GRINDING MACHINES FOR SINGLE WORKPIECES

Grinding, glazing, serrating and sharpening of single workpieces

Grinding machines for individual workpieces are used in the cutlery, machine knife, tool and surgical industries, among others.

Cup wheels or peripheral grinding wheels are used depending on the application.



The machines are designed for a wide range of mechanical processing operations, such as :

- flat and bevel grinding
- radii grinding
- face grinding
- scalloped and serrated grinding
- sharpening
- glazing
- contour grinding
- hollow grinding

Products

- flat bevel grinding machines
- rotary table grinding machines
- peripheral grinding machines
- rotary index table grinding machines
- hollow grinding machines
- glazing machines
- contour grinding machines
- sharpening machines

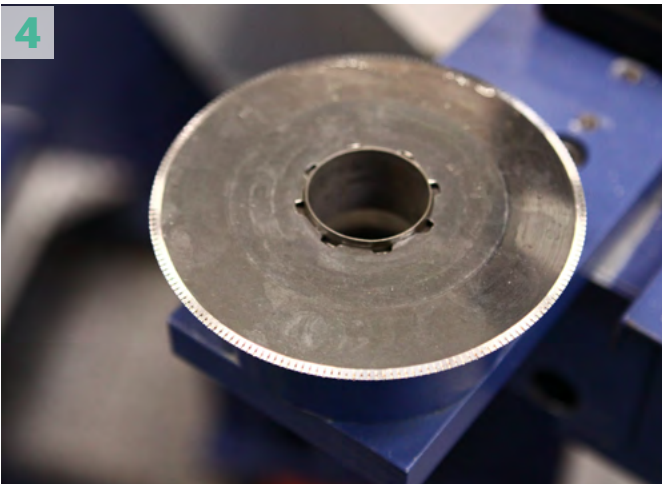
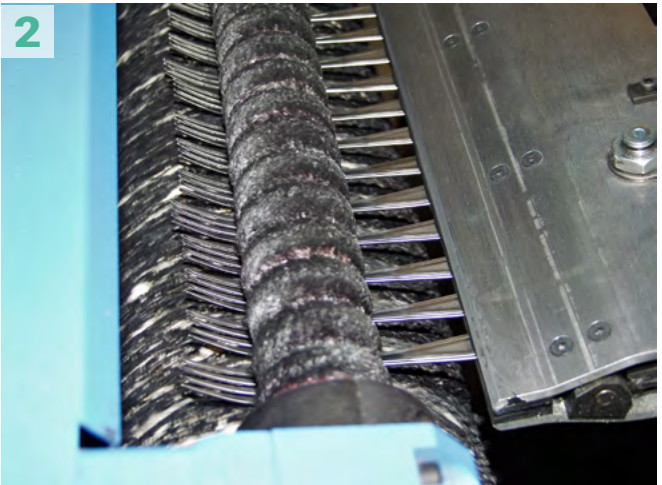
Bilder

1. Flat bevel grinding machine of the series BG: Grinding chisels (picture 1)
2. Peripheral grinding machine of the series WSL5: Serrating of saw blades in a package (picture 2)
3. Rotary table grinding machine series DRG: Flat grinding of surgical scissors (picture 3)
4. Peripheral grinding machine of the series RFS: Flat and bevel grinding of circular knives (picture 4)
5. Rotary index table grinding machine series RST8: Grinding of scalpel blades (picture on the left side)

POLISHING MACHINES

Rough and final polishing of single workpieces

The Berger Gruppe offers polishing machines for workpieces. Depending on the application, the machines are equipped with one or two shafts. Mechanical surface finishing is carried out with elastic tools such as abrasive belts, grinding and polishing tools, sisal or cloth wheels.



The machines are used for e.g.:

- rough and final polishing of cutlery parts, knife blades and rotationally symmetrical workpieces such as surgical nails, bone plates or knife handles
- bevel polishing on circular knives

Products

- double shaft polishing machines
- single shaft polishing machines
- chamfer polishing machines

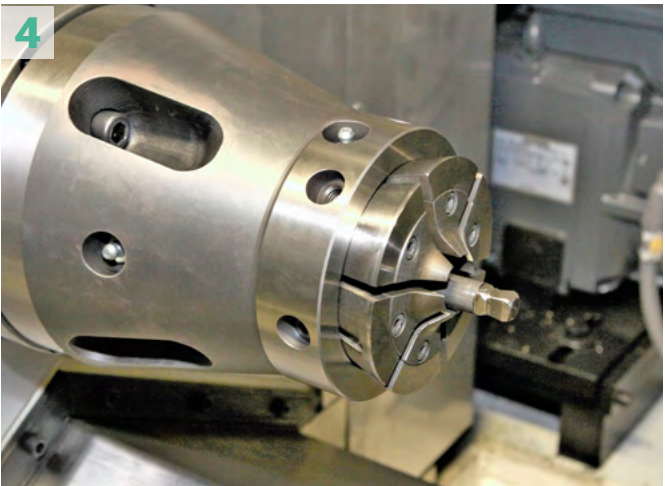
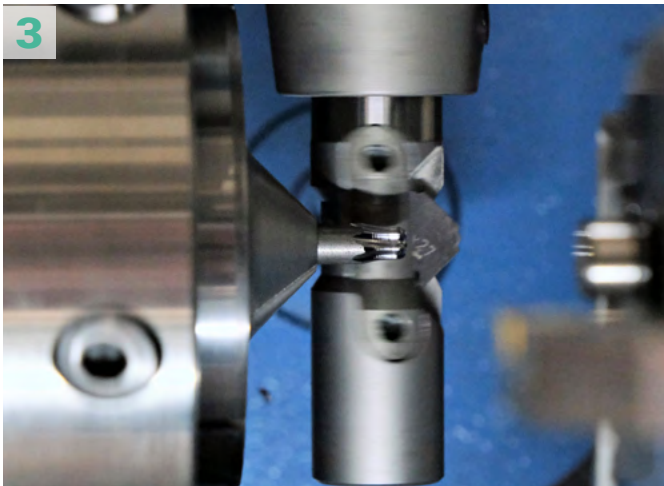
Pictures

1. Double shaft polishing machine of the series PC: CNC-controlled polishing knife blades up to 650 mm long (picture 1)
2. Double shaft polishing machine of the series DWP/1S: Rough and final polishing of cutlery flaps (picture 2)
3. Double shaft polishing machine of the series PS: Polishing of rotationally symmetrical workpieces such as bone nails (picture 3)
4. Chamfer polishing machine of the series FPV: Polishing of pre-ground cutting edges on circular knives (picture 4)
5. CNC-controlled double shaft polishing machine of the series PS (picture on the left side)

METAL CUTTING MACHINES

Profile generating, milling and drilling of single workpieces

The Berger Gruppe offers cutting machines for various applications. The profile generating centers are used for machining screwdriver tools, square and hexagonal tools and similarly shaped workpieces.



A special drilling machine is designed for drilling, countersinking and tapping circular knives

The machines are primarily used in the tool and machine knife industry. The following machining processes are used:

- profile generating, milling and drilling of screwdriver tools and square and hexagonal tools
- drilling, countersinking and tapping of circular knives

Products

- profile generating centers
- metal cutting machines for circular knives

Pictures

1. Profile generating center of the series LP110: Turning, profile generating and long turning of Phillips screwdrivers (picture 1)
2. Profile generating center of the series LP110: Profile generating center of PlusMinus screwdriver blades (picture 2)
3. Profile generating center of the series LP110: Profile generating Torx ball-head screwdrivers (picture 3)
4. Profile generating center of the series LP130: Profile generating of the square of socket wrenches (picture 4)

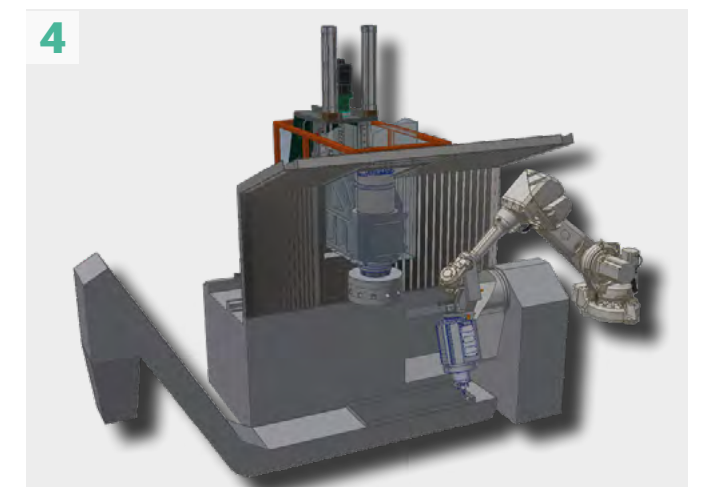
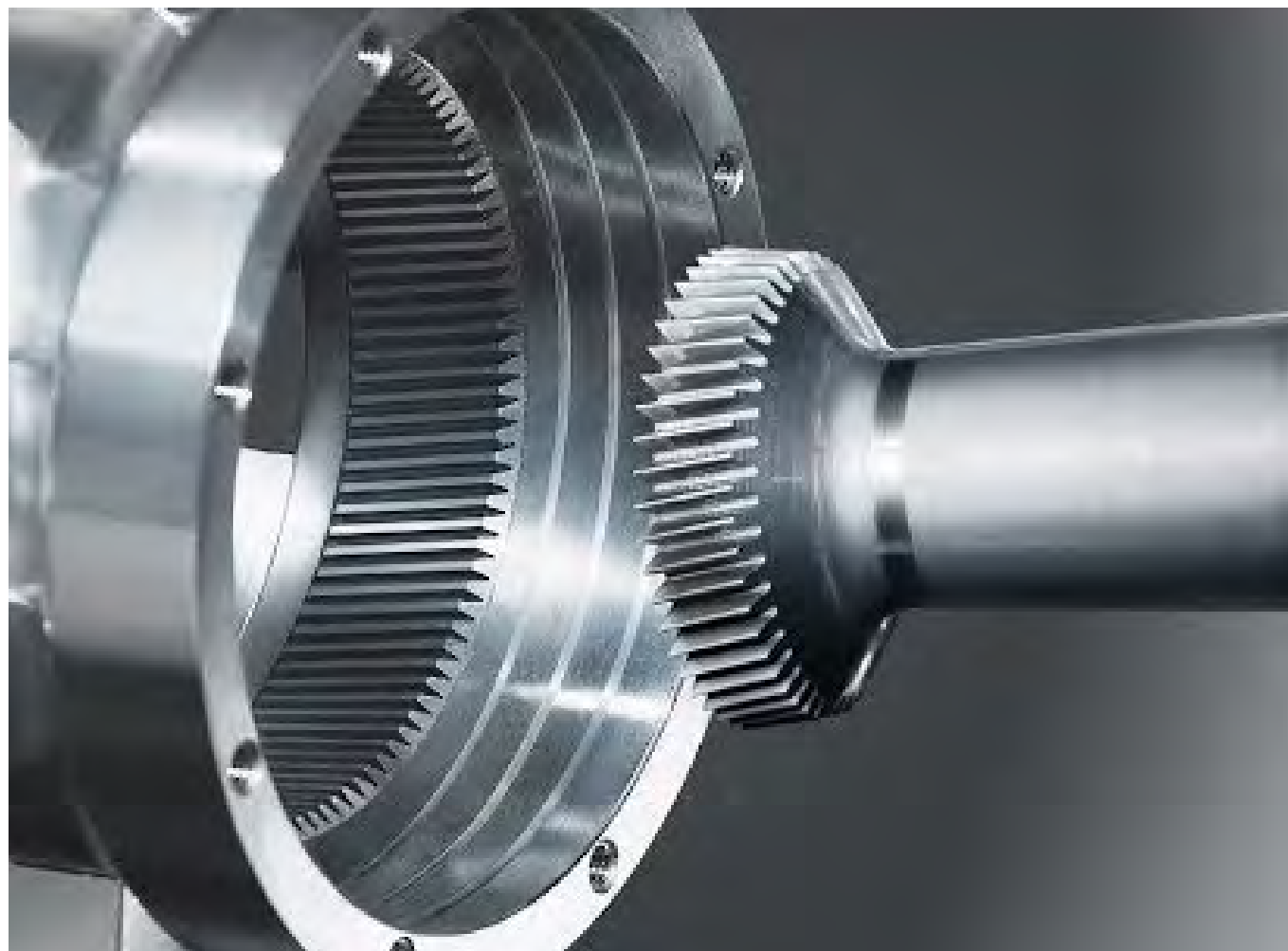
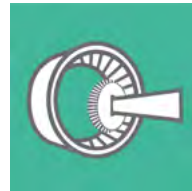
BERGER DRIVE TECH

BDT

Berger Drive Tech is the new business unit for the internal and external gearing of industrial drive technology workpieces.

We are concentrating on the gear skiving process, a very demanding process with regard to axis geometries and tools, which offers very high productivity advantages - particularly in the internal gearing of ring gears.

Gear skiving replaces the "shaping" and "broaching" processes.



Compared to broaching, it is around four to five times more productive. The advantages over broaching lie less in the machining speed than in the greater flexibility and lower tool costs.

Typical workpieces are internally toothed ring gears and externally toothed planetary gears of planetary gearboxes for the automotive industry, for agricultural machinery and for industrial gearboxes.

As planetary gears are also used in modern electric drives, the gear skiving process will continue to be a technology in high demand in the future.

Pictures

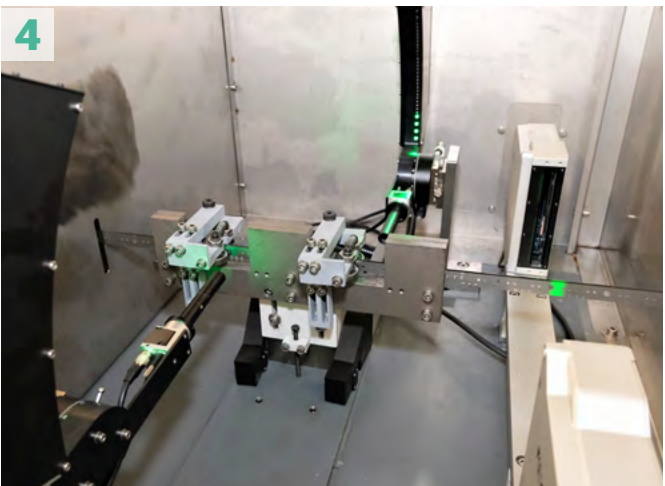
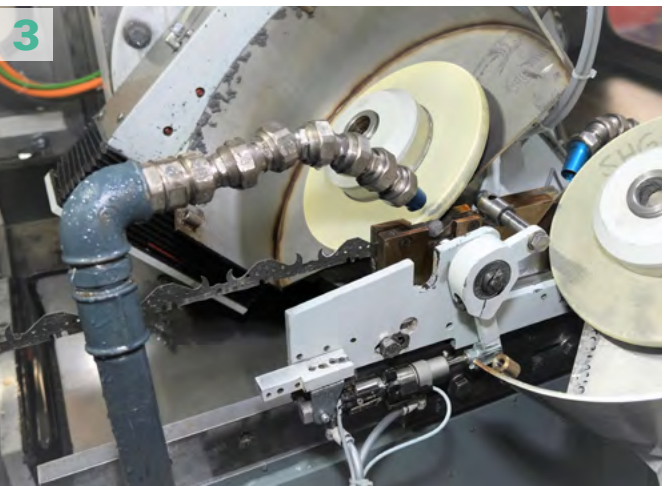
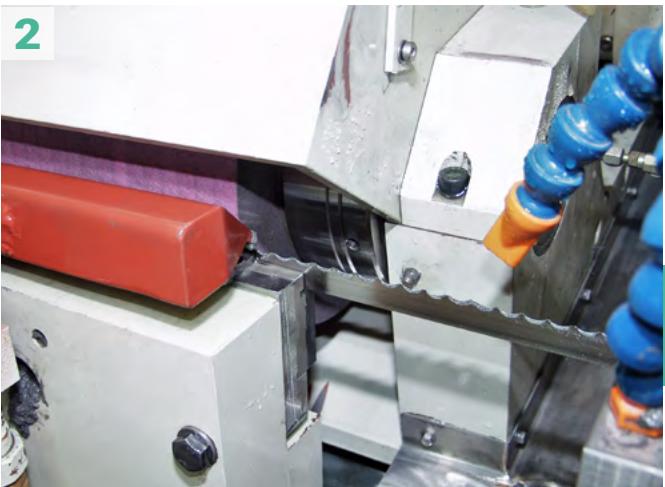
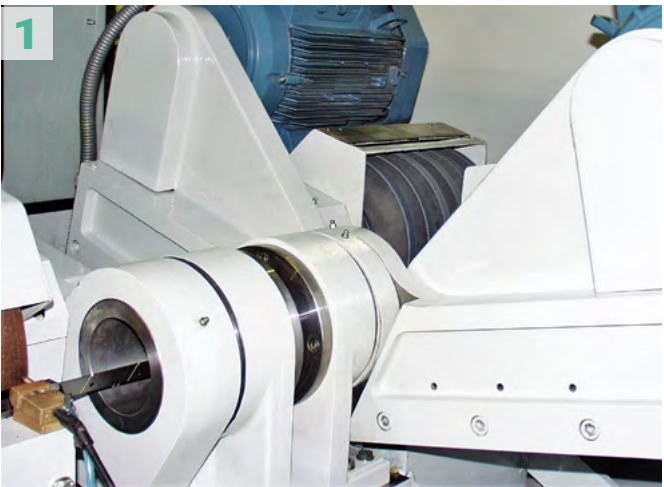
1. Ring gear: When skiving an internally toothed ring gear, adjustments can be made at any time, in contrast to broaching. For example, the flank line can be modified with regard to the angular position and crowning. (picture 1)
2. Tools: Different tool concepts guarantee an overall system that is optimally aligned to the respective application. Shank and disk-shaped tools are used as solid tools or indexable insert tools. (picture 2)
3. Planetary gears: The gears belonging to the planetary gear set can all be cut using the skiving process - internationally known as "skiving" or "power skiving". The high process precision guarantees noiseless running behavior of e-gears. (picture 3)
4. Robotics/WW: In addition to user-friendly dialog software, the productivity of the overall system is ensured by fast loading and unloading as well as rapid tool changes. (picture 4)

GRINDING MACHINES FOR STEEL STRIP

Deburring, grinding, serrating and polishing of steel strip

The Berger Gruppe offers machines and systems for processing steel strips.

Individual processing stations and system components are configured to form a system. Additional components or processing stations can be retro-fitted.



The steel strip grinding machines mainly process razor blades, scalpel blades, saws, technical blades, special surgical blades and similar workpieces.

Special applications are e.g:

- straight finish grinding
- scalloped and serrated grinding
- gothic arch grinding
- grinding of multiple strips
- grinding of hook blades

Products

- steel strip grinding machines
- steel strip polishing and deburring stations
- grinding machines for hooked blades
- steel strip straightening machines

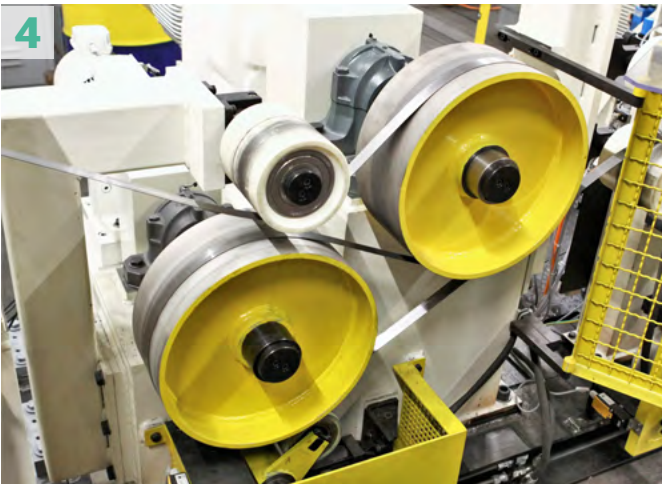
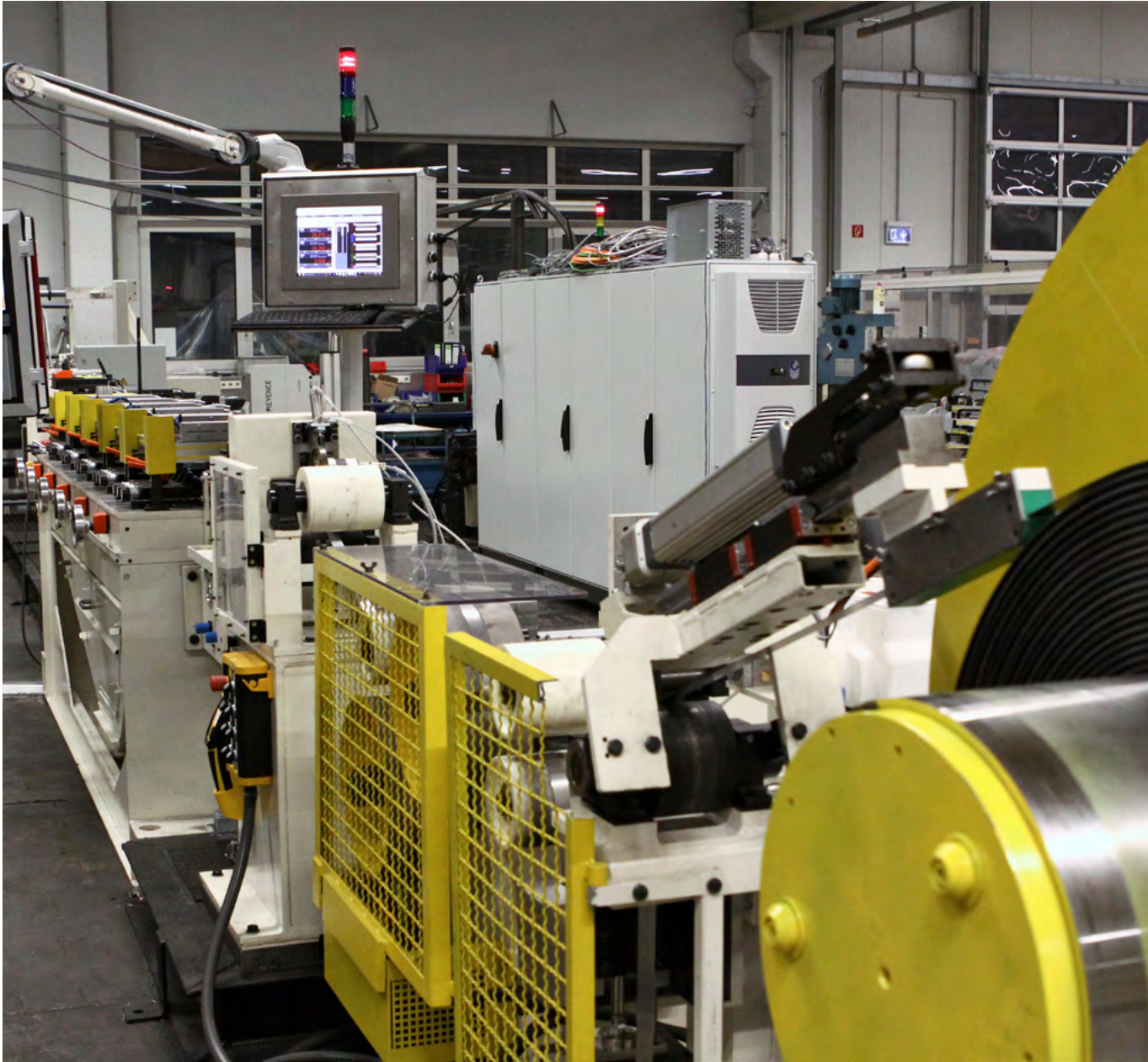
Pictures

1. BSM3000/D series steel strip grinding station: Straight, double-sided cutting edge grinding on steel strip for the production of technical blades (picture 1)
2. BSM3000/E series steel strip grinding station: serrated grinding for the production of machine knives (picture 2)
3. BSM500/HK series steel strip grinding station: Plunge grinding and polishing of steel strip for the production of hook blades (picture 3)
4. Angular Blade Inspection System (ABISY): Measuring the cutting edge for quality assurance during the grinding process (picture 4)
5. DEB series steel strip grinding machine: Double-sided grinding and polishing of steel strip for processing double-sided razor blades (picture on the left side)

STRIP PROCESSING MACHINES BY METAL-CUTTING

Deburring, chamfering, edge trimming,
grooving on steel strip

The Berger Gruppe offers a wide range of metal-
cutting strip processing machines. Both the strip
edge and the strip surface can be machined.



JULIUS strip edge trimming machines are used in
various industries such as the automotive indus-
try, the steel industry and the tube industry.

The following processing operations can be carried
out on steel strip:

- deburring
- edge trimming
- oil grooving
- brushing
- straightening
- traverse winding

Products

- strip edge trimming machines and lines by
metal-cutting
- grooving machines
- traverse winding systems
- straightening machines
- strip tension technique

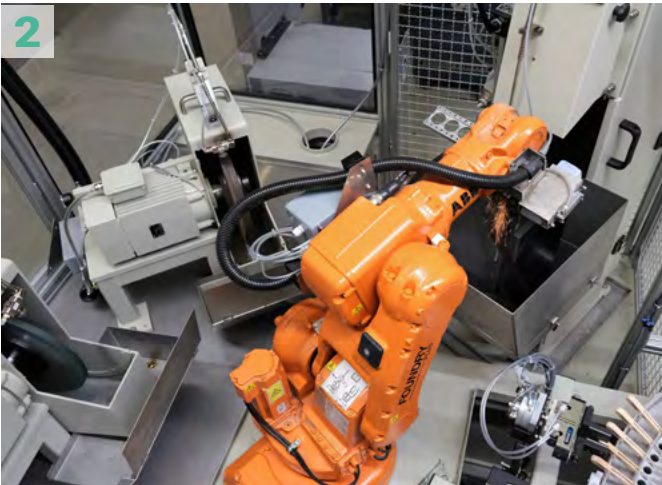
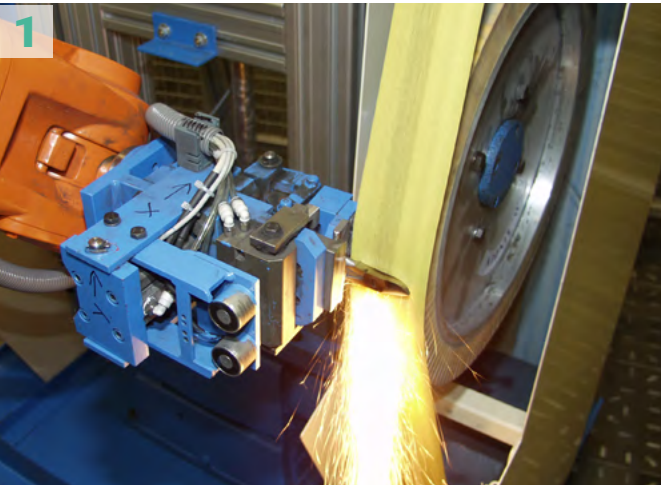
Pictures

1. Strip edge trimming by metal-cutting with one
tool (picture 1)
2. Grooving machine of the series NU: Strip sur-
face processing by metal-cutting with one
tool (picture 2)
3. Traverse winding system at the recoiler side
(picture 3)
4. Strip tension technique: Strip tension control
with S-block and strip tension position danser
(picture 4)
5. Strip edge trimming line of the series BHR/
BKB with integrated traverse winding system
(picture on the left side)

ROBOTIC GRINDING AND POLISHING SYSTEMS

Deburring, grinding, polishing, serrating and sharpening of single workpieces

The Berger Gruppe offers a wide range of robot cells for various applications. The cells are used in the cutlery, tool and foundry industries, among others.



Depending on the nature of the workpiece, the robot cell is equipped with different processing stations. Either the workpiece or the tool is machined under robot control.

The robot cells perform the following machining operations:

- deburring
- grinding
- polishing
- sharpening
- serrating

Products

- robot cells with robot-guided workpiece
- robot cells with robot-guided tool

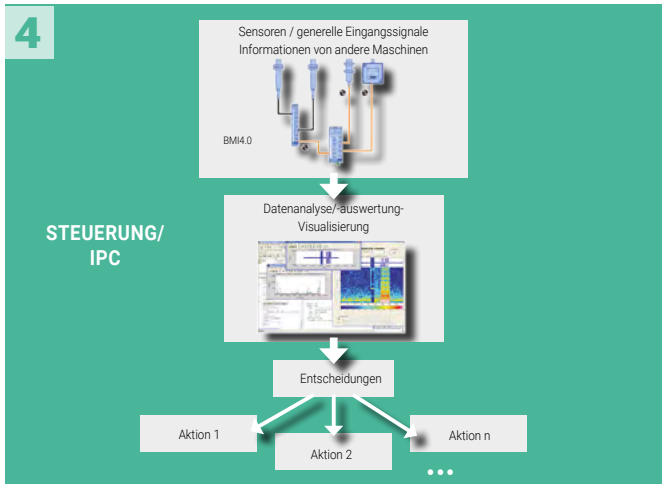
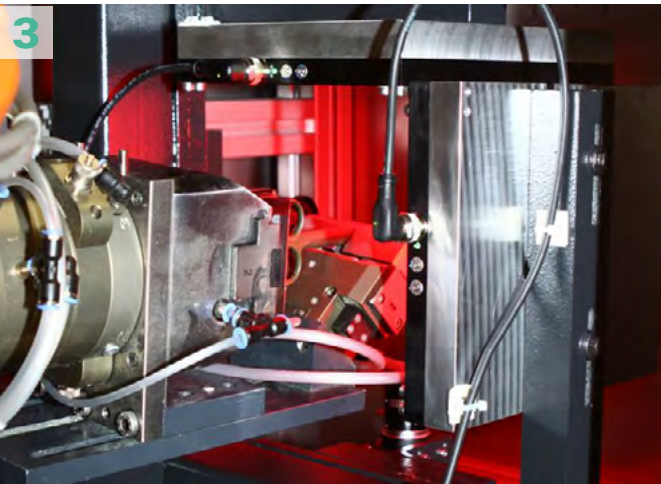
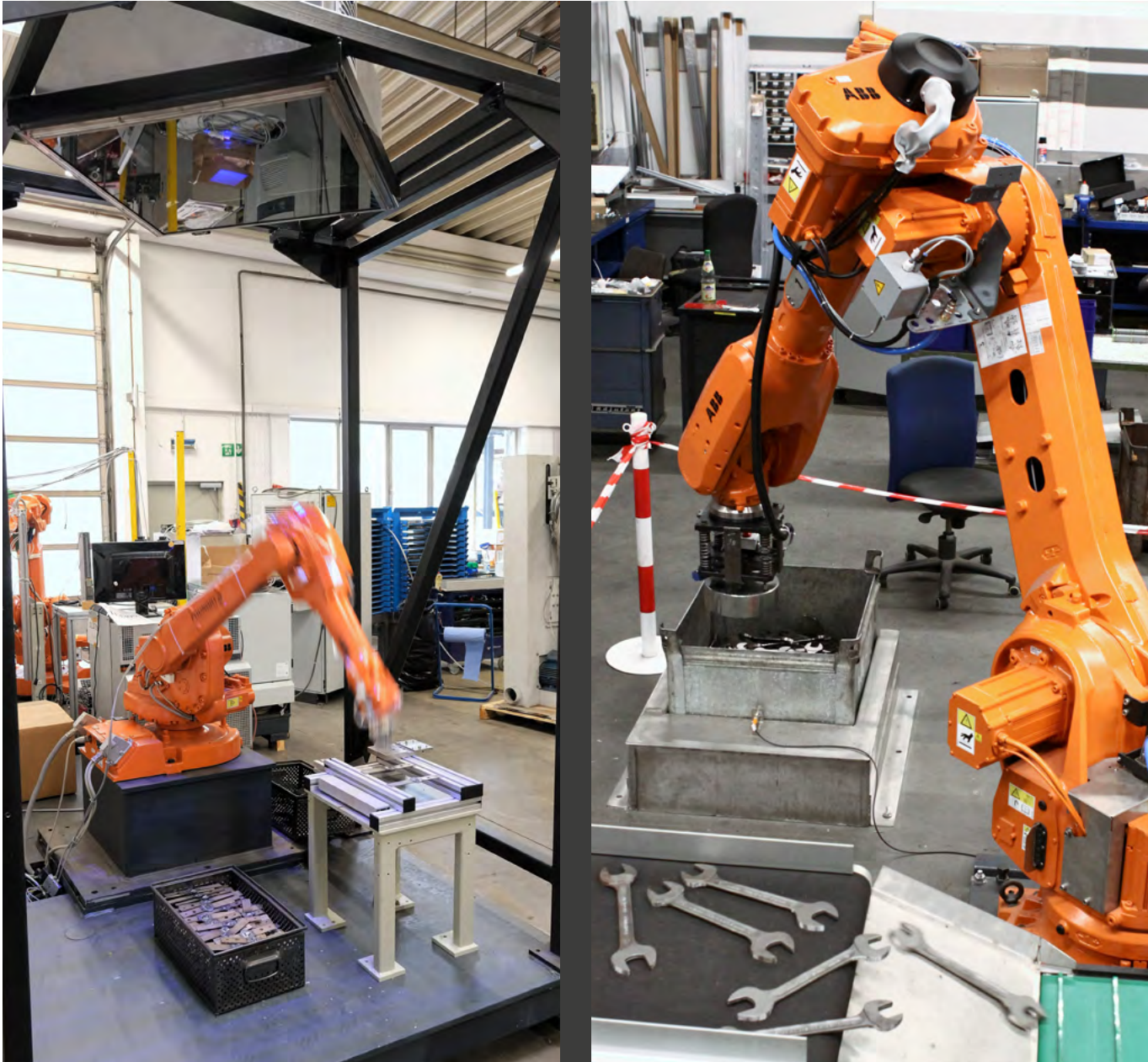
Pictures

1. Robot grinding cell with two belt grinding stations for grinding pliers (picture 1)
2. Robot processing cell with three belt grinding stations for grinding and sharpening knife blades (picture 2)
3. Robot deburring station for processing cast parts (picture 3)
4. Robot polishing station with two polishing stations for processing artificial hip joints (picture 4)
5. Robot cell with four processing and loading/unloading robots, two belt grinding stations and two BG1 series flat bevel grinding machines for processing knife blades (picture on the left side)

ROBOT PROCESS TECHNOLOGY / AUTOMATION

System integration, handling, sorting, measuring

Various production processes can be integrated into one system and handled automatically. Workpieces can be fed in randomly via conveyor belts, separated, detected, gripped by the robot and fed to subsequent processes.



- bus-based acquisition of sensor signals
- measurement technology
- programming
- process automation
- handling technology
- sorting units
- system integration

Products

- system integration
- sorting units
- measurement technology
- BMI4.0

Pictures

1. Feeding of workpieces via Berger Feeder (picture 1)
2. System integration: Welding system integrated into a robot grinding cell for machine knives (picture 2)
3. Camera measuring station for surgical scissors (picture 3)
4. Bus-based acquisition of sensor signals with BMI4.0 (picture 4)
5. Bin picking with position measurement via high-resolution camera system (left) or via conveyor belt and measuring table (right) (pictures on the left side)

BERGER CONNECT

Berger Connect

Berger Connect is a platform that can be used to record and display machine data.

By displaying and evaluating the quantities produced, for example, the machine or the entire machine park can be optimally utilized.



1



2

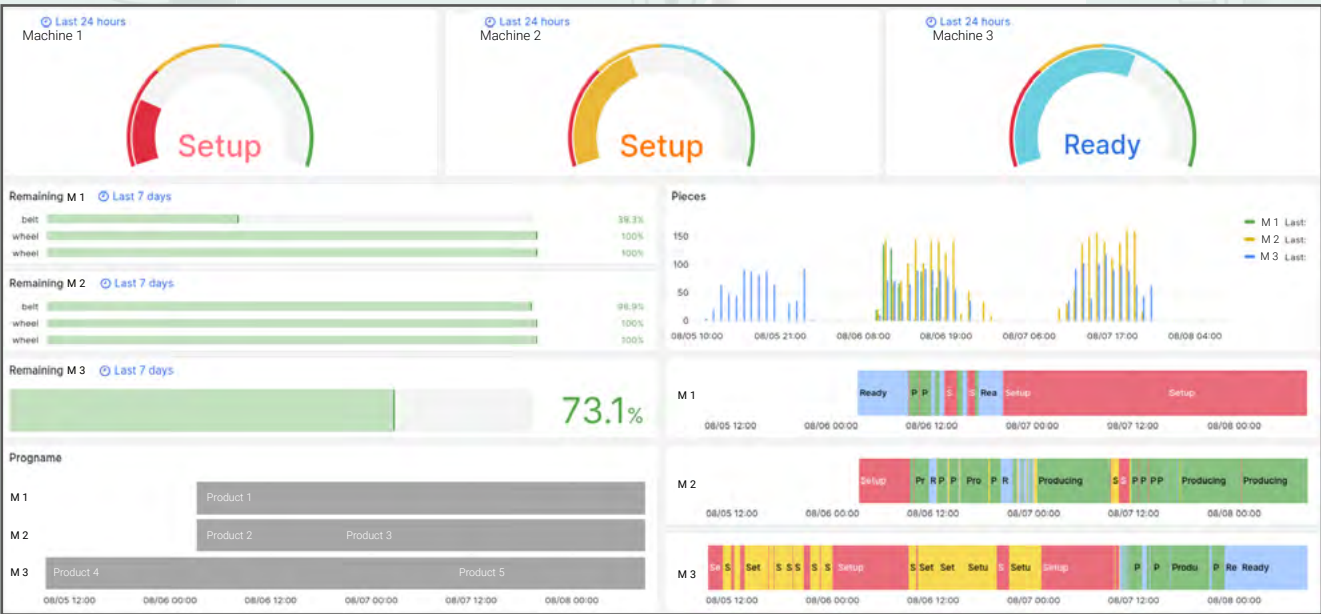


Under certain conditions - such as the use of special sensor technology - further data can be collected and displayed in addition to the number of workpieces processed, e.g.:

- Quantity of cooling lubricant
- coolant temperature
- compressed air
- Grinding wheel wear

Pictures

1. Overview of the workpieces (picture 1)
2. Remaining grinding stone (picture 2)
3. Processing robot cell RSP (picture left)



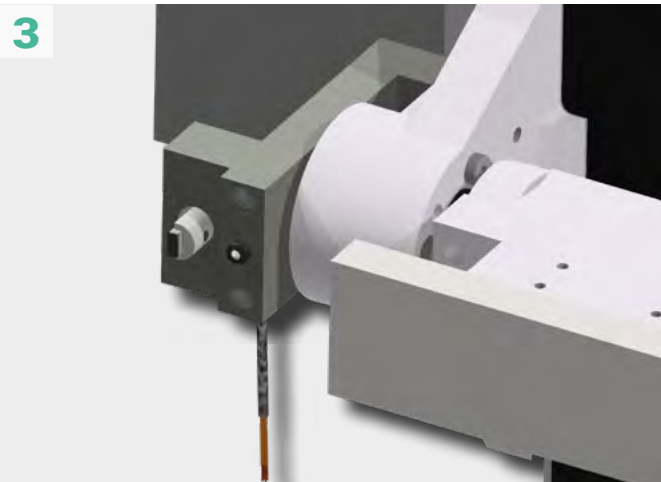
SERVICE

Service offers

The Berger Gruppe can look back on over 200 years of experience in machine and plant construction and more than 5000 units delivered.

Because quality has always been a leading maxim for us, systems that were installed more than 30 years ago are still in operation worldwide today.

In order to secure this productivity advantage for our customers, we have developed a wide range of services that can give you a decisive competitive edge.



In order to maintain and increase productivity, the Berger Gruppe offers a wide range of services, examples of which are described below.

Services

- machine check-up and additional services
- upgrade and optimization
- digital production
- mechanical overhaul
- courses and training

Pictures

1. Upgrade measurement technology (picture 1)
2. Upgrade CNC control (picture 2)
3. Upgrade drive technology (picture 3)
4. Upgrade in-line sharpness measurement system (picture 4)



ABRASIVES

Grinding wheels

The Berger Gruppe produces and sells a variety of grinding wheels in different qualities and dimensions.

These grinding wheels can be used on both Berger and comparable grinding and glazing machines.

The production of grinding wheels was relocated to Wuppertal-Vohwinkel a few years ago in order to create more space for mechanical engineering and development in Kohlfurth.



Products

- magnesite-bonded grinding wheels
- epoxy-bonded grinding wheels
- polyester-bonded grinding wheels
- bakelite-bonded grinding wheels
- ceramic-bonded grinding wheels

We also offer two-zone grinding wheels and glazing wheels.

Pictures

- 1. Grinding wheel storage (picture 1)
- 2. Grinding segments (picture 2)
- 3. Spiral wheels (picture 3)
- 4. Cup wheels (picture 4)
- 5. Casting of grinding wheels (picture on the left side)

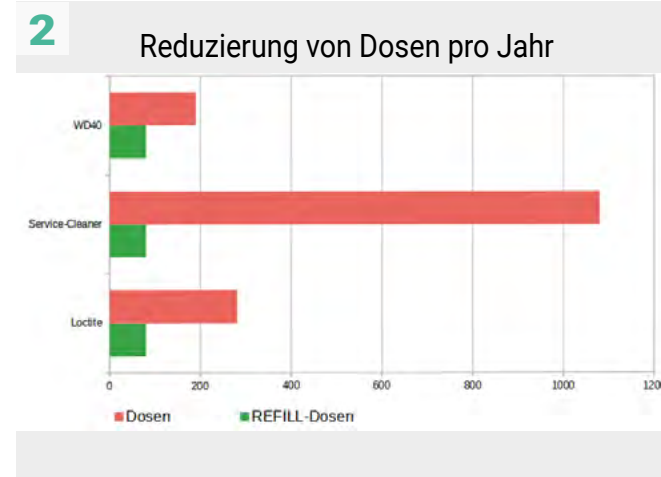
SUSTAINABILITY

RESOURCE-CONSERVING WORK

ECOLOGY ECONOMY AND SOCIAL COMMITMENT

For the Berger Gruppe, the term "sustainability" has had a special meaning, and not just since the climate debate.

The company lives sustainability in an ecological, economic and social sense.



Ecological sustainability

At the Berger Gruppe, ecological sustainability is based on two pillars: the resource-conserving use of raw materials and energy and the creation of renewable energies.

By creating technologically advanced machines, the Berger Gruppe focuses on quality rather than quantity. Consequently, research and development plays a central role in the company, with the result that high-quality machines with a long service life are developed and produced, which in turn are designed to manufacture long-lasting quality products.

The renaturation of the Wupper is another step towards giving nature back a piece of its habitat (picture 1). In 2019, the Berger Gruppe, together with the Wupper Association, returned the 500 meters of the Wupper riverbank adjacent to the company's site to its natural state. A near-natural habitat was restored. Employees of the company and local residents benefit from the newly created recreational area.

ÖKOPROFIT



The Berger Gruppe takes part in the cooperation project initiated by the Ministry of the Environment. Energy consumption and waste balance were recorded by the Berger sustainability team and optimization measures were implemented, e.g:

- replacing 1600 disposable spray cans annually with 240 refill cans with a refill system (pictures 2 + 4)
- optimization of the heating settings
- switching to LED lamps, dimmers and motion detectors for lower energy consumption
- reducing fuel consumption by purchasing electric cars and 26 wallboxes for company cars and staff cars (picture 3) and reducing business trips in favor of video conferencing
- reuse of filling material and cardboard packaging in shipping
- use of a drill grinding machine to reuse used drills (picture 5)
- increased use of tablets to save on paper printouts

ENERGY GENERATION WITH PHOTOVOLTAICS

Third largest plant in Wuppertal

In December 2022, the Berger Gruppe connected the third-largest photovoltaic system in Wuppertal to the grid. Covering an area of around 5000 m², the system with 1800 panels has a total output of 700 kWp.

40 % of the electricity generated covers 48 % of the company's own electricity consumption. The remaining 60% is fed into the grid and can supply up to 100 households with electricity on an annual average.

By building the photovoltaic system, the Berger Gruppe is able to reduce more than 300 000 kg carbon dioxide emissions per year and to become independent of the energy procurement market with almost half of the electricity required.

The investment has already paid off for the environment. With an amortization period of less than ten years, it was also the right decision from an economic point of view.



- initial situation: 400 MW/h grid consumption
- actual status: 700 kWp via PV system
- degree of self-sufficiency: 48.1
- avoided CO2 emissions: approx. 320 tons/year

Pictures

1. With 1800 solar panels on around 5000 m², the Berger Gruppe has one of the largest photovoltaic systems in the Bergisches Land region. (picture left)
2. Aerial view of the Berger Gruppe in Kohlfurth: almost the entire roof area is covered with modules. (picture above)
3. Aerial view of the Berger Gruppe before the construction work (picture 3)



INVESTMENT IN THE EDUCATION AND TRAINING OF FUTURE GENERATIONS

Training, internships, lectures and scholarships

Investing in the education and training of future generations is a focal point of the company's philosophy.

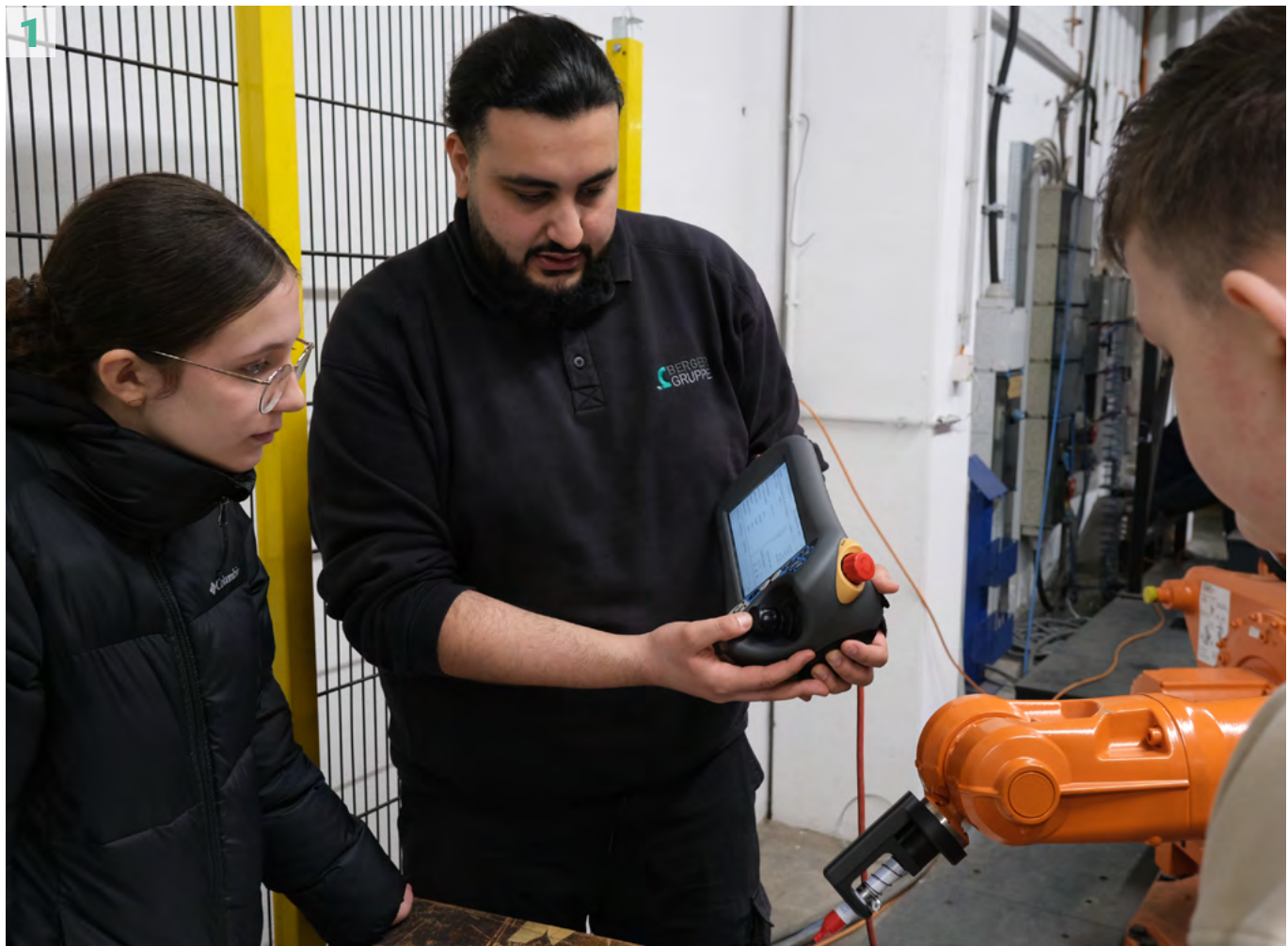
The company sees the support of pupils and students in the form of grants, internships, training courses or lectures as an investment in its own future and as an important cornerstone for the continued existence of the Group.

The Berger Gruppe is currently training 15 apprentices in technical professions.

Each year, the company offers 40 work placements for school pupils and up to 20 mechanical and electrical engineering placements for students.

Together with the University of Wuppertal and the Technical University of Dortmund, the Berger Gruppe supports students who are studying for a Bachelor's or Master's degree in the fields of process engineering and design.

Every year, the Berger Gruppe awards two German scholarships to students in the fields of mechanical and electrical engineering.



As part of the Bergisches Schultechnikum (BeST) program, lectures are held to train pupils in grades 8-11 (13 to 16 year olds) in the field of robotics. Cooperation courses with practical application in the Berger Gruppe's production facilities are held on various dates throughout the year.

The Berger Gruppe is particularly keen to support the Wuppertal Junior Uni in awakening and promoting an interest in technology among children. As a sponsor of the Junior Uni, the Berger Gruppe donated a robot cell for courses in industrial robotics.

The company's commitment to Wuppertal is not only reflected in the continuous expansion of production at its headquarters in Kohlfurth, but also in its support for Wuppertal organizations and associations. For example, the Berger Gruppe sponsors local sports clubs and local trade fair "tool-box" in Cronenberg to support social institutions.

The management of the Berger Gruppe is also on the board of the "Gemeinschaft Cronenberger Unternehmen" (Community of Cronenberg entrepreneurs, GCU) to support pupils, students and trainees as well as cultural activities in Cronenberg.

The company philosophy is supported by the workforce, which is reflected in the low staff turnover. Almost all employees have been with the company for many years, some for decades and some even in the second generation.

Pictures

1. "Experience, discover, develop - the industrial robot" of the Bergisches Schul-Technikum (BeST) (picture 1)
2. The Junior Uni at the Berger Gruppe as part of the "Industrial Robot Workshop" (picture 2)
3. German-Spanish apprentice exchange between the Berger Gruppe in Wuppertal and the Politécnico in Murcia (picture 3)
4. Meeting of the German scholarship holders at the Berger Gruppe with a lecture on the flood early warning system (picture 4)
5. Vacation course "Industrial Robotics" at the Junior University of Wuppertal, practical part at the Berger Gruppe (picture 5)

A REASON TO CELEBRATE

PRIZES AND AWARDS

HONORS FOR DISTINGUISHED WORK

The company's commitment to sustainability combined with technologically high-quality machines and social commitment as well as its open commitment to the Wuppertal site has been rewarded with several awards over the last decade.



2013 | The state of North Rhine-Westphalia recognizes the Berger Gruppe as the market leader in the field of grinding machines in the "Germany at its best" competition.

2014 | The Berger Gruppe makes it into the top ten of the Robotic Awards with a robot cell for deburring machined aluminum die-cast parts.

2015 | The Berger Gruppe is awarded the Wuppertal Business Prize as the best company of the year.

2018 | The Berger Gruppe wins the Robotics Award at the Hannover Messe with a process chain consisting of 33 interacting robot cells

2018 | The Berger Gruppe receives the ABB Value Provider Award in Lyon.

2020 | The IHK honors the Berger Gruppe for outstanding training performance. Robin Bohn (m.) achieved the highest score of "very good" in his final examination as a mechatronics technician.

2021 | With a fully automated processing cell for the production of saw blades, the Berger Gruppe wins the ife Award for single manufacturer batch size 1+ in 2021.

Pictures

1. 2021: Presentation of the ife Award for single manufacturer batch size 1+ (picture 1)
2. 2020: IHK award to the Berger Gruppe for outstanding training performance (picture 2)
3. 2018: Presentation of the Robotics Award at the Hannover Messe (picture 3)
4. 2018: Presentation of the ABB Value Provider Award in Lyon (picture 4)
5. 2015: Presentation of the Wuppertal Business Award for the Company of the Year (picture 5)

STRONG PARTNERS

UNDER ONE ROOF ...

The Berger Gruppe develops and builds CNC-controlled grinding machines for various industries such as the cutlery, tool, surgical and automotive industries.

Every year 10–12 new types of machines or new production processes are completed from a total of 80–110 new plants. As a robot system house from ABB and KUKA, the company mainly uses robots to automate its machines.

The robots are used both for handling and for workpiece or tool guidance. The feeding technology of the components to be machined is decisive for the use of automation

The development of workpiece provision and interfaces for other production steps is an important area of work for the company.

Newest technologies of broadband connectivity and digitalization of production purposes set the stage for Berger de-

velopments of interfaces for Industry 4.0 applications with linked sensor technology, signal analysis and integration of Automated Guided Vehicles (AGV) for the machines.



OUR PRODUCT CATEGORIES



Grinding machines
for single workpieces



Grinding machines
for steel strip



Grinding machines
for steel strip



Robotic process
technology/automation



Robotic grinding and
polishing systems



Strip processing machines
by metal-cutting



Deep cutting
machines