



**ATLANTIC**

SCHLEIFSCHEIBEN + HONSTEINE



## **THE PERFECT SURFACE**

Experience and innovation  
for precise grinding



„Our goal is the perfect surface.  
With our tailor-made products we work  
together with our customers to develop the  
perfect grinding solution, worldwide.“

Dr. Marco Weber  
(Managing Partner)





**ATLANTIC**  
SCHLEIFSCHEIBEN + HONSTEINE

# TABLE OF CONTENTS



## ATLANTIC GMBH

- 06** ATLANTIC GmbH
- 08** History
- 10** Sales offices

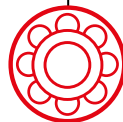
## INDUSTRIAL SECTORS

- 16** Roller bearing industry
- 20** Steel industry
- 24** Automotive industry
- 28** Other industries



## PRODUCTS

- 36** Precision grinding wheels
- 37** Honing and superfinishing stones
- 38** Segments and dressing sticks
- 39** Regulating wheels



## APPLICATIONS

- 44** Cylindrical grinding
- 46** Surface grinding
- 48** Honing & Superfinishing
- 50** Other applications



## RESEARCH & DEVELOPMENT

- 54** Equipped for the future







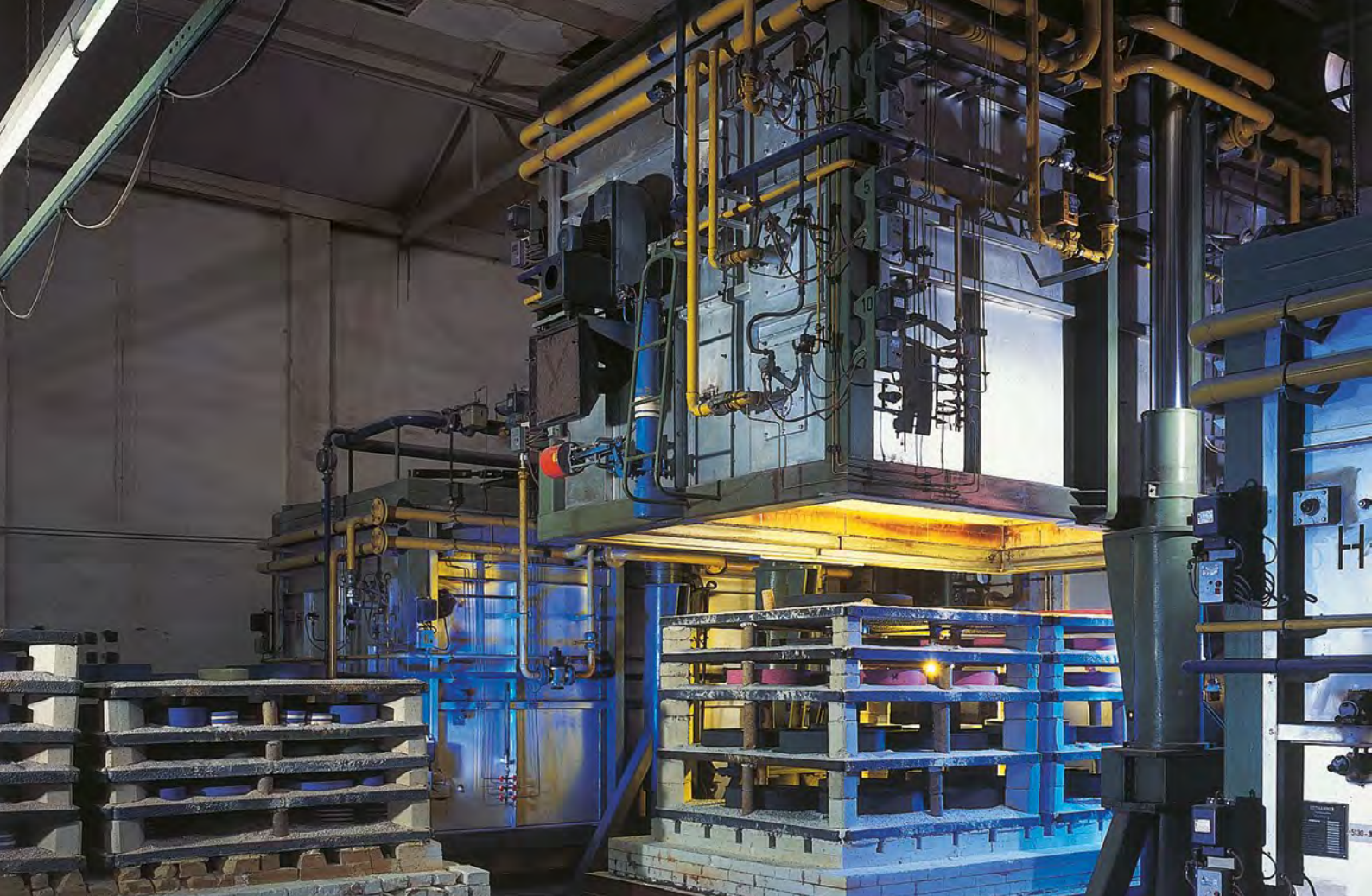
ATLANTIC GmbH was founded in 1920 and is today one of the most important manufacturers of grinding tools worldwide. At 40 locations and in more than 50 countries, the company, in conjunction with its customers, develop individual grinding concepts for international industrial demands on a daily basis.



ATLANTIC GMBH

**PRECISION AND  
INNOVATION**





## ATLANTIC GMBH

### CUSTOMIZED GRINDING SYSTEMS TO THE HIGHEST LEVEL

As an experienced abrasives specialist, ATLANTIC develops cross-industry grinding concepts that are used worldwide.

The use of high-performance grinding tools is an important factor for the function and cost-effectiveness of products in almost all industrial sectors. Through flexibility and individuality, ATLANTIC has a convincing approach worldwide. The company can draw on know-how that goes back to the origins of the abrasive industry.

The ATLANTIC range of abrasives offers all possible variations - ranging from coarse to extremely fine grain sizes, from very dense to extremely open structures and from very soft to extremely hard in many different bonds and grain combinations.

The grinding tools are adapted to the grinding and finishing processes and thus achieve the best grinding result.

#### **Core competence and close customer co-operation**

Optimum economy and quality: This is the goal of every product development and co-operation. Thanks to the flat line management structure, the globally positioned company is able to make developments, investments and organizational decisions quickly, flexibly and efficiently.



„EACH PRODUCT AN INDIVIDUAL SOLUTION –  
**THAT’S WHAT SETS US APART.**“



### Individuality and precision

Grinding tools are manufactured to the exact requirements of the customer. As a result, the customer receives a grinding tool that is perfectly adapted to the workpiece - a guarantee for the highest economic efficiency and quality of the customer's product!



### Close to the customer

Great care and attention guarantee an excellent surface machining operation. ATLANTIC consider the customer as the focal point of all our efforts. An experienced team of sales engineers in a total of 40 locations worldwide provide an individual and customer tailored service on site.



### Quality and innovation

ATLANTIC is one of the world's leading manufacturers of grinding tools. In constant dialogue with customers, grinding machine manufacturers and raw material suppliers, the focus is on quality and innovation. Through co-operation with research institutions and universities throughout Germany, product development is always one step ahead.





## THE MAN IN FOCUS

### CORPORATE CULTURE OF SUCCESS

ATLANTIC is characterised by a corporate culture that has grown over many years. Global representation, willingness to perform, flexibility of a medium sized organisation with continuous innovation puts us at the forefront of the international abrasive industry.

For ATLANTIC, employees are the company's greatest asset. Individual product development, quality of sales and service - this is how people do business. Also the production is based to a large extent on manual work and expert know-how. The readiness for constant change and further development has firmly established a „culture of success“ at all locations.

#### **Covering industrial sectors worldwide**

ATLANTIC grinding tools are not only used in the automotive, steel and roller bearing industries, but also in many other industrial sectors. High performance and the optimum surface quality are achieved according to the requirement profile.





## „PROGRESS IS OUR TRADITION.“

For generations, ATLANTIC has stood for the individual development and manufacture of high-quality grinding tools. The roots of the company go back almost 100 years. Determination, precision and value retention have made it one of the most important manufacturers of grinding tools worldwide. Development and production continue to take place in Germany.



For almost 100 years, experience in the abrasives industry has been passed on to future generations. The training of our own specialists is still an integral part today.

- **1920**  
Founding of the company by Dr. Otto Goertz and Walter Guilleaume
- **1946/47**  
Reconstruction of the factory destroyed in the Second World War
- **1956**  
Honing stone production for long-stroke and short-stroke honing is established
- **1961**  
Production of honing cups for precision machining
- **1985**  
Development of synthetic resin bonded grinding wheels
- **1996**  
First certification of quality management according to ISO 9001
- **2011**  
Bosch Supplier Award ceremony
- **2017**  
Development of Krypton technology



**ATLANTIC**

SCHLEIFSCHEIBEN + HONSTEINE

**PRECISION. BOUNDLESS.**

INTERNATIONAL SALES ORGANISATION  
AND EXPORTS WORLDWIDE

We have abrasive experts covering all industrial countries to advise and support solutions on site if required.

**5 CONTINENTS**  
**51 COUNTRIES**  
**40 LOCATIONS**

**America**

USA

Canada

Brazil

Mexico

Chile

Argentina

Peru





### Europe

Germany	Ireland	Finland	Bulgaria	Latvia
France	Spain	Luxembourg	Greece	Lithuania
Netherlands	Switzerland	Poland	Russia	Estonia
Belgium	Sweden	Czechia	Ukraine	Turkey
Austria	Denmark	Slovakia	Serbia	
Italy	Portugal	Hungary	Bosnia	
UK	Norway	Romania	Croatia	

### Asia/Africa/Pacific

China	Japan
India	Singapore
Bangladesh	Egypt
Thailand	Saudi Arabia
Malaysia	South Africa
South Korea	Australia





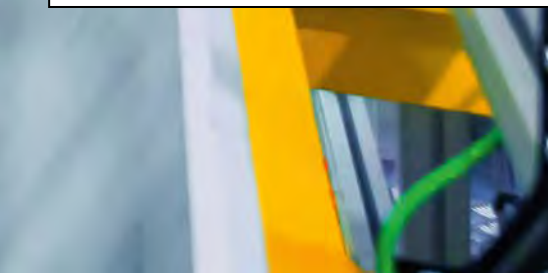




Quality and economy as the result of close co-operation - in numerous industrial sectors individual grinding concepts from ATLANTIC perfect industrial products that have to meet the highest demands permanently and reliably.



INDUSTRIAL SECTORS  
**INDIVIDUAL  
SOLUTIONS**



---

## THE PERFECT SURFACE

### INDIVIDUAL SOLUTIONS FOR VARIOUS TECHNICAL CHALLENGES

ATLANTIC grinding tools achieve high cutting performance and high surface qualities in accordance with the requirement profile.



#### Roller bearing industry

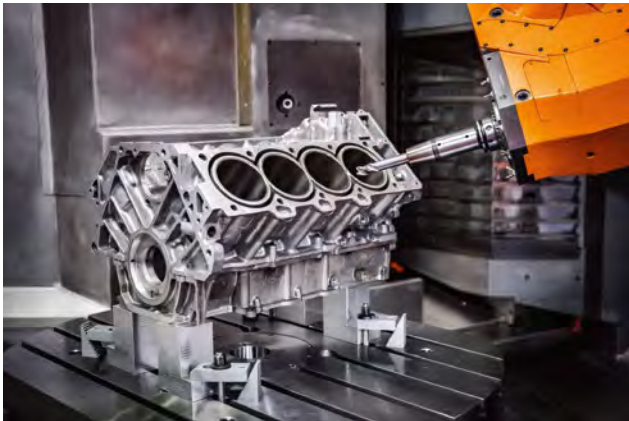
The roller bearing industry is constantly changing and is always on the lookout for optimisation potential. ATLANTIC supports its customers in the continuous improvement of their grinding and finishing tools and is a competent partner with decades of experience from numerous projects. Its particular strengths lie in the development and production of grinding wheels for the machining of all components in ball bearings, roller bearings and needle roller bearings as well as the grinding and lapping of roller bearing balls made of steel or ceramic.



#### Steel industry

In the steel processing industry, the demands placed on industrial grinding wheels are many and varied. On the one hand, high stock removal rates are the main criteria. On the other hand, the main emphasis is on surface finish. ATLANTIC's engineers have profound knowledge and experience in the field of hot and cold strip rolling mills. As one of the leading manufacturers of abrasives, ATLANTIC serves customers all over the world. The best possible specification is developed for the respective application.





### Automotive industry

The automotive and supplier industry is characterised by short development cycles, just-in-time delivery, the highest quality standards and innovative materials that must be functionally reliable in the long term. ATLANTIC has always taken these challenges into account in the individual development of grinding and finishing tools and is a trusted partner of renowned OEMs, first tier suppliers and suppliers to the automotive industry. Finer surfaces of the vehicle components lead to reduced pollutant emissions - thanks to the grinding processes optimised by ATLANTIC.



### Other industries

ATLANTIC grinding tools are used in almost all areas of industry. Almost every process requires a grinding tool adapted to the grinding process. ATLANTIC convinces with its expertise, product variety and individual advice on site. Only the right choice of abrasive, grain size, bond, structure and hardness ensures a high-quality, economical grinding result. Whether surface grinding, external cylindrical grinding, bore grinding or almost any other grinding operation: ATLANTIC manufactures the right grinding tool for all industries.



**Applications of roller bearings:**

Passenger cars and trucks, mechanical engineering, railways, wind turbines, aerospace technology, mining and other material handling technology, other industrial applications and many uses in everyday life.

## **ROLLER BEARING INDUSTRY INDIVIDUALITY MEETS ECONOMY**

**Grinding tools tailored to the specific requirements of the roller bearing industry ensure the economical production of various types of ball and roller bearing components.**

ATLANTIC has decades of experience in the field of grinding and finishing tools and, as a competent partner, optimises production processes. By consultation and taking into account the various grinding and finishing processes, individually tailored grinding wheels and honing stones are developed.



„INDIVIDUALITY IS OUR STRENGTH.“



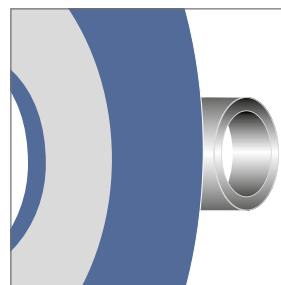
## BALL BEARING

High efficiency and precision are required in the manufacture of ball bearings. Even with the production of large quantities at maximum productivity, consistently high quality must be guaranteed. This results in ball bearings that work reliably and safely even in continuous operation.

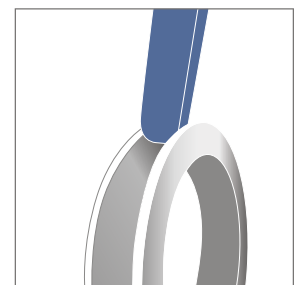
### Customer benefits

#### Product portfolio for ball bearing production

- Internal cylindrical grinding wheels
- Double sided face grinding wheels
- Grinding and regulating wheels for centreless external cylindrical grinding
- Raceway grinding wheels up to max. 125 m/s peripheral grinding wheel speed
- Honing stones for raceway finishing



**CYLINDRICAL GRINDING**  
RACEWAY GRINDING  
INNER RING



**HONING & SUPERFINISHING**  
SHORT STROKE HONING





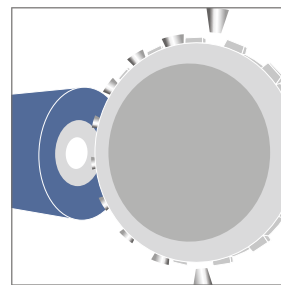
### BALL BEARING

Due to their design and machining, roller bearings guarantee maximum axial and radial stability even under the highest loads. ATLANTIC is distinguished worldwide by its high level of expertise in the development, manufacture and application of grinding tools for the manufacture of components for roller bearings.

### Customer benefits

#### Expertise in the machining of roller bearings

- Centreless external cylindrical grinding (thrufeed and plunge)
- Internal cylindrical grinding
- Double sided face grinding
- Raceway grinding inner and outer ring
- Finishing
- Taper roller face grinding
- Sidewall grinding



**SURFACE GRINDING**  
TAPER ROLLER END  
GRINDING



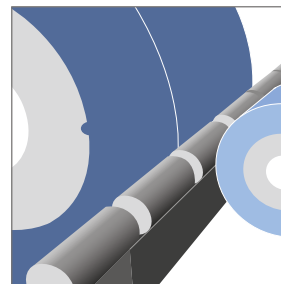
### NEEDLE ROLLER BEARING

When machining needle rollers, individually specified and very hard vitrified bonded silicon carbide grinding wheels are used.

### Customer benefits

#### Expertise in the machining of needle roller bearings

- Centreless external cylindrical grinding in thrufeed
- Extremely fine surface finish
- Low roundness deviation
- Reproducibility
- Guarantee of continuously stable processes



**CYLINDRICAL GRINDING**  
CENTRELESS THRUFEED  
GRINDING



### Customer benefits

#### Advantages for ball grinding production

- Absolute precision up to G5 and better
- Low diameter tolerance and shape deviation
- Exact surface finish
- Perfect roundness

### BALL GRINDING

Grinding and lapping wheels for balls made of steel as well as of ceramic in all diameters and batch sizes are custom-made. This results in optimum solutions for high stock removal rates, perfect surface finish and a long service life of the grinding wheel.

PERFECT SURFACE ACCURACY EVEN WITH  
COMPLEX GEOMETRIES







© Steinhoff GmbH & Cie. OHG, 2018

## STEEL INDUSTRY SUCCESSFULLY IN USE WORLDWIDE

**Major customers in the steel and roller industry benefit internationally from our technical expertise and quality grinding tools.**

Due to the wide variety of requirements in the steel and roller industry, grinding wheel manufacturers today are expected to offer a wide range of products. ATLANTIC's broad product portfolio is known in the market as one of its strengths. Whether high stock removal rates, short machining times, long service life or special surface qualities - ATLANTIC is able to offer a suitable solution for every hot, cold or aluminium rolling mill thanks to its decades of expertise.



„OUR CLAIM IS TO **ALWAYS BE THE BEST.**“

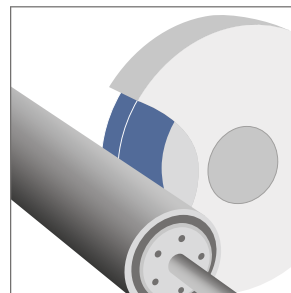


### HOT STRIP MILLS

Difficult-to-machine rolls made of wear-resistant materials are ground to a functional profile. Individually manufactured grinding wheels fulfil essential criteria such as high stock removal, short grinding times and high G-ratios.

### Customer benefits

- Formulations with high-performance abrasive grain matched to the roll material
- Long wheel life
- High stock removal rates
- Short grinding cycles
- Long roll life
- Adaptation of the specifications to the different requirements with regard to roll material, roll type and shape (cylinder, convex, concave or CVC)



**CYLINDRICAL GRINDING**  
ROLL GRINDING



## COLD STRIP MILLS

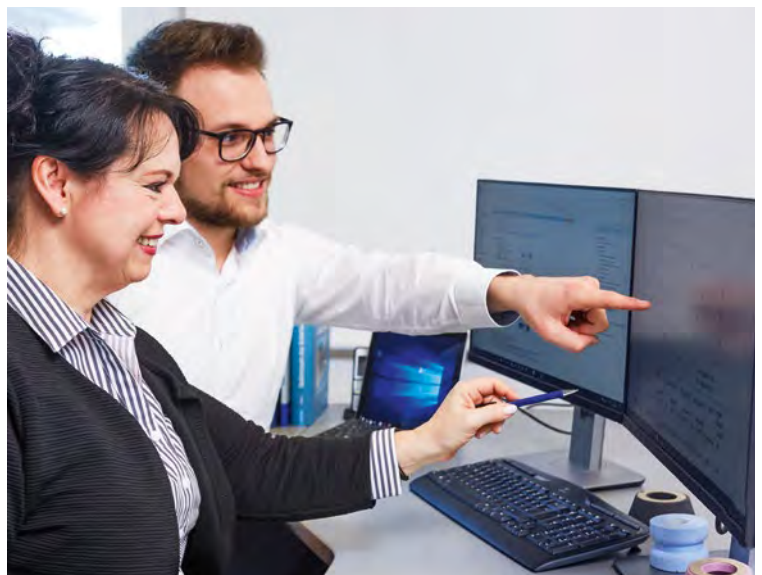
Special grinding tools from ATLANTIC for grinding work rolls in cold strip mills have a special surface texture. This prevents scratches, feed marks and chatter marks on the roll surface. As a consequence, the ground rolls have the best possible surface finish of up to  $0.03 \mu\text{m Ra}$ .

## Customer benefits

- Different grain types and bondings for different roll types
- Universal application
- High technical standard
- Wide range of recipes
- Short grinding cycles
- Perfect surfaces (no scratches or feed marks)
- Repeatable surface finishes
- Consistent wheel performance
- Simple operation of the grinding wheel without major program alterations

## Achieving more together

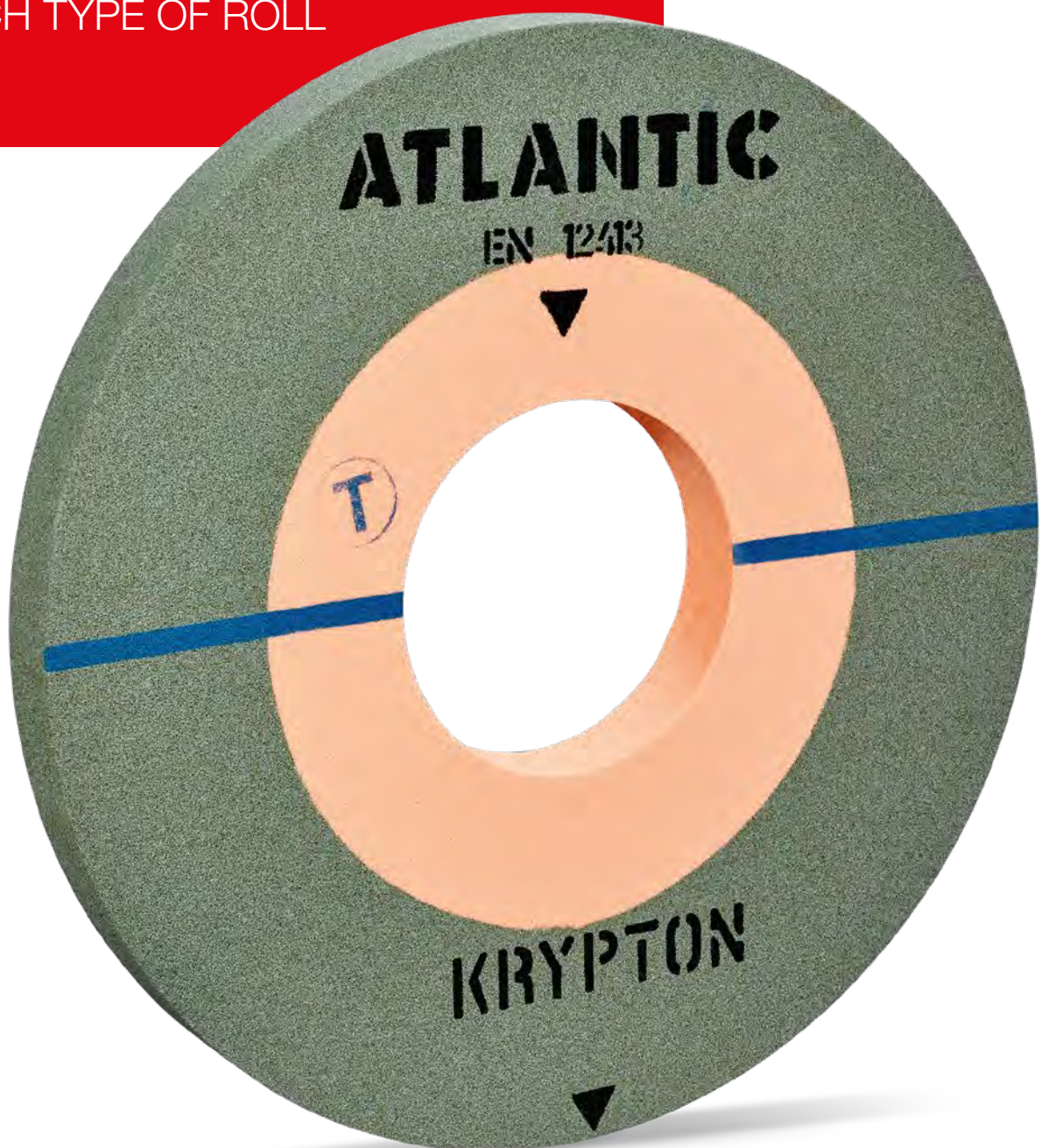
A constant monitoring of our own production processes as well as the continuous search for better and more efficient raw materials distinguish ATLANTIC worldwide. Close co-operation with the customer and the research and development department is the best basis for being able to manufacture the optimum product.







SPECIAL GRINDING WHEELS  
FOR EACH TYPE OF ROLL





## **AUTOMOTIVE INDUSTRY**

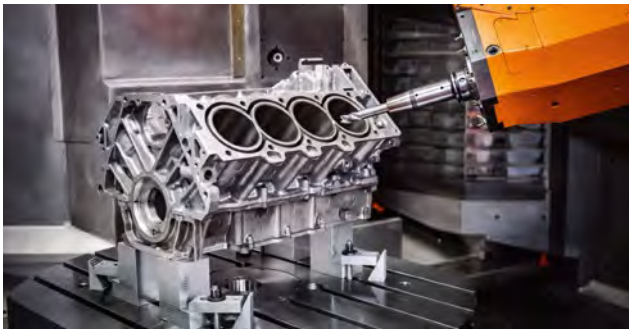
### **MAXIMUM QUALITY WITHOUT COMPROMISES**

**Precision parts machined with ATLANTIC grinding tools are used in vehicles of all classes.**

The automotive and supplier industry is characterised by short development cycles and just-in-time delivery. It demands innovative materials with the highest quality standards and maximum functional reliability. A car consists of a large number of mechanical components that only function precisely together if all the surfaces that have been machined by grinding, honing or finishing have been perfectly matched. For several decades, ATLANTIC has been a partner to well-known original equipment manufacturers and suppliers to the automotive industry worldwide.



„**HIGHEST PRECISION** IS OUR BENCHMARK.“

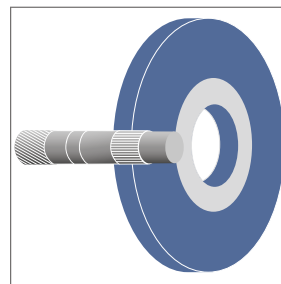


## ENGINES

ATLANTIC has decades of experience from numerous projects for the automotive industry. Particular success has been achieved, for example, in the honing of cylinder liners or the grinding of bucket tappets.

### Customer benefits

- Double sided face grinding (connecting rods, piston rings)
- Finishing of bucket tappets
- Honing of cylinder bores
- Crankshaft grinding
- Innovative machining concepts for mass production and flexible production
- High surface quality
- Individual specifications
- Large product range for processing a wide variety of engine components



**CYLINDRICAL GRINDING**  
EXTERNAL CYLINDRICAL





---

## CHASSIS

There are no compromises when it comes to chassis and chassis components: Components and component groups must meet high standards of driving comfort, noise minimisation and long-term functional reliability. One of ATLANTIC's particular strengths is the grinding of shock absorber rods from pre-ground to finishing after chrome plating.

### Customer benefits

- Grinding tools for the production of shock absorber rods
- Grinding wheels for intermediate grinding before chrome plating
- Regulating wheels
- Finishing stones for finishing after chrome plating
- Optimal and cost-efficient use
- Individual, customer-specific and processing-related problem recording
- Defined solution concepts
- Fast implementation of process solutions



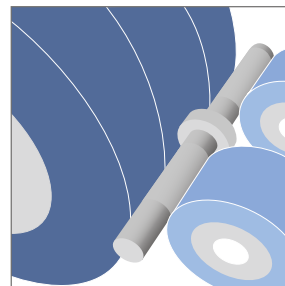
### Customer benefits

- External cylindrical grinding of injector needles and bodies
- Centreless plunge grinding, e.g. injection needles
- Honing cups for finishing
- Exact compliance with dimensional, positional and surface finish values
- Extremely high reproducibility

---

## FUEL INJECTION SYSTEMS

The development of injection systems has drastically reduced fuel consumption in recent decades. The use of modern grinding tools has contributed a great deal to this success.



**CYLINDRICAL GRINDING**  
CENTRELESS PLUNGE  
GRINDING



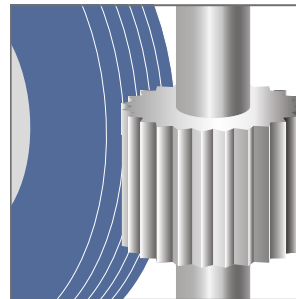
### Customer benefits

- Gear grinding
- Gear honing
- Discontinuous profile grinding
- Grinding of bevel gears
- Shorter grinding times without thermal damage
- Greater stock removal
- Higher stock removal rates
- Shorter grinding cycles

## GEARBOXES AND GEARS

Transmission technology is advancing rapidly. In many industries worldwide, transmissions are responsible for dynamics, motion and more environmentally friendly emission values. Designs vary significantly, but the demand for precision is always high. Important parameters are the increase in torque capacities with minimal friction as well as long service life.

ATLANTIC combines individual consulting, development and manufacturing with the highest product quality and ensures worldwide that gearboxes run smoothly and have a long service life.



**INDIVIDUAL GRINDING**  
GEAR GRINDING  
(CONTINUOUS)

HIGHEST QUALITY  
WITH SAFETY.





## OTHER INDUSTRIES

### DIVERSITY WITHOUT BORDERS

**Grinding tools are used in almost all areas of industry.**

A wide variety of industries benefit from ATLANTIC grinding tools. Whether in the tool industry, medical technology or the aerospace industry – ATLANTIC supplies individual products that meet the highest requirements.





„WE FACE **EVERY CHALLENGE.**“

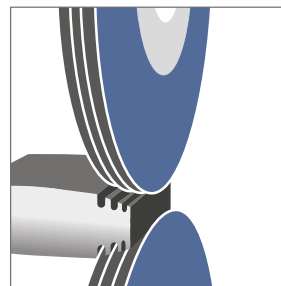


#### Customer benefits

- High infeed rates
- High feed rates
- High productivity
- Small dressing increments
- Long wheel life
- No thermal damage

#### TURBINE CONSTRUCTION

Both in turbine construction for the aviation industry and for power generators, extremely high-alloy, heat-sensitive materials have to be ground. The extremely highly porous, vitrified bonded grinding wheels from ATLANTIC meet the material requirements. They grind extremely cool and maintain dimension and profile within very small tolerance bands.



**SURFACE GRINDING,**  
PROFILE SURFACE  
GRINDING CREEP-FEED



## MACHINING OF MEDICAL IMPLANTS

ATLANTIC has decades of experience in working with vitrified-bonded, fine-grit silicon carbide. These honing cups are used for machining medical implants made of high-alloy steels or ceramics and guarantee maximum functionality.

## GRINDING OF CANNULAS

A specially developed generation of fine-grit silicon carbide grinding wheels enables the sharp, burr-free processing of needles and cannulae, which later guarantees correct medical application on the patient.

### Customer benefits

- Burr-free needles
- Extremely long tool life
- Tailor-made solutions
- Perfect surface finish and geometry



### Customer benefits

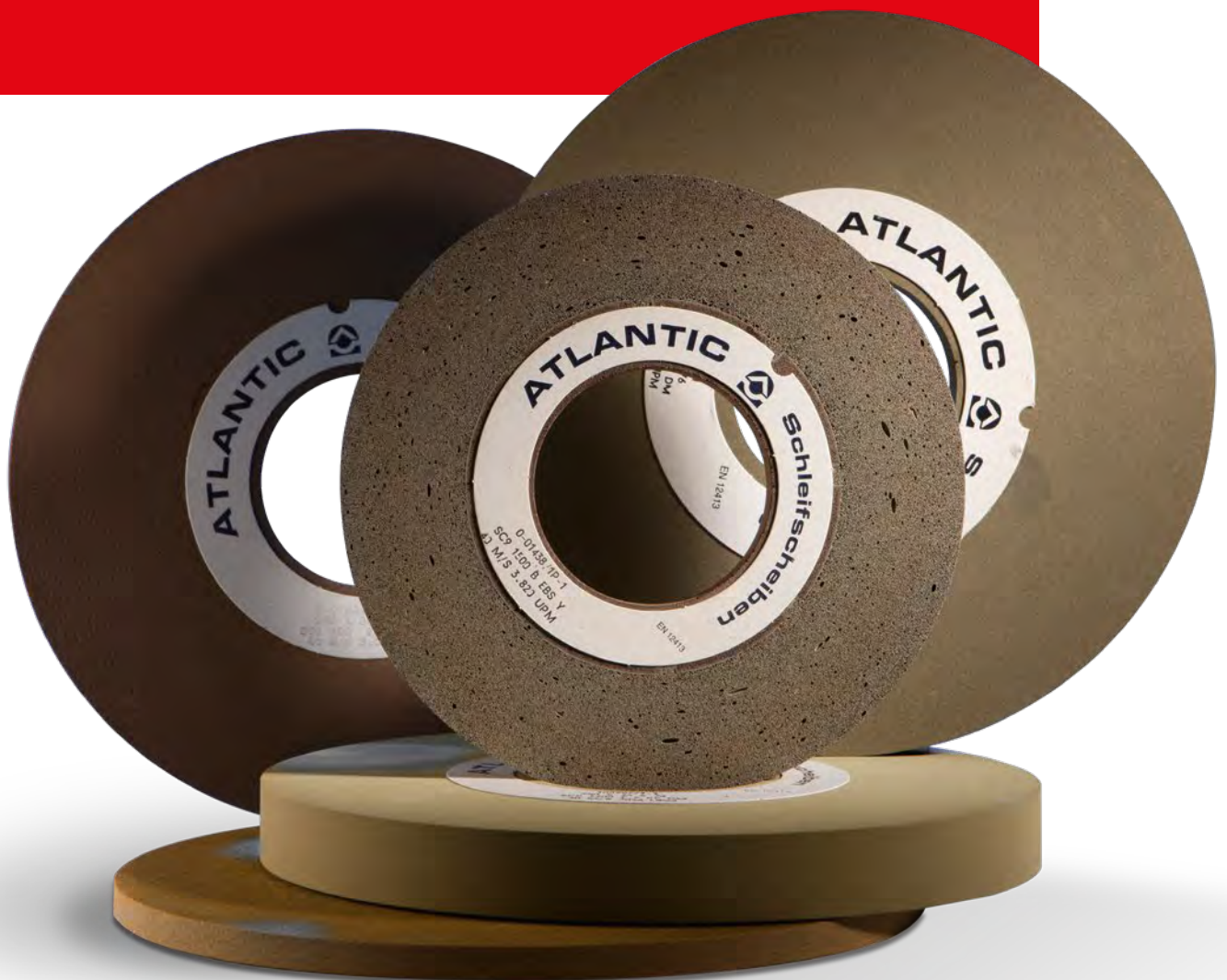
- Grinding wheels for grinding the face and/or the edge of circular knives
- Grinding wheels for sharpening all possible knife shapes in the food industry
- Grinding wheels for the manufacture of cutting tools for use in agriculture
- Grinding wheels for sharpening saw blades
- Use of particularly cool grinding, self-sharpening bonding systems
- Use of extremely fine-grit silicon carbide grinding wheels for particularly sharp and burr-free cutting edge geometries

## TOOL GRINDING

The economic efficiency of modern cutting tools results from their particularly sharp cutting capabilities in combination with an extremely long service life. The sharpness is determined by the cutting-edge geometry and the service life by the use of particularly wear-resistant, high-alloy tool steels. Both aspects can be optimally influenced by the use of ATLANTIC's particularly cool-grinding and, depending on requirements, extremely fine-grit grinding wheels.



PRECISION DOWN TO THE SMALLEST DETAIL







**ATLANTIC**  
EN 12513

ATO INGRESSO

MAX:40M/S 1504UPM

704849 / 01 / 001  
EK8 80 -K 6 VF

37 / 07E / 001  
B4A46IV 504  
50M/S 1273UPM

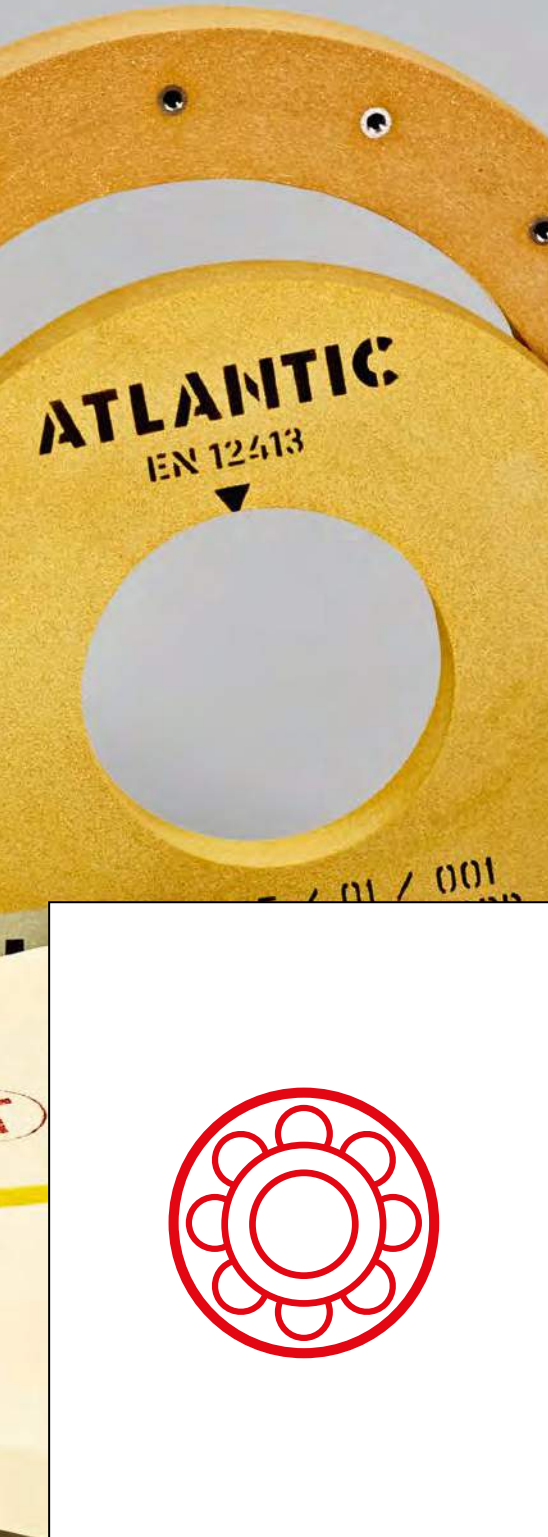
**ATLANTIC**  
EN 12513

**ATLANTIC**  
EN 12513

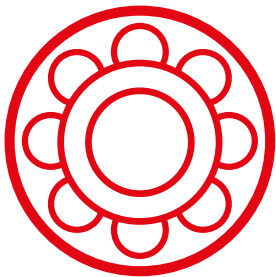
MAX:40M/S  
1504UPM

**AT**





ATLANTIC's manufacturing programme comprises of more than 40,000 products – from coarse to extremely fine grain sizes, and from very soft to extremely hard. Certified production at the Bonn site in Germany enables research, development and customer service at the highest level.



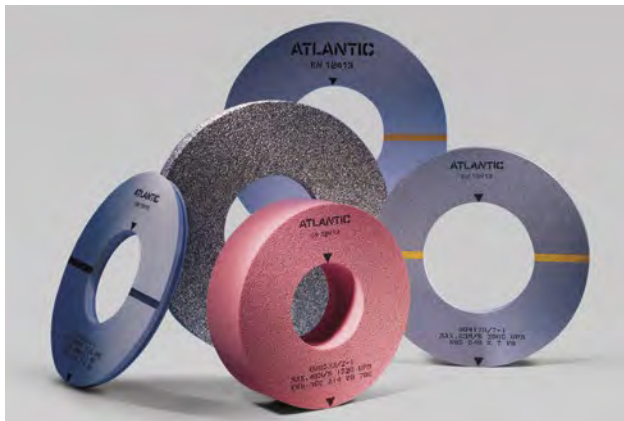
PRODUCTS  
**MADE IN  
GERMANY**

---

## VARIETY FOR OPTIMISING THE GRINDING PROCESS

### CUSTOMER-SPECIFIC GRINDING TOOLS

The comprehensive product portfolio of ATLANTIC adapts flexibly and modularly to all customer requirements.



#### Precision grinding wheels

ATLANTIC precision grinding wheels achieve both high cutting performance and the highest surface quality in all areas of application. Each product can be individually adapted to the specific requirements of the workpiece to be machined. The close relationship between product development, manufacturing process and state-of-the-art production monitoring guarantees safety, reliability and a consistently high quality standard.



#### Honing and superfinishing stones

In the design process of modern components, ever increasing demands must be taken into account with regard to smooth running, durability and greatly reduced frictional resistance of the functional surfaces in the hardened state. This results in an increasing importance of various microfinishing processes. Both finishing and honing are the preferred production methods for implementing these parameters. Based on several decades of experience, ATLANTIC honing and finishing stones form the exact basis for meeting these increased demands.





**The following grain types and bondings are available for the complete product portfolio:**

- with corundum and/or silicon carbide
- with diamond or CBN
- in vitrified or synthetic resin bonding
- in hardness from A (extremely soft) to Z (extremely hard)
- in microstructures from 5 (very dense) to 13 (highly porous)
- from grain size 16 (1300 µm) to 2000 (1 µm)



### Grinding segments

ATLANTIC produces individual grinding segments for the efficient processing of extremely large flat surfaces. Such segments give a high performance with a cool grinding action and high stock removal rates. For more delicate work such as deburring, smoothing, and sharpening, abrasive hand files and stones round off the comprehensive ATLANTIC product range.



### Regulating wheels

The grinding performance not only depends on the grinding wheel, but also on the quality of the regulating wheel. ATLANTIC offers a recently developed control wheel with outstanding properties as an optimum alternative to the conventional rubber or synthetic resin bonded control wheels. ATLANTIC offers a process-safe prerequisite for efficient production to meet the constantly growing demands on workpiece quality, in particular roundness.

---

## PRECISION GRINDING WHEELS

UNIQUE SELECTION FOR ALL INDUSTRIAL APPLICATIONS

### Product portfolio and areas of use:

- External cylindrical grinding (between centres and centreless)
- Internal cylindrical grinding
- Surface and profile grinding
- Thread grinding
- Grinding of gear tooth flanks
- Grinding of balls
- Outer diameter up to max. 1110 mm
- Wheel widths up to 660 mm (in sets)
- In most shapes and profiles acc. to ISO 525





## HONING AND SUPERFINISHING STONES

### STRONG IN SUPERFINISHING

#### Product portfolio and areas of application:

- Honing of inner and outer diameters
- Honing stones for finishing roller bearings or engine components
- Honing cups for fuel injection components, bucket tappets and gears
- Honing cups for microfinishing of medical implants
- With sulphur or wax impregnation
- Grain sizes up to FEPA 2000 (1  $\mu\text{m}$ )





---

## SEGMENTS AND ABRASIVE FILES

### EFFICIENT SURFACE GRINDING

#### Product portfolio and areas of application:

- Segments in almost all common dimensions and shapes
- Abrasive hand files and stones
- For deburring, smoothing and sharpening
- Machining of semi-finished products, machine knives and workpieces with flat surfaces





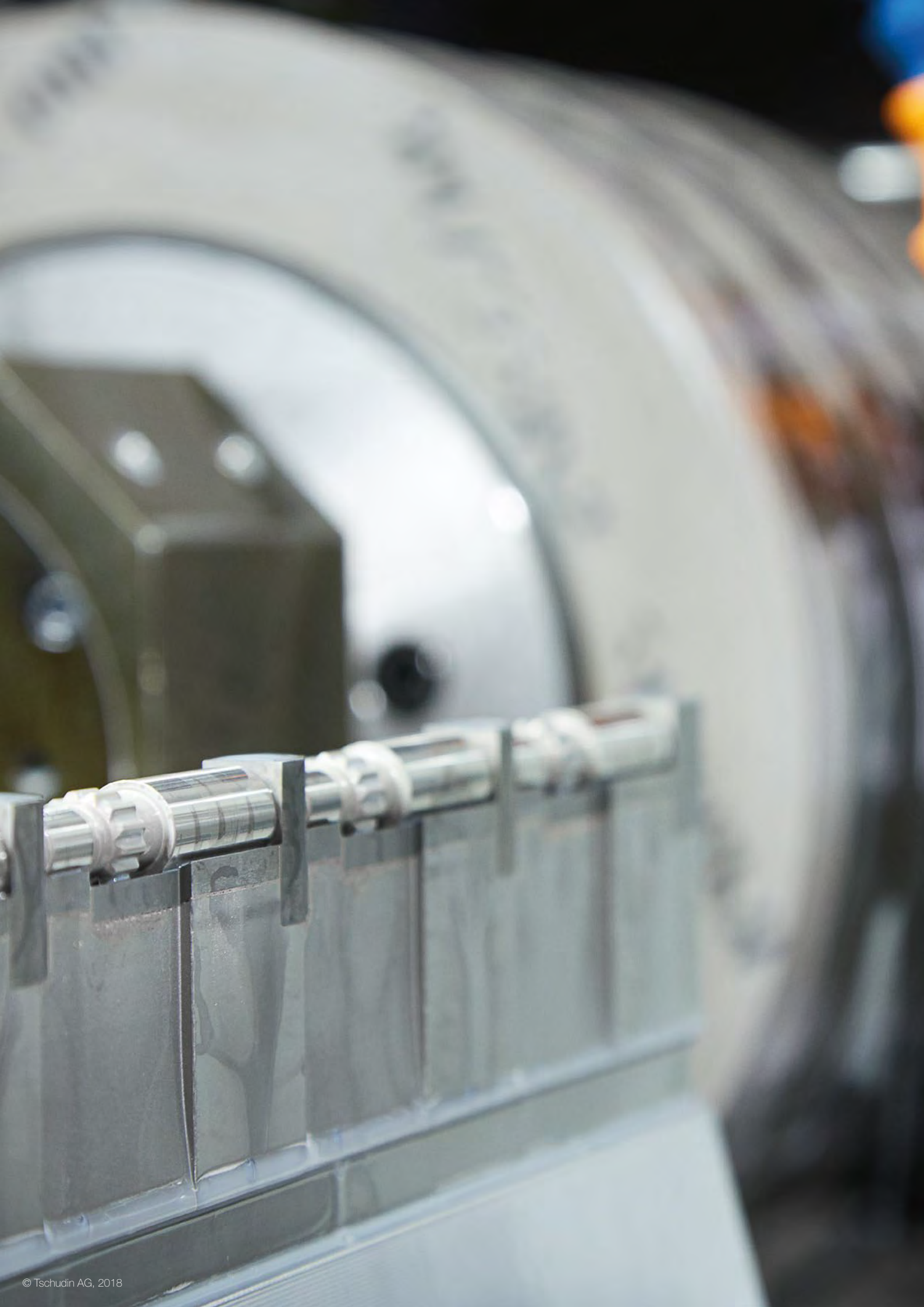
## REGULATING WHEELS

### OPTIMAL PARTNER TO THE GRINDING WHEEL

#### Product portfolio and areas of application:

- Outer diameter up to max. 508 mm
- Wheel widths up to 305 mm in one-piece or 660 mm in multi-piece design
- For centreless external cylindrical grinding (plunge or thrufeed)
- Absolutely homogeneous grain matrix due to ATLANTIC technology

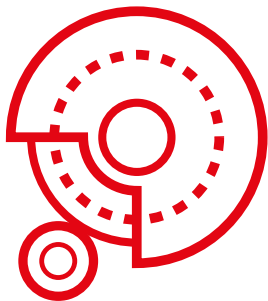








As an innovative solution provider for grinding, finishing and honing applications, ATLANTIC has the answers using its expertise in the production of grinding tools: the right product for each individual application.



APPLICATIONS  
**COMPETENCE  
IN DETAIL**

---

## INNOVATIVE SOLUTIONS

### FOR ALL AREAS OF APPLICATION

ATLANTIC's technical department is characterised by experience, application expertise and product know-how. The best possible results can only be achieved with products that meet the process-specific requirements down to the smallest detail.



---

#### Cylindrical grinding

ATLANTIC meets the ever-increasing demands in machine and vehicle production for functionality and economy. The personal contact individuals, application technicians and countless product variations and compositions are available to the customer for this purpose.



---

#### Surface grinding

In industrial applications, absolute flatness is essential when face grinding workpieces such as cylinder heads. ATLANTIC is an experienced partner when it comes to selecting the right grinding wheel specification.



### Honing and Superfinishing

ATLANTIC honing and finishing tools are used where high-precision geometry and a perfect surface are required. In close co-operation with the customer, ATLANTIC develops the optimum tool to achieve dimensional and surface finish requirements for the specific workpiece material.



### Individual grinding processes

Improving performance, increasing tool life, optimising processes - ATLANTIC's technical department has decades of experience and a headline of extensive manufacturing know-how, which enables it to offer the right grinding tool for almost all processes and requirements.

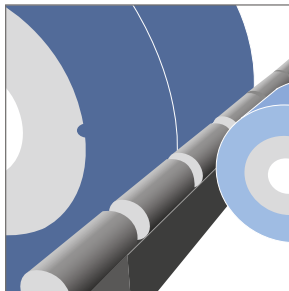


# CYLINDRICAL GRINDING

## PRECISION MACHINING OF SPECIAL GEOMETRIES

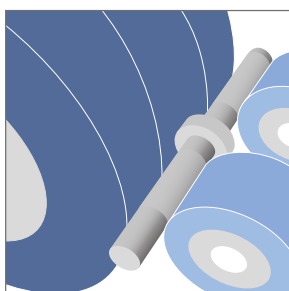
Complex workpieces, difficult-to-machine materials with high surface finish and geometric requirements, precision and spiral free - ATLANTIC proposals for cylindrical grinding applications enables the precise machining of special geometries whilst providing particularly high productivity.

### Centreless external cylindrical grinding



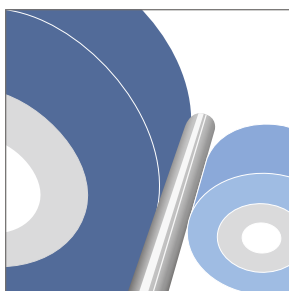
#### Thrufeed

e.g. bolts, needles, rollers, shock absorber rods, etc.



#### Plunge grinding

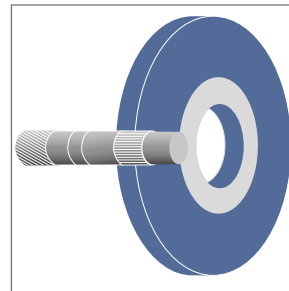
e.g. axles, shafts, pistons, tap blanks, fuel injection needles, spool control valves, punches, etc.



#### Bar grinding

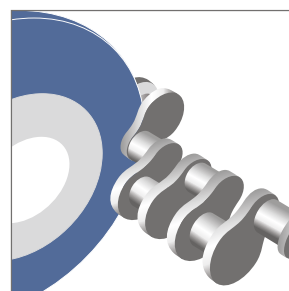
e.g. all possible bright steel products, both after peeling /straightening and after drawing /straightening

### External cylindrical grinding between centres



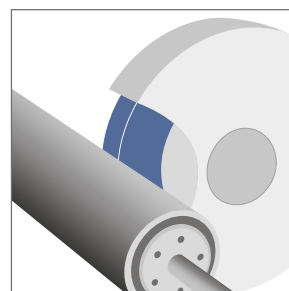
#### Cylindrical traverse grinding

e.g. shafts, axles, pins, dies, circular knives, tubes etc.



#### External cylindrical plunge grinding

e.g. crankshafts or camshafts, piston rings, cylindrical shaped parts etc.



#### Roll grinding

in the cold or hot strip mill of the steel industry, in the aluminium industry and for rolls used in the production of paper and foils.



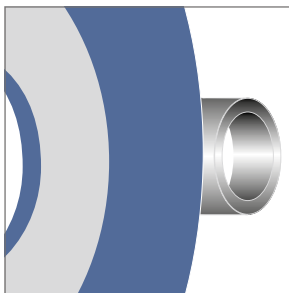
**Scan code now!**  
Here you will find 3D  
animations of our  
grinding processes.



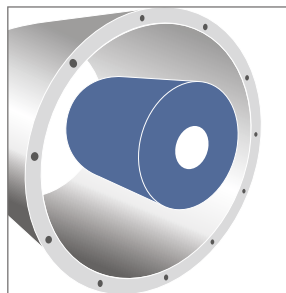
© Willi Göbel Maschinenbau GmbH, 2018

**External cylindrical grinding between centres**

**Internal cylindrical grinding**

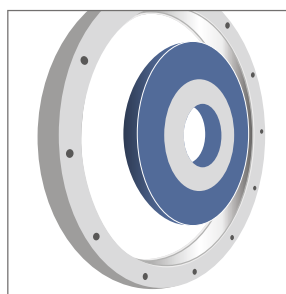


**Raceway grinding  
Inner ring**  
e.g. ball bearing or roller  
bearing

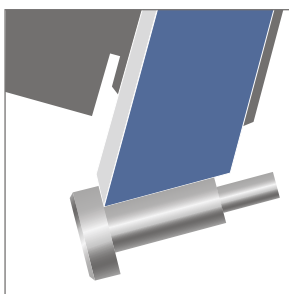


**Cylindrical bores**  
inner diameter

**Angular plunge grinding  
(combination of cylindrical and face grinding)**



**Raceway grinding  
outer ring**  
ball bearing or roller  
bearing



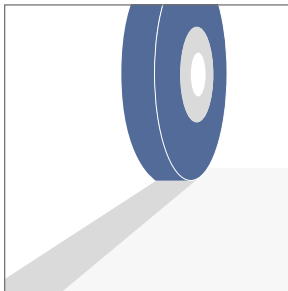
**Angular plunge grinding**  
e.g. gear shafts, axles,  
turbocharger shafts,  
fuel injection nozzles

# SURFACE GRINDING

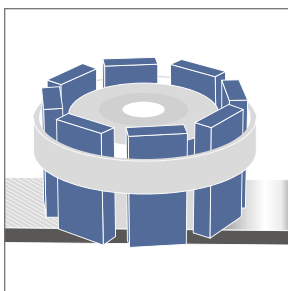
## OPTIMAL GENERATION OF LEVEL, FLAT SURFACES

ATLANTIC offers special grinding tools in specific qualities for various applications covering a wide spectrum of workpieces with flat surfaces.

### Surface grinding

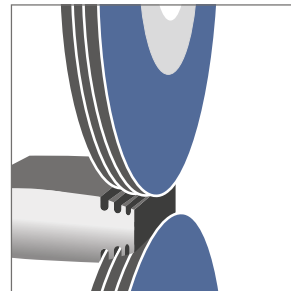


Surface grinding

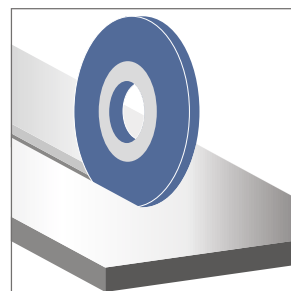


Surface grinding with segments

### Profile deep grinding



Profile surface grinding creep-feed with continuous dressing (CD)



Profile deep groove grinding using plunge infeed



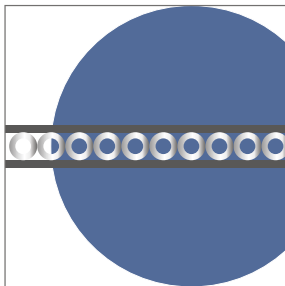


**Scan code now!**  
Here you will find 3D  
animations of our  
grinding processes.

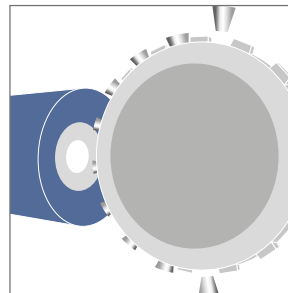


**Double disc surface grinding**

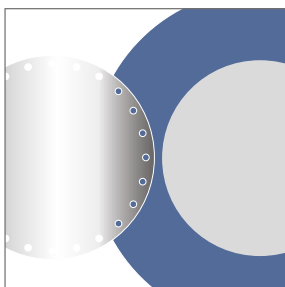
**Surface grinding of taper roller end faces**



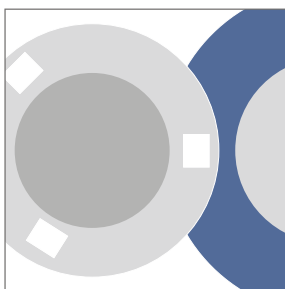
In a thrufeed  
process with linear  
transport



Taper roller end grinding  
on Modler MRK machines



In a thrufeed process  
with rotating transport  
disc



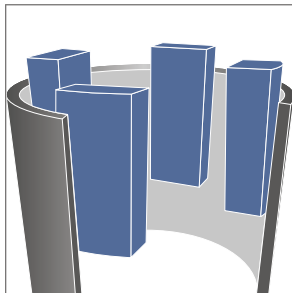
In the plunge process

# HONING AND SUPERFINISHING

## DIMENSIONAL ACCURACY AND SHAPE ACCURACY PERFECTLY OPTIMISED

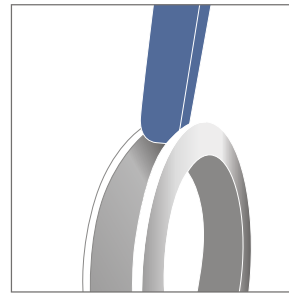
ATLANTIC develops honing stones for the production of the finest and precisely defined surface structures. The shape, dimensions and specifications of these honing stones are precisely adapted to the respective process. Special mixing processes, pressing techniques and impregnation types help to reduce abrasive wear and to achieve a very homogeneous structure which guarantees very consistent results with regard to process parameters such as material removal, surface quality and service life.

### Long stroke honing with honing stones



**Long-stroke honing**  
of inner diameters/bores  
of cylinder liners

### Plunge finishing with honing stones



**Short-stroke honing**

- inner and outer rings of ball bearings
- inner and outer rings of roller bearings
- camshafts or crankshafts

### Superfinishing

Superfinishing (short-stroke honing) allows particularly high surface qualities to be achieved, which guarantee a high contact bearing surface required for highly stressed components.





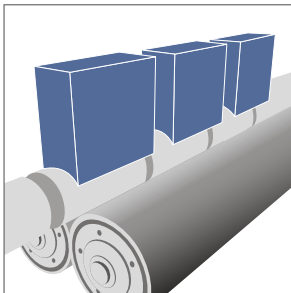
**Scan code now!**  
Here you will find 3D  
animations of our  
grinding processes.



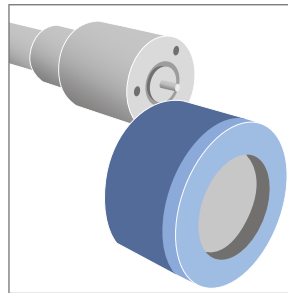
© Thielenhäus Microfinish, 2018 | www.thielenhaus.com

### Thrufeed finishing with honing stones

### Finishing with honing cups



**Thrufeed finishing**  
e.g. of taper rollers,  
cylindrical rollers, piston  
pins etc.



**Superfinishing with  
honing cups**

- Finishing of flat surfaces
- Finest machining of spherical components e.g. balls

### Honing

During the pre-machining of workpieces, geometric errors usually occur which can only be eliminated by honing. Roundness errors are corrected. Honed surfaces have a high contact ratio and are extremely resilient and wear-resistant.





---

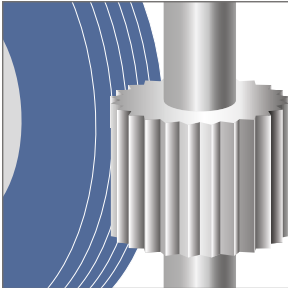
# OTHER APPLICATIONS

## THE RIGHT SOLUTION FOR ALL APPLICATIONS

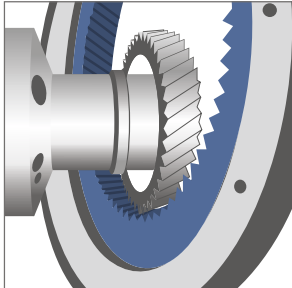
Material quality, service life as well as process and application reliability - the right grinding process, in combination with the right grinding tool, is decisive in many areas for the final use of the end product and the smooth flow of the associated process chain. The well-founded expertise in application technology, combined with the individual production of modern abrasives, makes ATLANTIC a solution provider for all grinding applications.

### Gear grinding

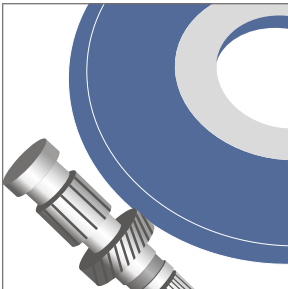
---



**Continuous gear grinding**



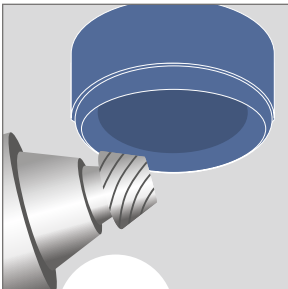
**Power honing**



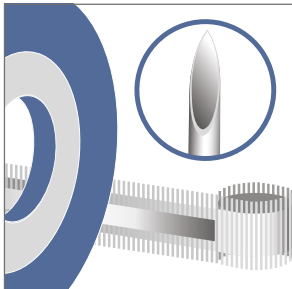
**Discontinuous gear grinding**

### Grinding of injection needles

---



**Grinding of bevel gears**



**Hypodermic needle grinding**

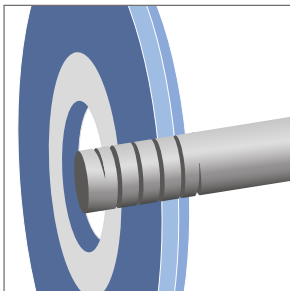


**Scan code now!**  
Here you will find 3D  
animations of our  
grinding processes.



### Thread grinding

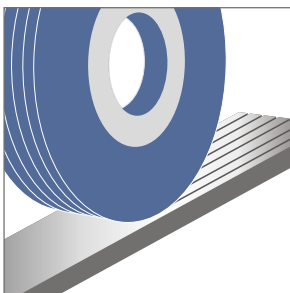
### Tool sharpening



Single rib thread grinding

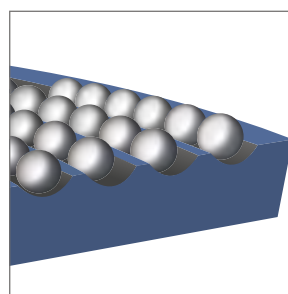


Grinding of saw teeth



Multi-ribbed thread grinding

### Ball grinding



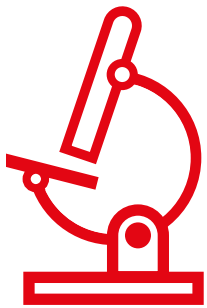
Ball grinding and lapping







Close co-operation with customers and raw material suppliers enables the development of innovative grinding concepts, the market launch of which is often accompanied by patent applications. Thanks to bilateral research projects with leading universities, ATLANTIC is technically always one step ahead.



RESEARCH &  
DEVELOPMENT  
**FOCUS ON  
PROGRESS**

# EQUIPPED FOR THE FUTURE

## EXPERIENCE AND INNOVATION

**Innovation is the key to our present and future success.**

From the very beginning, research and development have been an integral part of ATLANTIC's corporate philosophy. For almost 100 years, the company has been combining experience and science to deliver customised solutions to its customers. Best quality at the cutting edge of technology - this is the guiding principle, also for the research and development sector. The focus here is on the requirements and needs of customers from the steel, automotive and roller bearing industries. Tailor-made products guarantee high-precision and efficient production.



### Focus on product innovation

With new products, sales in some customer segments increased by more than 25 %.



### Investing in the future

ATLANTIC has tripled its R&D efforts over the past five years, and new university talent has significantly strengthened the team.





### Ambitious goals

By 2025, 50 % of sales are to be generated by new products. This is a tall order and nonetheless revolutionary in an industry with traditionally very long product life cycles.



### Krypton – the grinding tool 4.0

With Krypton, ATLANTIC has achieved a milestone in the development of outstanding grinding tools. The new bonding technology can achieve unbelievable improvements. The market launch will begin in mid-2018.

### Open innovation

Close co-operation with universities, suppliers and customers is the driving force behind ATLANTIC's innovative strength. Through active participation in the Forschungsgemeinschaft Schleiftechnik e. V., close relations are maintained with the WZL of the RWTH Aachen, the IWF of the TU Berlin and the Furtwangen University of Applied Sciences. The IWF at the TU Braunschweig and the Hochschule Magdeburg are also among the company's co-operation partners.



Leberstrahlung  
Deutscher Beiratsrat  
für Augenvermögen  
Leber Klasse 2B  
nach EN18225-1:2007





**ATLANTIC GmbH**  
Gartenstr. 7-17  
53229 Bonn  
Germany

Phone: +49 (0) 228 408-0  
Fax: +49 (0) 228 408-290  
info@atlantic-bonn.de



[www.atlantic-grinding-wheels.com](http://www.atlantic-grinding-wheels.com)