

CREATING TECHNOLOGIES FOR A CLEANER PLANET TOGETHER

#creatingtogether



OUR MISSION:
TECHNOLOGIES FOR A CLEANER PLANET



ENERGY
GENERATION



ENERGY
TRANSMISSION



ENERGY
STORAGE



ENERGY
USE

ANNUAL REPORT 
2024/25 
ENGLISH

HIGHLIGHTS & AWARDS

24/25



Plant construction in Mexico completed

A symbolic handover of the keys marks the completion of the new Miba friction materials plant in northern Mexico. Following commissioning, the production site will manufacture friction solutions primarily for the local market.



Anniversaries at Miba sites

Together with employees, families, and companions, Miba Frictec celebrates its 20th anniversary at the site in Roitham. In India, the tenth anniversary of the Miba Engineering Center is also celebrated with a colorful party.



10 years of Miba vacation childcare

The traditional summer holiday program at the Miba Forum not only helps parents to balance family and career but also aims to introduce children to the fascination of science and technology in a fun way.



Energy transition as a growth factor

New international orders for milling machines from Miba Automation Systems for the construction of giant offshore wind towers underscore the fact that technologies for clean energy generation are an important growth driver for Miba.



February 24

March 24

April 24

June 24

July 24

August 24

September 24

October 24

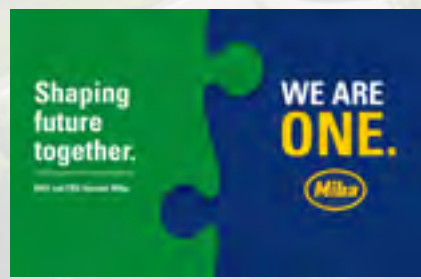
Admos becomes part of the Miba Group

Miba expands its industrial bearings business with the acquisition of Admos. The Berlin-based company produces hydrodynamic bearings for a wide range of applications and is also a specialist in laser cladding.



United under a strong brand

To benefit from a strong, unified brand, companies of the Miba Power Electronics Group are changing their names. EDMS becomes Miba Electronics Slovenia; EBG and DAU now operate as Miba Resistors Austria and Miba Cooling Austria.



Energy storage technology from Austria

With VOLTHOME® and VOLTINDUSTRY®, Miba Battery Systems presents innovative energy storage solutions for private households and industry. The modular battery systems set new standards in terms of energy density, flexibility, and safety.



Groundbreaking ceremony for Base 27

Miba is investing EUR 12 million in a new center for skilled worker and apprentice training in Laakirchen. "Base 27" will house modern workshops and laboratories, a large assembly hall, and flexible learning spaces across 2,400 m².



Miba Night of Innovation

At the "Miba Night of Innovation," Miba gives more than 500 guests an insight into its research and development activities and the bearing production at the Laakirchen site. The apprentice training facilities also open their doors.



BEST RECRUITERS 24/25

In Bronze
Miba AG



LEADING EMPLOYERS 2024

Top 1 % of employers in Austria
Miba AG



SAP QUALITY AWARD

From SAP
Miba AG



BGF SEAL OF QUALITY

For Workplace Health Promotion
Miba AG



BEST LOCALIZATION SUPPORT AWARD

From SCHAEFFLER
Miba Drivotec India



JOHN DEERE CUSTOMER AWARD

For Quality & Delivery Performance, from John Deere
Miba Drivotec India



BEST SUPPLIER AWARD

From AISIN
Miba Sinter Brasil



QUALITY PERFORMANCE CERTIFICATE

From Nissan
Miba Sinter Brasil



BEST COOPERATION AWARD

From BorgWarner
Miba Precision Components (China) – Sinter Branch



„HIGH AND NEW TECHNOLOGY ENTERPRISE“ CERTIFICATE

Jiangsu Provincial Depts. of:
Science and Technology, Finance, Tax
Miba Precision Components (China)



„JIANGSU ENGINEERING RESEARCH CENTER“ CERTIFICATE

Jiangsu Provincial Depts. of:
Science and Technology, Finance
Miba Precision Components (China)



GOLD SUPPLIER & OUTSTANDING QUALITY AWARD

From JDEC
Miba Precision Components (China) – Bearing Branch



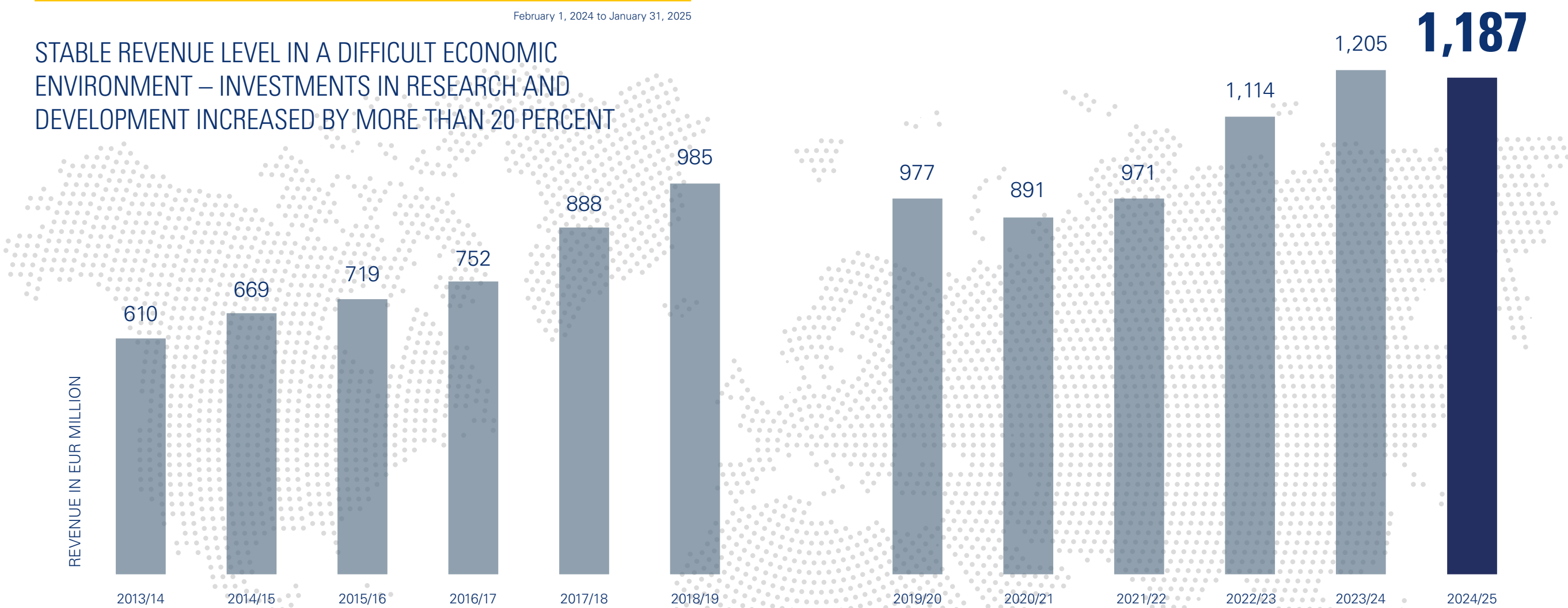
GOLD SUPPLIER AWARD

From Weichai Power
Miba Precision Components (China) – Bearing Branch

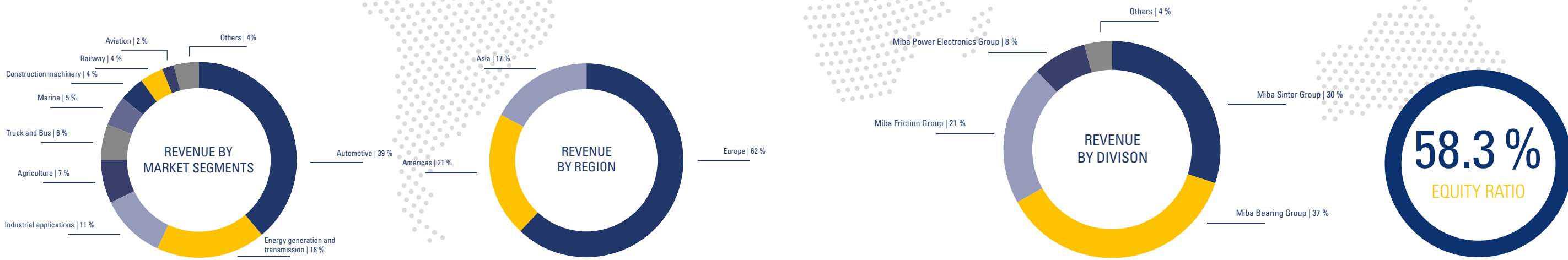
KEY FIGURES 2024/25

February 1, 2024 to January 31, 2025

STABLE REVENUE LEVEL IN A DIFFICULT ECONOMIC ENVIRONMENT – INVESTMENTS IN RESEARCH AND DEVELOPMENT INCREASED BY MORE THAN 20 PERCENT



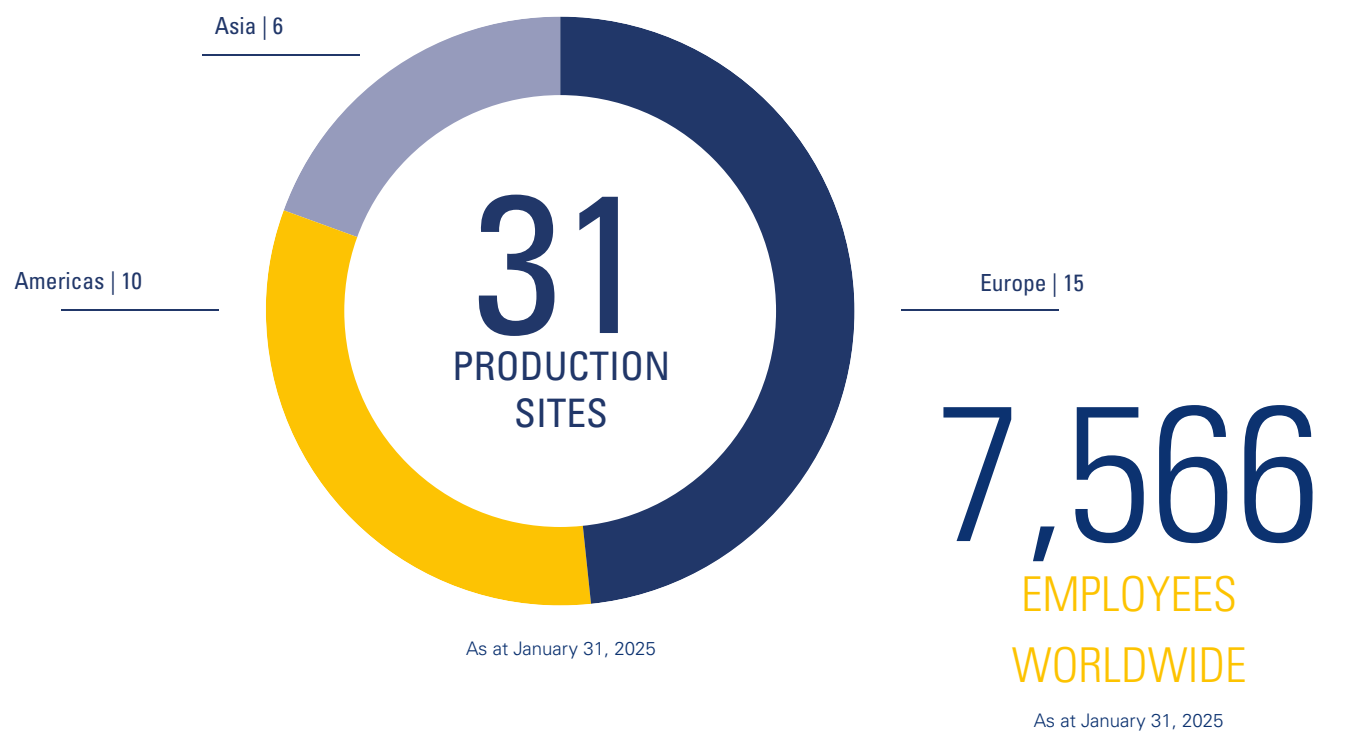
ANNUAL REVENUE 2024/25 IN DETAIL



INNOVATIVE SOLUTION PROVIDER FOR OUR CUSTOMERS



PRESENT ON ALL THE IMPORTANT CUSTOMER MARKETS WORLDWIDE



EUR 130 MILLION INVESTED IN THE FUTURE



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FOREWORD BY F. PETER MITTERBAUER,
CEO, MIBA AG



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NOTES

To optimize visual presentation, some images in this report were generated or enhanced using artificial intelligence. Such images are marked with the content credentials symbol.



CREATING TOGETHER

"AT MIBA, TEAM SPIRIT MEETS INNOVATIVE SPIRIT. CREATING TOGETHER DESCRIBES THIS ATTITUDE. IT ALSO DESCRIBES THE CLOSE PARTNERSHIP WITH OUR CUSTOMERS. WITH MIBA TECHNOLOGIES, WE WANT TO REDUCE THE CO₂ FOOTPRINT OF THEIR PRODUCTS."

F. Peter Mitterbauer



ladies and gentlemen, dear employees,

CREATING TOGETHER – the motto of this year's annual report describes an attitude that we at Miba particularly stand for. Here, team spirit meets innovative spirit. **CREATING** stands for our innovative spirit. It requires people who want to make a difference with their daily commitment – for a better future, for more sustainability, for our responsibility towards employees, society, and the environment. **TOGETHER** stands for our team spirit. It is the driving force that inspires and motivates us. We believe in cooperation. We want to learn from each other and exchange know-how and experience. Every idea and every talent counts in driving Miba forward together. We are **#creatingtogether**. Our high-performance culture and our strong values are the basis for this.

CREATING TOGETHER also describes the close partnership with our customers. We want to use Miba technologies to reduce the carbon footprint of their products. In close cooperation with our customers, we develop and produce solutions for the efficient and clean generation, transmission, storage, and use of energy. Together we create "Technologies for a cleaner planet."

INNOVATION WITH A CLEAR CUSTOMER FOCUS

We focus on innovation, product, and technology leadership. We are proud of our high R&D ratio of 4.4% and our almost 400 patents. In 2024, we were once again among the top 5 companies with the most patent applications in Austria. We also increased our R&D expenditure by more than 20 percent to 52 million euros in the past fiscal year. Innovation is never an end in itself. It is clearly focused on our customers and supports them in shaping future markets and establishing unique selling propositions for their products.

58.3 PERCENT EQUITY RATIO – BASIS FOR FUTURE INVESTMENTS

In the past fiscal year, we once again invested heavily in the future with more than 130 million euros. As an economically successful and financially independent company with an equity ratio of 58.3%, we have the financial leeway for this. We are creating additional production capacity for our customers with major investments. For example, the construction of the new plant in Mexico was completed last year. In Styria in Southern Austria, we will open the extensive expansion of Miba Resistors Austria this year, and in China, we are building our fourth production plant. Work on "Base 27" is also progressing rapidly. With this new center for the training of skilled workers and apprentices, we are underlining our clear commitment to the training and further education of our employees.

"POSITIVE LEADERSHIP" CHARACTERIZES OUR LEADERSHIP CULTURE

With "Positive Leadership", we offer them a leadership culture that aims to promote strengths and is characterized by open communication and appreciative feedback. We stand for flat hierarchies, openness to new ideas, and a wide range of options for balancing family and career.

With all of this, we want to **CREATE TOGETHER** – with our customers, employees, partners, and friends of Miba. Thank you for your interest in our company and for your trust in us.

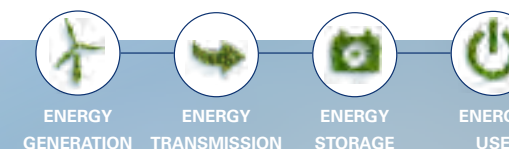
Yours,

Peter Mitterbauer

F. Peter Mitterbauer
CEO, Miba AG

CREATING CUSTOMER SOLUTIONS THROUGH INNOVATION TOGETHER

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OUR MISSION:

TECHNOLOGIES FOR A CLEANER PLANET

OUR VISION:

NO POWER WITHOUT MIBA TECHNOLOGY

Miba technologies help our customers reduce the carbon footprint of their products. In our customers' applications, they contribute to making the generation, transmission, storage, and use of energy even more efficient and thus more sustainable and environmentally friendly.

Through innovative solutions, we strive for product and technology leadership in technologically demanding niches along the entire energy value chain.

The illustration shows the areas in which Miba technologies are already making this contribution today and which product areas we want to increasingly develop in the future.



ENERGY GENERATION

Wind power
Solar energy
Hydropower
Gas and diesel gensets, turbines
Fuel cells



ENERGY TRANSMISSION

Efficient power transmission
(e.g. high-voltage direct current (HVDC) transmission / medium voltage direct current (MVDC) transmission)
Smart grids
Control and stability of power grids
Compressors and pumps
Components for the charging infrastructure of electric vehicles



ENERGY STORAGE

Battery systems and modules
Battery components
(e.g. battery thermal management)
Safety components for batteries and fuelcells
Coating solutions for batteries



ENERGY USE

Highly efficient drive technology:

- Conventional drives
- Hybrid drives
- Fully electric drives

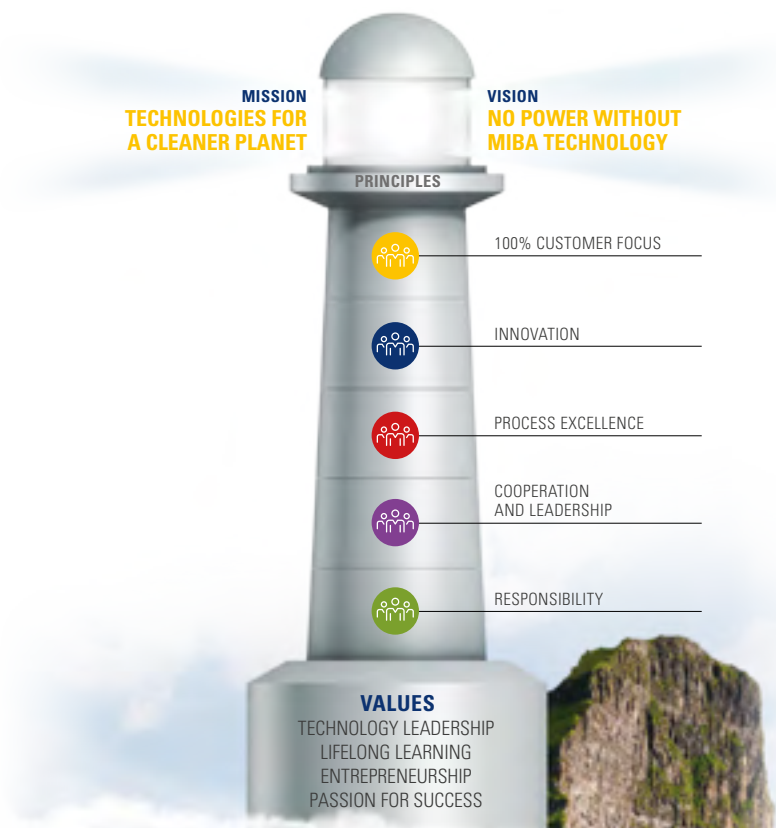
Industrial applications

MIBA LIGHTHOUSE

CUSTOMER FOCUS, INNOVATION, AND PRODUCT QUALITY ARE OUR TOP PRIORITIES

The Miba Lighthouse is our system of values and principles that guides us in our daily work and decisions. Our customers and our cooperation with them play a particularly important role in this: 100 percent customer focus,

innovation, and the highest quality for our products and processes are among our most important principles of action. And our pursuit of technology leadership has always been a core value of Miba.



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OUR CUSTOMERS SHOULD ALWAYS "HAVE A PLACE AT THE TABLE"

How can we better incorporate our customers and their needs into all our considerations? How can we better understand what they really need and what their real challenges are? And how can we best support and create real added value for them? To answer all these questions even more in the interests of our customers, we have begun to reserve a symbolic "place at the table" for them, for example with a stuffed toy.



"WE WANT TO CREATE GENUINE USP_s FOR OUR CUSTOMERS' PRODUCTS."

MIBA BOARD MEMBERS CHRISTOPH EDERER, MICHAEL HUMMELBRUNNER AND MARTIN LIEBL ON THE IMPORTANCE OF INNOVATION, TECHNOLOGY AND PRODUCT LEADERSHIP, QUALITY AWARENESS, AND FINANCIAL STRENGTH FOR OUR CUSTOMERS



CHRISTOPH EDERER, BOARD MEMBER MIBA AG AND GENERAL MANAGER MIBA BEARING GROUP

Innovative strength, a pioneering spirit, 100 percent customer focus, and a clear view of the future – all of this characterizes our teams and the corporate culture they live by. We want to think about everything in terms of customer benefit. If we succeed in this, we can develop and produce our customer's products of tomorrow, always in close partnership with them and as a solution provider. It is therefore important to know the markets and needs of our customers in detail and to be in close contact with them.

MICHAEL HUMMELBRUNNER, CFO MIBA AG
With more than 130 million euros invested in the future in the past fiscal year alone, we at Miba are doing one thing above all: we are creating innovations, expertise, and production capacities for our customers. In this way, we want to grow together with them and shape their products and markets of tomorrow. Thanks to our clear focus on financial stability and independence, we have the financial leeway to achieve this. In the past financial year, our equity ratio once again grew strongly from 53.8% to 58.3%.



MARTIN LIEBL, BOARD MEMBER MIBA AG AND GENERAL MANAGER MIBA FRICTION GROUP

With innovations for leading technologies, we develop components that create truly unique selling propositions for our customers' products. Our exceptional Miba corporate culture drives genuine and sustainable product leadership. We live and promote a working environment with freedom for creativity, flat hierarchies, and open communication characterized by constructive feedback. This sparks the Miba spirit of innovation and successfully brings ideas that earn money into series production. The proven Miba quality and the personal service of the Miba team at all our sites worldwide inspire our customers every day.



INNOVATION & TECHNOLOGY: CORE ELEMENTS OF THE MIBA DNA

THE SEARCH FOR THE BEST SOLUTIONS FOR OUR CUSTOMERS HAS ALWAYS DRIVEN US

Innovation has always been a core value of our corporate culture. As an innovation leader, we want to be a solution provider for our customers' technological challenges. Together with them, we want to develop solutions that create real added value for their products.

This involves three dimensions:

Desirability:
Does the customer want to buy our product in series and will we create real added value for them?

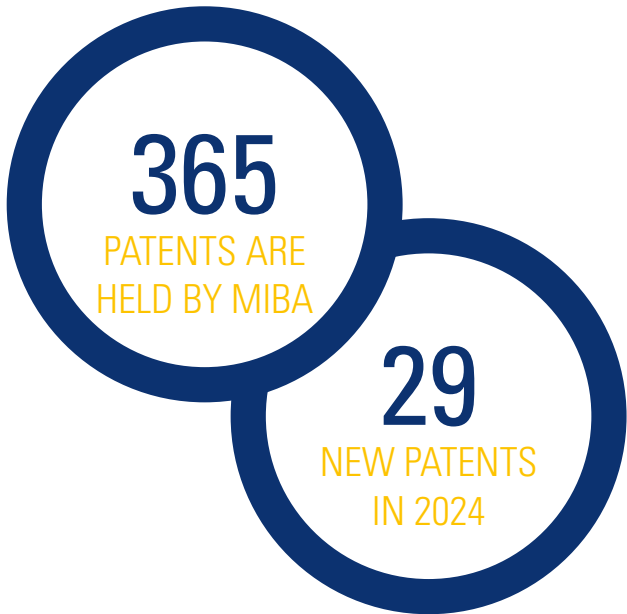
Viability:
Is there a sustainable market for our innovation in which we can earn money?

Feasibility:
Can we find a technological solution to our customer's challenge?



“SUCCESSFUL INNOVATION IS CREATED WHERE CURIOUS, CREATIVE PEOPLE WORK PASSIONATELY TOWARDS COMMON GOALS. THIS IS HOW WE DEVELOP SOLUTIONS THAT OFFER OUR CUSTOMERS REAL ADDED VALUE.”

Rudolf Morawetz,
Vice President Innovation & Technology, Miba AG

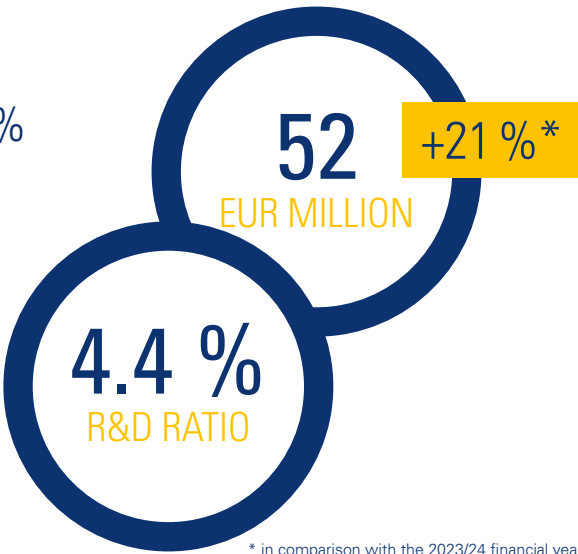


MIBA REMAINS PATENT LEADER

We are pleased that the figures from the Austrian Patent Office once again underline our striving for innovation. With 29 new patents in total, the Miba Group was once again the number one patent applicant in Upper Austria in 2024. In the Austria-wide ranking, we were once again among the top 5 in the same period.

R&D INVESTMENTS INCREASED BY 21 % COMPARED TO THE PREVIOUS YEAR

Even though the past fiscal year was an economically challenging one, we continued to increase our investments in the future: the largest increase was in investments in research and development, which rose by more than 20 percent to 52 million euros compared to the previous fiscal year. The R&D ratio amounted to a high 4.4 percent.



* in comparison with the 2023/24 financial year

CREATING SOLUTIONS FOR ENERGY GENERATION TOGETHER

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Development of bearing technologies for wind energy at Miba in China

UPWIND FOR MIBA TECHNOLOGY: BEARING SOLUTIONS FOR EVER MORE POWERFUL WIND TURBINES

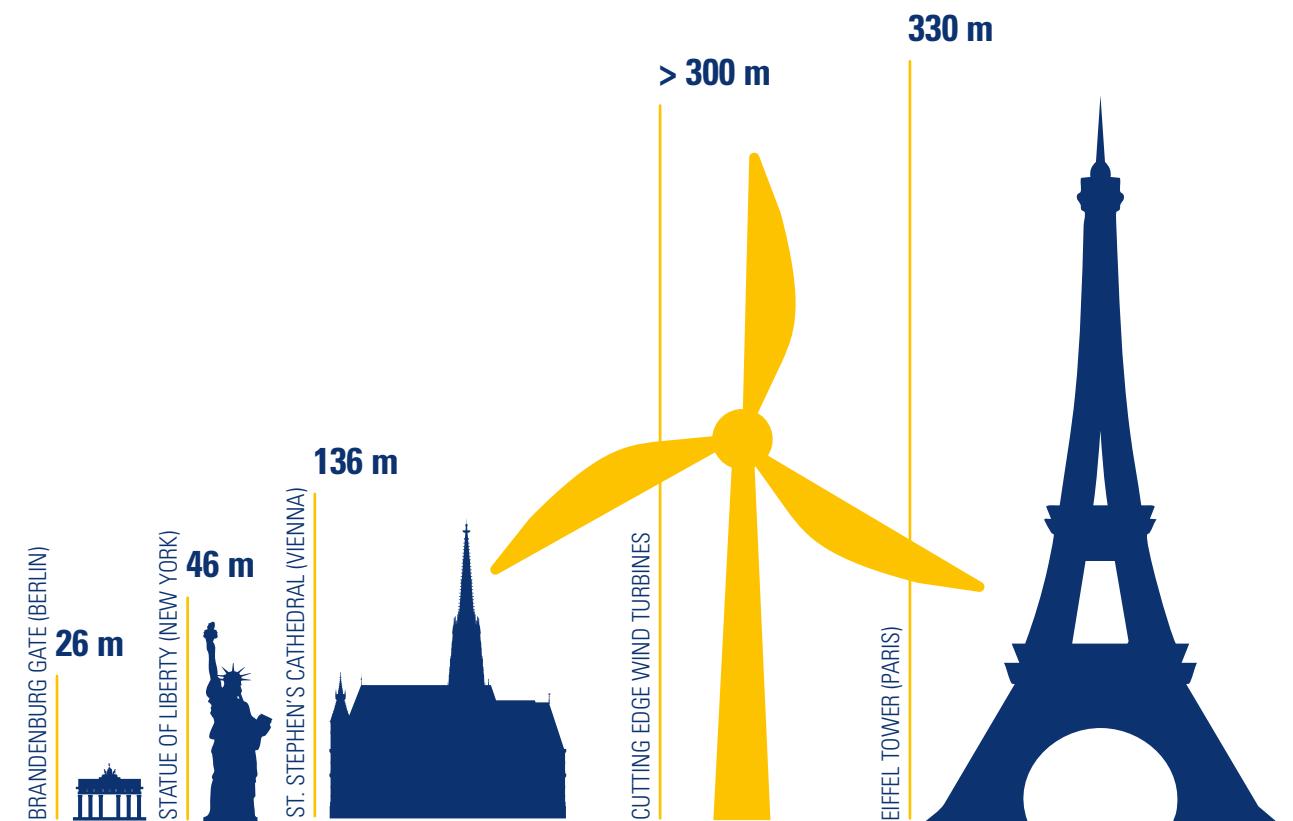
GLOBAL COLLABORATION, MARKET AND CUSTOMER FOCUS DRIVE OUR TEAMS

Wind energy is a key factor in the transition to renewable energy sources. In addition, the demand for energy is constantly increasing. To keep pace with this development, wind turbines are becoming ever larger and more powerful. This results in new technological requirements for wind turbine components that are subject to high stresses. In order to withstand the high loads, the roller bearings frequently used in the past are increasingly being replaced by hydrodynamic bearing technology, which promises higher power densities in the same installation space. Overall, this also contributes to the economic attractiveness of wind energy.

In order to actively shape this transformation, the Miba Bearing Group has spent years developing and launching a bearing bushing that can transmit the high forces in wind turbine gearboxes. The gearboxes translate the slow rotary motion of the rotor blades into a higher speed, which the generator needs in order to efficiently convert the kinetic energy into electrical energy.



Miba's bearing bushing is designed to meet the requirements of highly stressed wind turbine gearboxes.



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GLOBAL TEAMS CONNECTED BY CUSTOMER FOCUS

Miba Bearing Group's successful activities in the wind power sector are backed by the expertise of employees at Miba sites worldwide – including in Austria, India, and China. This interdisciplinary co-operation shows what an important basis a closely networked team is for the development of future-oriented products. Its common guiding principle is always the close cooperation with our customers and a profound understanding of their technological requirements.

The team behind the first generation of bearings for wind turbine gearboxes received special recognition last fall. They were presented with the Franz Mitterbauer Award, the internal innovation prize that is awarded annually to the most forward-looking and innovative projects at Miba. A five-member team from four Miba sites accepted the award on behalf of many others involved – and also set an impressive example of social responsibility: they donated the prize money associated with the award to the SOS Children's Villages in their respective home countries. Miba has doubled this donation to 20,000 euros.

PRODUCTION DIRECTLY IN THE MOST IMPORTANT MARKET – CHINA

The demand for renewable energy generation is increasing worldwide. For this reason, Miba's wind power activities are globally positioned. A particularly important market for wind power technologies is China, which has been responsible for around half of the annual global increase in wind power capacity in recent years. As electricity generation from renewable energy sources is inherently subject to fluctuations, the installed capacity must exceed that of conventional power plants many times over in order to ensure a comparable power supply. China has therefore committed to long-term investment in the expansion of wind energy in its climate strategy.

To be close to this important market, the wind gearbox bearing bushings for the Chinese market are manufactured at Miba Precision Components (China) in Suzhou, in line with our local-to-local philosophy. In recent years, it has developed into a competence center and production site for wind energy technologies that is highly valued by customers. In total, more than 700 employees work at the plant.



“WITH INNOVATIVE AND HIGH-QUALITY PRODUCTS FOR WIND TURBINES, MIBA HAS BECOME A MAJOR PLAYER IN THE CHINESE MARKET AND IS KNOWN IN THE INDUSTRY AS A TECHNOLOGY LEADER AND RELIABLE SOLUTION PROVIDER FOR ITS CUSTOMERS.”

Anthony Wang, General Manager,
Miba Precision Components (China)



JOINT DEVELOPMENT WITH OUR CUSTOMERS

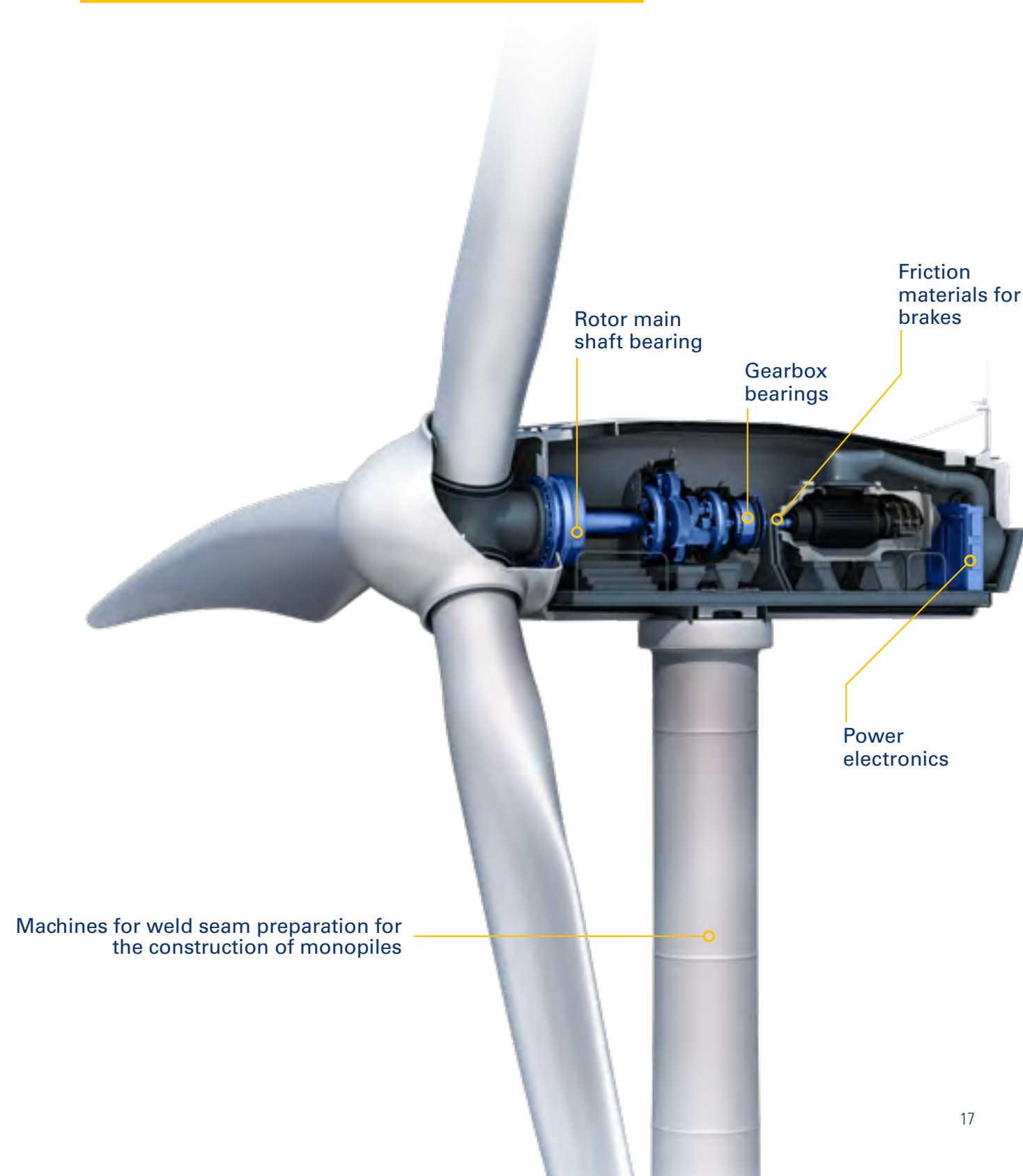
The development of ever more powerful wind turbines will continue in the future. In the coming years, rated outputs of over 20 megawatts and rotor diameters of more than 200 meters will become increasingly common. Miba's research and development team is therefore already working intensively with our customers on the next generations of our bearing solutions.

The expertise of the Berlin-based company Admos, which has been part of the Miba Group since February 2024, will also make an important contribution to this. The team there specializes in laser cladding, a technology for generative coating of tribological surfaces. Thanks to its flexibility, this process enables new bearing applications and materials, making it an efficient alternative to conventional casting methods.

Together, we will continue to play an active role in shaping the future market for sustainable energy generation from wind power.



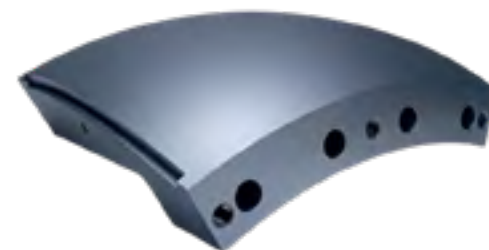
MIBA PRODUCTS FOR WIND ENERGY





NEW SEGMENTED JOURNAL BEARING™ REDUCES COSTS

Miba bearings can also be used as main shaft bearings in the wind turbine – in the form of individual bearing segments. This segmentation allows servicing directly on the tower, eliminating the need for expensive cranes to replace bearings. This saves turbine operators time and money. With the new concept, considerable cost savings can be realized for our customers through simple servicing.



Individual storage segments ensure that service costs can be greatly reduced

MIBA FRICTION MATERIALS SAFELY SLOW DOWN WIND TURBINES



To increase the safety of wind turbines in strong winds and prevent overspeed, which can cause damage to the turbine, wind turbines must be slowed down. The safest method for this is brakes with friction materials, such as those offered by Miba. Miba sintered friction components are characterized by stable friction coefficients and improved wear resistance, which is made possible by the use of high-quality materials and state-of-the-art production processes.

Miba friction materials for safe operation of wind turbines

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Project coordination at Miba Cooling Austria in Ligest/Styria

COOLING TECHNOLOGY AND RESISTORS FOR ELECTRONICS IN WIND TURBINES

The teams of the Miba Power Electronics Group with its production sites in Austria, Slovenia, the USA, and China work closely together to develop and produce high-tech resistors and cooling technologies for the sensitive electronics in wind turbines in collaboration with their customers.

Miba resistors are used in wind turbines for current and voltage limitation, harmonic limitation, or as measuring resistors to improve grid quality. This makes the turbines more efficient and durable. That



Miba high-tech resistors and heat sinks

is also the reason why around 90 percent of wind turbine manufacturers rely on our technology.

Miba cooling technology ensures that the function-critical electronic parts in wind turbines are always protected by being kept at the right operating temperature.

MIBA MACHINES FOR THE CONSTRUCTION OF GIANT OFFSHORE WIND TURBINES

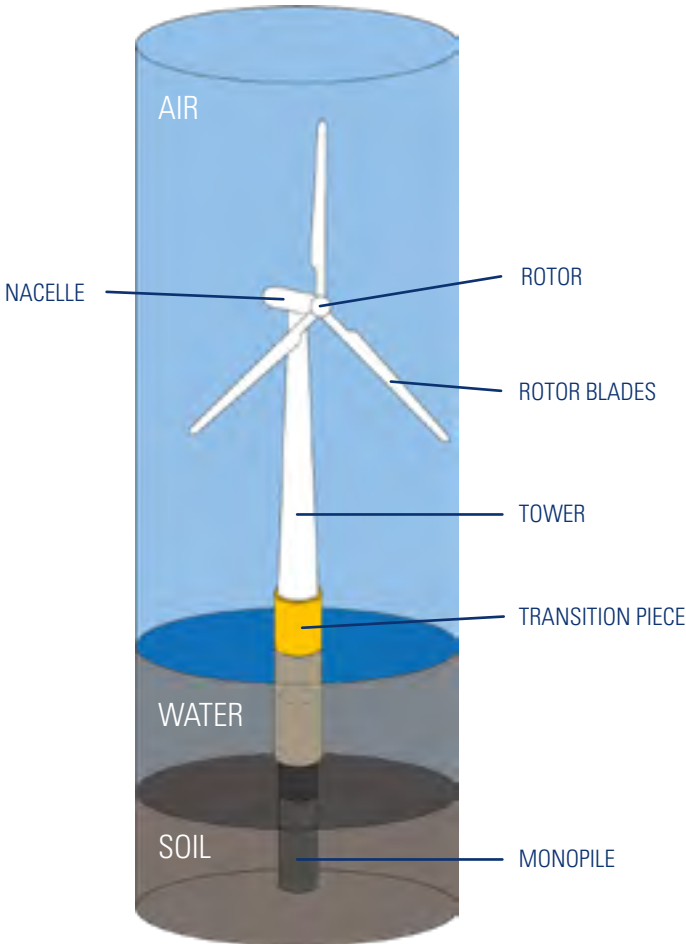
The world’s largest wind towers are being built offshore with the help of milling machines from our mechanical engineering specialist Miba Automation Systems (MAS). The huge wind turbines are anchored to the seabed using so-called monopiles, which are single-pile foundation towers. The foundation tubes, which are up to 120 meters high, are driven up to 60 meters deep into the ground. In order for such a structure to be erected in the sea at all, three to five-meter-long pipe segments are first bent from metal plates in ports, welded together, then assembled to form the monopiles, and transported to sea by ship. What is important here is the quality of the weld seam, as the individual pipe segments and the overall construction must be able to withstand enormous loads. This is where Miba Automation Systems comes into play: its machines are used to mill a weld seam preparation into the metal – creating the basis for the pipe segments to be optimally welded.

NEW ORDERS FOR PROJECTS IN EUROPE, CHINA, AND KOREA

Since the beginning of 2024, Miba Automation Systems has received numerous new orders for such milling systems from all over the world. Our customers’ projects include the construction and delivery of milling systems for new offshore wind farms off the coasts of Europe, China, and Korea.



Learn more about weld seam preparation



Schematic representation of an offshore wind turbine, anchored to the seabed with a monopile.



Delivery of a milling machine to a long-standing customer



Test of the saw in a tank at Miba Automation Systems in Aurachkirchen (Upper Austria)

SAFE DISMANTLING OF NUCLEAR REACTORS WITH MIBA MACHINES

Many European nuclear power plants have reached the end of their service life. Dismantling them poses enormous challenges for the companies involved. The most sensitive areas in particular, the reactor internals, are exposed to very high levels of radiation – so how do you dismantle a nuclear power plant without endangering people and the environment?

The machines from Miba Automation Systems (MAS) are part of the solution. In close cooperation with the customer, MAS has spent the past two years developing a special saw that can be lowered directly into the reactor basin – at water depths of up to 35 meters. There it cuts the reactor internals in months of precision work.

The specifications could not be higher: an extremely powerful mobile saw that can cut stainless steel components with wall thicknesses of up to 120 millimeters, with a maximum weight of 900 kilograms, and a saw blade that can be changed remotely under the surface of the water. And all without any additional equipment.

“WITH OUR INNOVATIVE MACHINE, WE MEET THE CUSTOMER’S NEEDS EXACTLY – A VERY SAFE AND AT THE SAME TIME ECONOMICAL DISMANTLING TECHNOLOGY.”

Mario Mittermair,
Managing Director, Miba Automation Systems

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INTENSIVE COOPERATION SOLVES THE HIGHEST CUSTOMER REQUIREMENTS

This masterpiece of mechanical engineering was jointly developed by a team of designers, mechanics, development engineers, software experts, electrical engineers, purchasers, and project managers. Through almost daily exchanges and weekly meetings with the customer, together, the team was able to meet the very high requirements for special tools in nuclear power plant dismantling.

MIBA PRODUCTS FOR HYDROPOWER



MACHINES FOR POWER PLANT CONSTRUCTION

Miba Automation Systems (MAS), our mechanical engineering specialist, is also active in power plant construction. Thanks to MAS, which develops and produces CNC

machines, turbine components can be manufactured more accurately and efficiently.



BEARING TECHNOLOGY FOR HYDROPOWER PLANTS

Miba's industrial bearing plant in Cataguases, Brazil, is one of the world's three largest suppliers of hydrobearings, i.e. bearings for turbines in hydroelectric power plants. Miba hydrobearing technology is used in small (power generation under 30 megawatts), medium (power generation between 31 and 80 megawatts), and large (over 80 megawatts) hydropower plants.

#creatingtogether



São Simão Dam | © Luiz Felipe Longo

THE SÃO SIMÃO PROJECT IN BRAZIL

Hydropower is an indispensable part of Brazil's energy mix and accounts for around 60 to 65 percent of the country's energy supply. The modernization and upgrading of existing smaller plants with modern technologies therefore represents an important opportunity for the energy supply.

Two years ago, Miba Industrial Bearings launched one of its largest and most ambitious retrofit projects in Brazil, the São Simão project. This initiative involves repairing the bearings of six generator units. However, the project faced challenges: a tight schedule, complex assembly of individual parts, and the requirement to avoid plant downtime.

To overcome these obstacles, the experts at Cataguases formed a multidisciplinary team focused on structured problem-solving. This team, consisting of members from the sales, process engineering, and production departments, developed a comprehensive action plan with specific goals, customizable schedules, and performance metrics. Constant communication with both the direct customer and the end customer ensured open communication and necessary adjustments. Thanks to redefined priorities and reconfigured planning sections, the deadlines were met. These joint efforts and the structured approach enabled deliveries to begin in 2024, with completion scheduled for 2030.

The São Simão project underlines the commitment of the Miba Industrial Bearing branch and its team to innovation, efficiency, and customer satisfaction, which is in line with our mission "Technologies for a cleaner planet".

MIBA PRODUCTS FOR SOLAR ENERGY

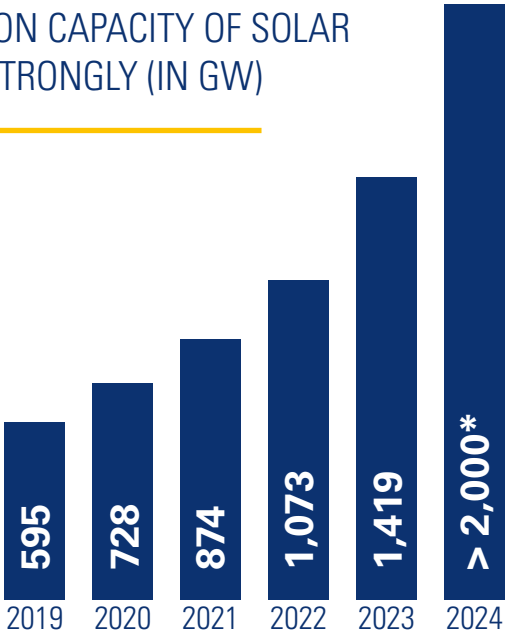
POWER ELECTRONICS FOR SOLAR POWER SYSTEMS

Our resistors in thick-film technology can be found in the inverters of almost all solar power systems from well-known manufacturers. They offer the best ratio between component size and performance – especially compared to wirewound resistors, as our technology allows a larger number of resistors to be installed in a single housing. Miba heat sinks also protect the electronic components in solar equipment from overheating. The use of special technologies, such as vacuum brazing, has further increased efficiency and power density. This enables our customers to use the latest power semiconductors with the highest power density.



Miba power electronics technologies for solar energy

THE GLOBAL PRODUCTION CAPACITY OF SOLAR ENERGY IS GROWING STRONGLY (IN GW)



Source:
International Renewable Energy Agency

* Outlook



CREATING SOLUTIONS FOR ENERGY TRANSMISSION TOGETHER

#creatingtogether





Test bench for heat sinks at Miba Cooling Austria in Ligist

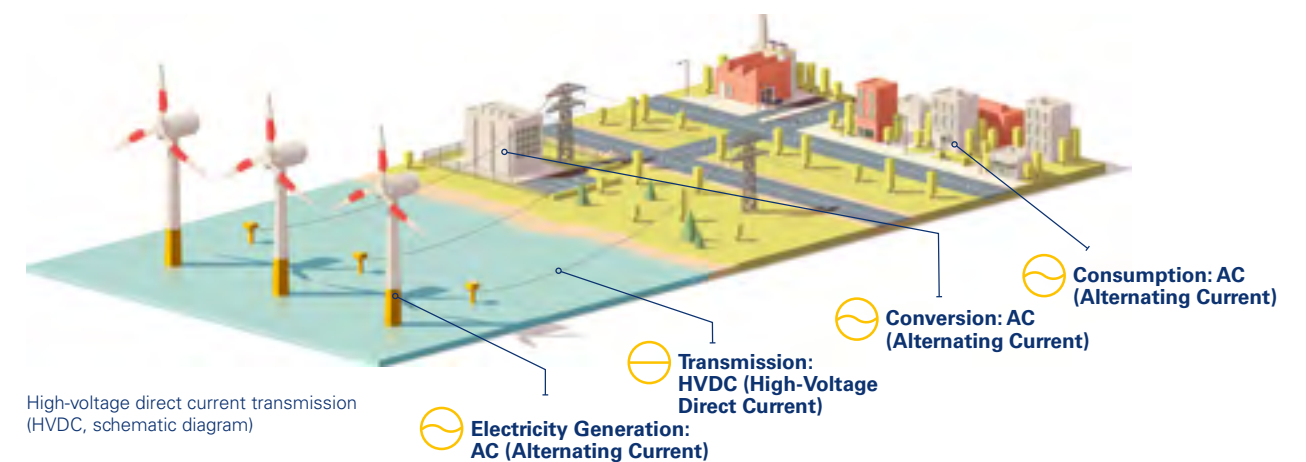
POWER ELECTRONICS FOR EFFICIENT AND LOW-LOSS ENERGY TRANSMISSION

THE MIBA POWER ELECTRONICS GROUP TEAM DEVELOPS AND PRODUCES SOLUTIONS FOR HIGH-VOLTAGE DIRECT CURRENT (HVDC) TRANSMISSION

The world is hungry for electrical energy. The electrification of mobility and industry, the increasingly widespread use of artificial intelligence with its many new data centers, and global population growth are creating an ever-increasing demand for electricity. In order to achieve climate targets at the same time, this energy must also be generated more and more sustainably, from wind, hydropower, and solar energy. This leads to major challenges for the grid infrastructure. Not only does it have to be able to transport ever larger amounts of energy. Sustainable energy is also not always available at the same time, which is a challenge for grid stability.

ENERGY LOSS IN POWER GRIDS IS GREATLY REDUCED

National and supra-regional grid development plans are the answers to these challenges. They are strategic instruments for the long-term development of the electricity grids and measures to ensure the supply of electricity to the population and industry. High-voltage direct current (HVDC) transmission is a key element of this. It makes it possible to transport electrical energy efficiently and with low losses over long distances – for example from offshore wind turbines off the coast to major cities inland. The alternating current generated is first converted into direct current and then back into alternating current in the region of consumption. In the best case scenario, the energy loss per 1,000 kilometers is then only three percent; with conventional transmission technology, it is one percent per 100 kilometers with a 320 kV line alone.



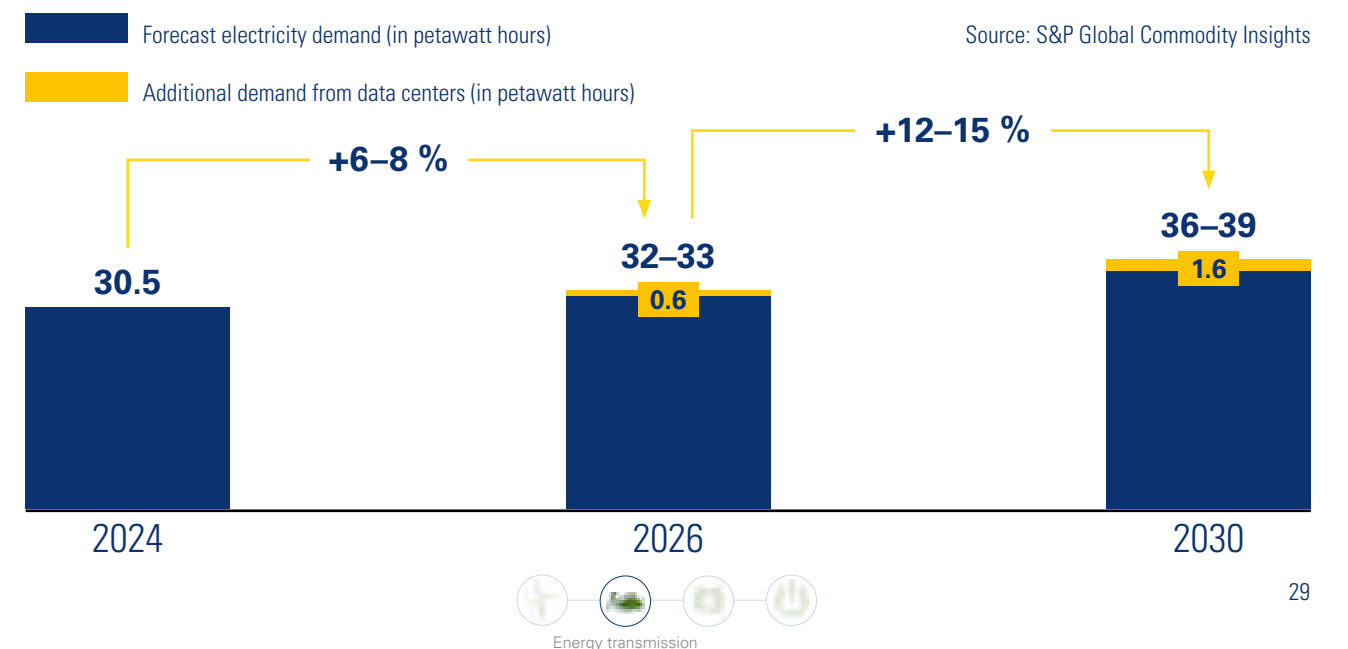
MIBA TECHNOLOGY PROTECTS FUNCTION-CRITICAL ELECTRONICS

To achieve this, you need converters, and this is where Miba's power electronics come into play. In close cooperation with their customers from the electronics industry, our teams develop and produce high-tech resistors and cooling technologies for the safe operation of these function-critical electronic components. For example, heat is generated in the inverters, which must be limited by optimum cooling in order to avoid damage and high operating costs. Miba heat sinks ensure the technical functionality and extend the service life of the components. Miba resistors regulate very high voltages and also make them easy to measure. They therefore also make an important contribution to protecting our customers' products.



Resistors and cooling technology for high-voltage direct current transmission

MAJOR GROWTH IN GLOBAL DEMAND FOR ELECTRICITY





Coordination of customer projects at Miba Resistors Austria



“WITH OUR TECHNOLOGIES, WE ARE MAKING A SIGNIFICANT CONTRIBUTION TO THE SUCCESS OF THE ENERGY TRANSITION, IN OTHER WORDS, TO THE SUSTAINABLE USE OF RENEWABLE ENERGY.”

Jens Kuschel,
Managing Director, Miba Power Electronics Group



Plant expansion in Kirchbach in Styria

PLANT EXPANSION IN STYRIA AND NEW PLANT CONSTRUCTION IN CHINA

With the construction of a new, large plant building in Kirchbach in Styria (Austria), Miba is creating the capacity required to meet the rapidly growing demand from our customers for high-tech resistors. The pro-



New plant construction in the Shenzhen region

duction area at the production site will be more than doubled, from 3,000 to 6,300 square meters. We are also building our second power electronics plant in the Shenzhen region in China.

VACUUM-BRAZED HEAT SINKS OFFER MANY ADVANTAGES

In 2025, we will commission the fourth vacuum brazing furnace for the production of our innovative heat sinks. Vacuum-brazed heat sinks offer our customers a number of advantages: vacuum brazing allows precise control over the brazing process, resulting in consistent and highly reliable connections. The vacuum-brazed heat sinks themselves enable improved heat transfer as their individual components are fully bonded to each contact surface. This ensures ideal heat transfer throughout the heatsink, resulting in more efficient cooling and higher performance than is the case with other connection technologies.



Filling a vacuum brazing furnace

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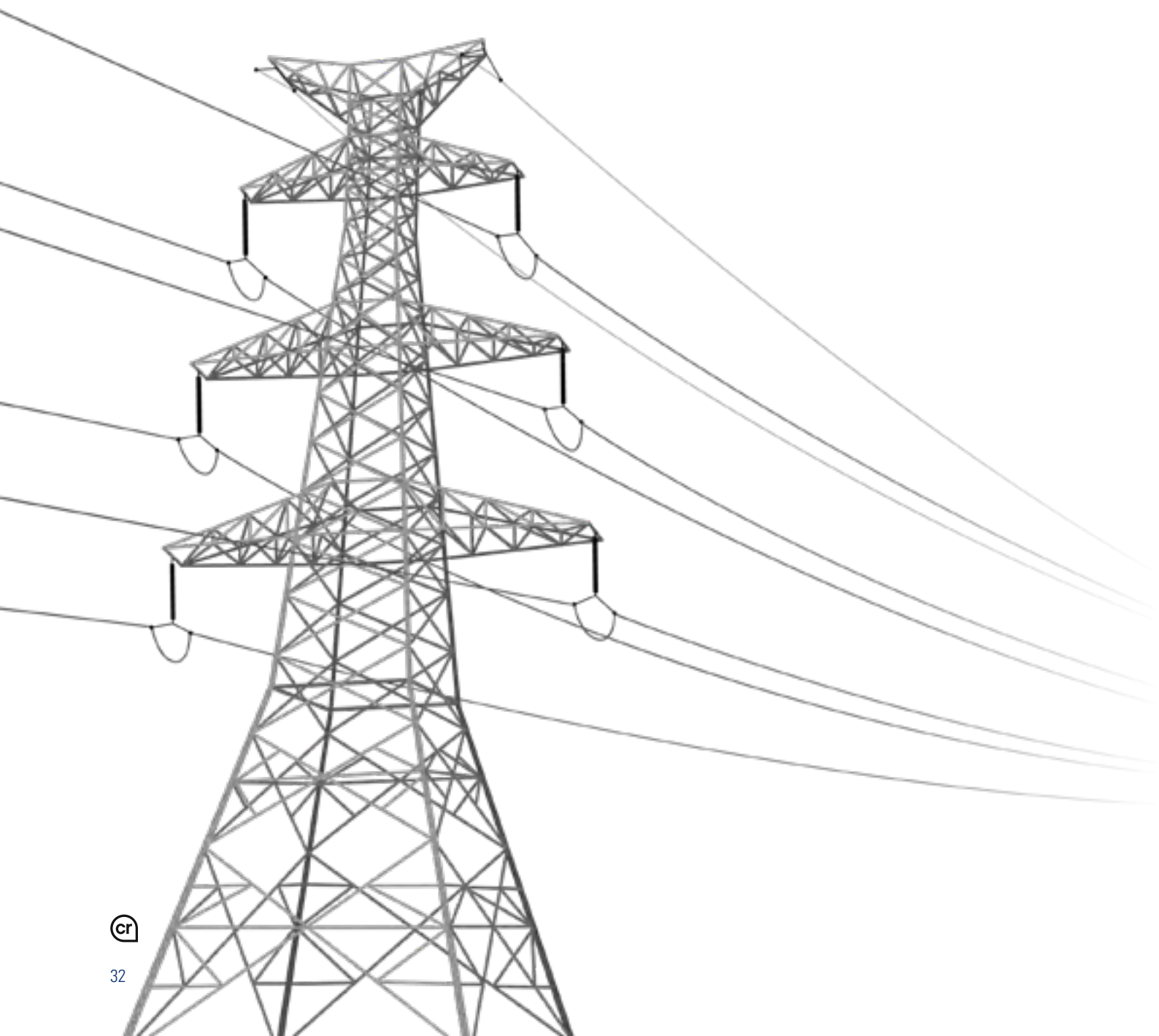
Electronics laboratory at Miba Resistors Austria

RESEARCH AND DEVELOPMENT – ALWAYS 100 PERCENT FOCUSED ON OUR CUSTOMERS AND THEIR MARKETS

The development and sales team at Miba Resistors Austria works closely with its customers to develop and produce customized resistor solutions for HVDC technology. Together with our customers, we want to break new technological ground. To achieve this, we draw on our decades of research and development expertise, our production know-how, and our highest quality standards. With our Miba high-tech resistors, we want to ensure the safe operation of our customers' HVDC technologies.

Being close to markets and customers are also particularly important success factors for Miba Cooling Austria. The enormous investments in energy infrastructure required for the energy transition lead to a very high demand for HVDC transmission products in the coming years. In close cooperation with its customers, Miba Cooling Austria is creating the capacity for this, for example by investing in an additional, fourth vacuum brazing furnace at its production site in Ligist, Styria.

OTHER PRODUCTS FOR ENERGY TRANSMISSION



INTELLIGENT ENERGY MANAGEMENT: MIBA TECHNOLOGIES FOR SMART GRIDS

Smart grids are the energy suppliers' approach to optimally controlling the utilization of electricity grids in a consumption region. All parts of the system are monitored via a digital system to ensure maximum stability, reliability, and efficiency.

Miba high-voltage resistors are used in smart grids to measure voltages in the line and thus quickly detect local failures or defects. This ensures the stability of the overall grid and allows faults to be detected and fixed quickly. In very extensive regions in the USA, for example, smart grids are used to centrally monitor and control overhead power lines with pinpoint accuracy. This allows faulty line connections to be localized very quickly and put back into

operation. In the future, smart grids will also be used to optimize and efficiently use the grid infrastructure.

If a lot of electricity is generated during periods with sufficient wind and sun, electric cars, for example, could be used as decentralized storage – or the electricity could flow into local and central stationary battery storage systems. Alternatively, consumers such as heat pumps or wallboxes for electric cars could be switched on by the grid operators to stabilize the grid in times of high electricity supply. The areas of application in which Miba high-voltage resistors are used underscore Miba's mission to provide technologies for a clean planet.

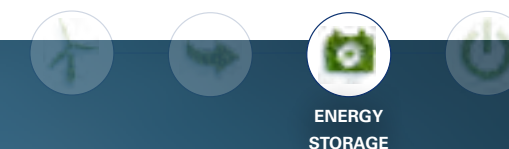
RESISTORS AND COOLING TECHNOLOGIES FOR THE CHARGING INFRASTRUCTURE



Miba resistors and cooling solutions are installed in fast and ultra-fast chargers in the power range from 150 to 350 kilowatts. They ensure that efficient and fast charging can be carried out safely, without overheating and damage. They therefore offer an important protective function for the charging infrastructure.

CREATING SOLUTIONS FOR ENERGY STORAGE TOGETHER

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VOLTHOME® & VOLTINDUSTRY®: MODULAR ENERGY STORAGE SYSTEMS FOR BUSINESSES & PRIVATE HOUSEHOLDS

Electricity from renewable sources is a core component of the sustainable energy supply of the future. Solar energy in particular will play an important role in this. Thanks to the continuous expansion of photovoltaic systems, its share of global renewable energy capacity will grow steadily in the coming years.

Miba wants to take advantage of the great opportunities in this market: With VOLTHOME® and VOLTINDUSTRY®, Miba Battery Systems has expanded its portfolio to include modular home energy storage systems. The battery specialist from Bad Leonfelden (Austria), whose roots lie primarily in the development of mobile applications, is thus positioning itself even more broadly for the technological requirements of the energy transition. The two systems are based on the same technology but are specifically tailored to the requirements of the respective target groups. While VOLTHOME® enables private households to easily store and flexibly use their self-generated solar power, the

VOLTINDUSTRY® commercial storage system helps companies establish a more independent energy supply and avoid expensive peak loads.



Assembly at Miba Battery Systems in Bad Leonfelden

Thanks to the modular design, the storage capacities range from 12.4 to currently 37.3 kilowatt hours and can be connected in parallel several times to form cascable groups of up to 298.4 kilowatt hours. This means that the energy requirements of small and medium-sized commercial operations through to medium-sized industrial operations can be covered. In both cases, development is focused on one central goal: the best possible solution for our customers.

VERSATILE TEAM WITH A COMMON VISION

The vision of actively shaping the future market of efficient energy storage is also an important driver for

the employees involved. The interdisciplinary team in Bad Leonfelden brings a wide range of expertise in areas such as mechanical and electrical design, software development, and quality assurance to the project. In addition, industrialization specialists focus on the efficient design of production processes. There was also a lively exchange with central departments at Miba right from the start, for example in the area of patent examination and intellectual property protection. The dynamic development of the energy storage market in particular unites the entire team behind the common goal of bringing their solution to market quickly and efficiently.



BATTERY STORAGE CAPACITY WAS ADDED
WORLDWIDE IN 2024

“WITH OUR INNOVATIVE STORAGE SOLUTIONS, WE WANT TO PLAY AN ACTIVE ROLE IN SHAPING THE ENERGY TRANSITION. VOLTHOME® AND VOLTINDUSTRY® FOCUS ON MAXIMUM EFFICIENCY, FLEXIBILITY, AND SAFETY WITH TECHNOLOGY MADE IN AUSTRIA.”

Stefan Gaigg,
Managing Director, Miba Battery Systems



**NEW STANDARDS IN ENERGY DENSITY,
FLEXIBILITY AND SAFETY**

In terms of technology, VOLTHOME® and VOLTINDUSTRY® are characterized above all by their high energy density. This has a decisive advantage for customers: compared to other storage solutions, Miba's systems require significantly less space for the same energy content. Thanks to their modular design, they also adapt effortlessly to any space and can be flexibly expanded in the event of subsequent upgrades. This is particularly important for the long-term use of the storage units – because compared to mobile batteries, home storage units generally have to withstand much longer use with more charging cycles. Another unique selling point is the system voltage of up to 1000 volts, which provides maximum flexibility for a wide range of applications.

An important focus during development was also placed on the greatest possible safety. The combination of round cells with individual cell protection and a specially developed battery management system, which was the result of extensive tests, ensures maximum protection both during installation and during operation.

BATTERY TECHNOLOGY MADE IN AUSTRIA

VOLTHOME® and VOLTINDUSTRY® are developed and produced entirely at VOLTFACORY #01 in Bad Leonfelden. The technologically leading battery production plant was opened in fall 2022 and offers an annual production capacity of 500 megawatt hours on an area of 3,900 square meters. Miba Battery Systems also sees this Made in Austria approach as a promise to customers who value European supply chains and the strengthening of local value creation.



VOLTFACORY #01 in Bad Leonfelden

Series production of VOLTHOME® and VOLTINDUSTRY® will begin in early summer 2025. Close cooperation has already been established with a partner whose extensive service network customers can rely on when purchasing and installing the systems.



LEARN MORE ABOUT
VOLTINDUSTRY®



LEARN MORE ABOUT
VOLTHOME®

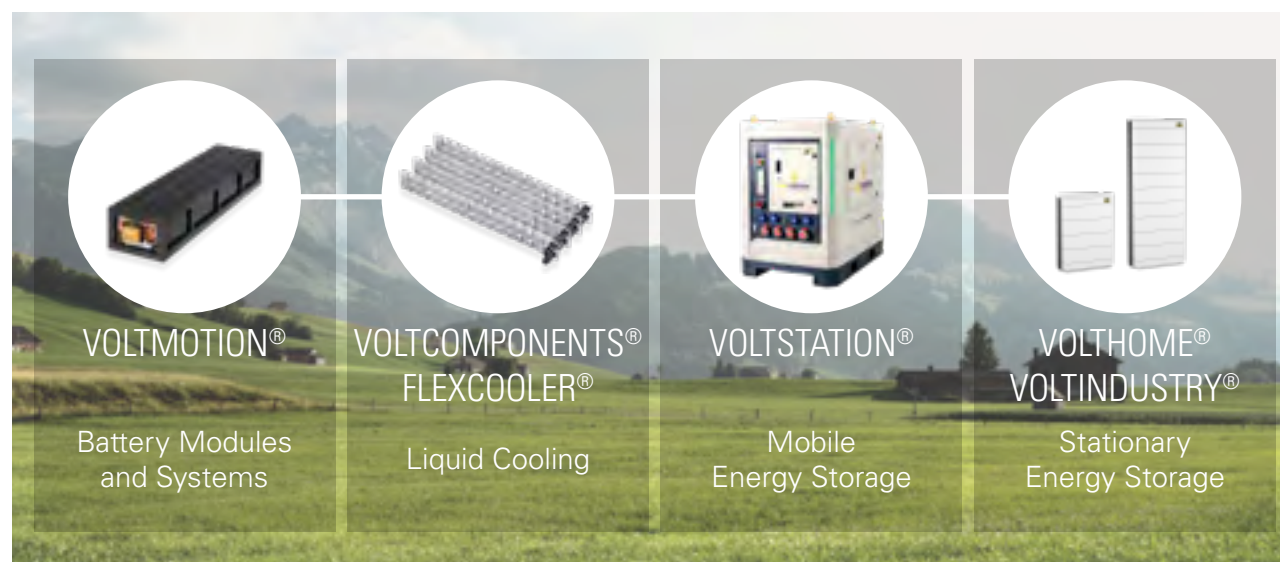
OTHER PRODUCTS FOR ENERGY STORAGE



BATTERY SYSTEMS AND BATTERY COMPONENTS

With four product lines, Miba Battery Systems, our specialist for battery systems and components, offers solutions for a wide range of applications. Under the VOLTMOTION® brand, we supply customized battery solutions for on-road and off-highway vehicles. The Miba FLEXCOOLER® is our multi-award-winning, innovative

solution for the thermal management of batteries. With the VOLTSTATION®, we offer a compact and mobile energy storage system for construction sites or events, for example. We also offer VOLTHOME® and VOLTINDUSTRY® stationary energy storage systems for homes and businesses.



VOLTMOTION® – CUSTOMIZED BATTERY SOLUTION FOR VEHICLES

Under the VOLTMOTION® brand, we offer customized battery solutions for on-road and off-highway vehicles. With their different dimensions, the batteries meet the usual installation space requirements. Thanks to the modular approach, different wiring options can be implemented. By scaling up the battery packs with serial/parallel connection, they can be expanded into larger battery systems according to customer requirements. The Miba FLEXCOOLER® is installed in the battery packs.

The battery systems are developed and produced according to automotive standards with the highest quality requirements. As proof of the high standards, the battery systems have been awarded various certifications by accredited laboratories.



MIBA FLEXCOOLER® – UNIQUE TECHNOLOGY FOR THERMAL MANAGEMENT OF BATTERIES

The Miba FLEXCOOLER® is the first liquid cooling system on the market that optimally absorbs and dissipates heat thanks to the close connection between the battery cells and the cooling system. With its flexible shape, our technology adapts perfectly to the battery cells. The advantages: On the one hand, low weight, on the other hand, gap fillers, i.e. materials to fill the space between the battery cell and the cooling system, are no longer required. The Miba FLEXCOOLER® can be used for prismatic, cylindrical, and pouch battery cells.



VOLTSTATION® – ECO-FRIENDLY MOBILE ENERGY STORAGE REPLACES DIESEL GENERATORS

The Miba VOLTSTATION® is an environmentally friendly alternative to diesel generators, for example on construction sites, at events, and for many other applications. Stationary and mobile, it provides emission-free and quiet

power. Thanks to its modular and compact design, the mobile storage unit is easy to transport and easy to operate using the touchscreen.

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ELECTRIC FIRE ENGINES “MADE IN UPPER AUSTRIA”

The next generation of special operations vehicles is increasingly relying on electric drives. Rosenbauer – the world market leader in the field of firefighting equipment from Leonding near Linz – and Miba Battery Systems are joining forces for this purpose. In future, battery solutions for Rosenbauer’s special emergency vehicles will be developed and produced by Miba. The first flagship of the partnership is the

new PANTHER electric airport rescue and firefighting vehicle. In order to achieve the high acceleration required during operations, it needs a battery with a particularly high power density and as little additional weight as possible compared to conventional drives. Requirements that Miba’s battery solutions can fulfill.

CREATING TECHNOLOGIES FOR ENERGY USE TOGETHER

#creatingtogether



ENERGY
USE



WE OFFER OUR CUSTOMERS A WIDE RANGE OF PRODUCTS FOR ENERGY USE

WITH OUR TECHNOLOGIES, WE WANT TO CONTRIBUTE TO GREATER ENERGY EFFICIENCY AND THUS TO REDUCING THE CO₂ FOOTPRINT OF OUR CUSTOMERS' PRODUCTS.



Cars & motorcycles





Trucks & buses



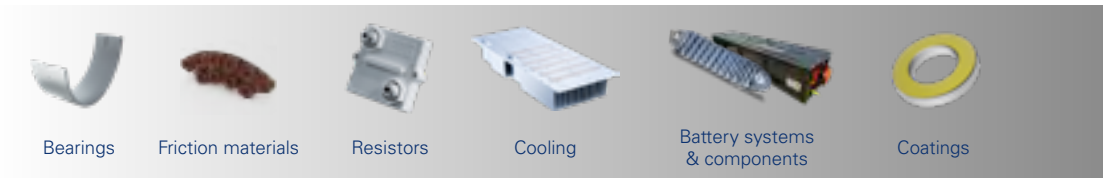


Marine





Railway





Aviation



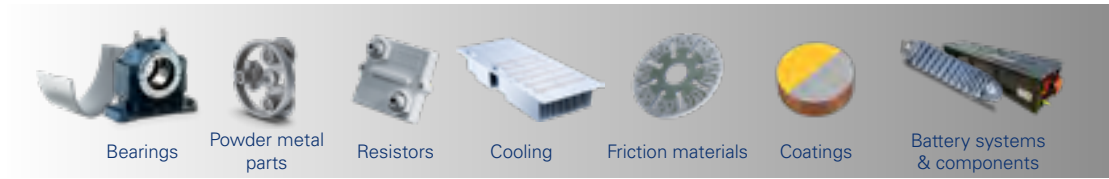


Off-highway vehicles





Industrial applications

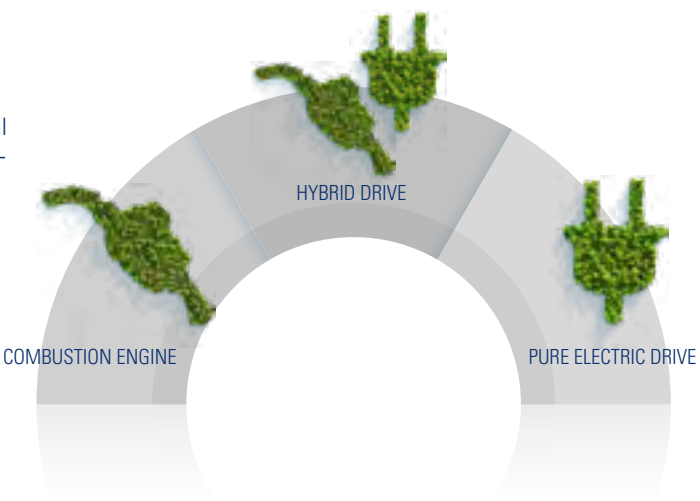


LEARN MORE ABOUT OUR SOLUTIONS



WHEN DEVELOPING SOLUTIONS FOR MOBILITY, WE FOCUS ON TECHNOLOGY OPENNESS

Whether pure electric driving, hybrid drives, or combustion engines: we develop and produce components for all types of drives. For us, technology openness means finding the most suitable solution for our customers. Always with one goal: to make drivetrains even more energy efficient, environmentally friendly, and quiet.



FUTURE ON RAILS: HIGH-SPEED TRAINS BRAKE WITH MIBA TECHNOLOGY



Rail transport is an important pillar of resource-saving mobility – and is constantly evolving. Trains capable of reaching ever higher top speeds are being put into service around the world. This also places extreme demands on the components used, including the braking systems. A high-speed train traveling at 400 kph needs a full six kilometers of braking distance to come to a standstill. The extreme energy that acts on the brakes of the individual wheels during this maneuver heats the pads up to 700 degrees Celsius. Only sintered friction materials that meet the highest safety standards can withstand this stress.

EXPANSION OF TEAM AND EXPERTISE

With its extensive expertise in innovative friction materials for highly stressed train brakes, the Miba Friction Group has been active in this demanding market for 30 years. In recent years, it has steadily expanded its presence and product portfolio and has evolved from a component supplier to a complete brake pad provider. This development was a milestone from both an organizational and

technological point of view, as it was accompanied by an expansion of expertise from pure material knowledge to the design and simulation of entire assemblies.

SEIZING LONG-TERM OPPORTUNITIES

The timing was good: the market for braking systems in Europe was previously dominated by two major suppliers. Both manufacturers and rail operators were looking for another supplier. Full customer focus and a high level of commitment put Miba in a good starting position. The customer benefits quickly convinced train manufacturers and operators: Miba's braking systems promise them cost savings, as the brake pads are more durable and therefore need to be replaced less frequently.

With its commitment, the Friction Group has not only strengthened its market position, but also created a sustainable and profitable business segment for the future: Trains have a service life of 30 to 35 years, and freight trains can even remain in service for up to 50 years. By taking the step from component supplier to provider of

“OUR GLOBAL PRODUCTION CAPACITIES
IN THE RAILWAY MARKET ARE AN
IMPORTANT ADDED VALUE FOR OUR
CUSTOMERS.”

Gerald Schachinger,
Vice President Sales & Marketing, Head of R&D,
Miba Friction Group



complete brake pads, Miba Frictec in particular has positioned itself for this market in the long term. This is also underlined by the current construction of a new railway test bench at its site in Roitham. From summer 2025, the company will be able to conduct its own tests on the brake systems there.

GLOBAL FOCUS ON CUSTOMERS AND MARKET NEEDS

Miba Group’s global footprint is also a significant advantage in the railway market. A good example of this is the Indian market, where continuous technological progress offers opportunities for Miba technology: while Indian trains used to barely exceed a maximum speed of 80 kilometers per hour and therefore did not require sintered brake pads, speeds are now rising to up to 200 kilometers

per hour. The brake systems therefore have to be adapted to the increased loads and retrofitted accordingly. With the Miba Drivetec India site in Pune, Miba is close to its customers with its know-how and can also draw on the many years of expertise of Miba Frictec. Miba is therefore broadly positioned for further growth in the market for sintered brake systems.

SOLUTIONS FOR THE HIGHEST DEMANDS ON TRACTORS AND TRUCKS IN INDIA

The performance requirements for trucks in India are particularly high. They are on the road in heavy traffic and often on unpaved roads, and they usually have high payloads. The clutches in particular have to withstand heavy loads. Clutches are also extremely important, function-critical components in the drivetrain of tractors.

Together with its customers, Miba Drivetec, our friction materials plant in Pune, has developed and launched clutch buttons specifically for the requirements of the Indian market. They offer the durability, heat resistance, and friction properties required for optimum performance.



Miba Drivetec in Pune, India, opened a new production hall last year.

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EFFICIENT STRUCTURES FOR MAXIMUM CUSTOMER BENEFIT

The relationship between customers and suppliers is traditionally very close in the railway business. The Miba team therefore regularly visits manufacturers and operators in person in order to gain the best possible understanding of their needs and align their development work with future requirements at an early stage. For example, a team of technicians spent an entire night on a test track in the Czech Republic to change brake pads and install temperature sensors. The success of the high-performance brake pad business is also due to the efficient organiza-

tion and the culture of discussion within the team: open and trusting communication makes it possible to address any challenges and problems that arise directly and solve them efficiently. The railway team functions like a small start-up within the company and, in addition to close internal cooperation, also relies on the expertise of external partners and consultants who have been familiar with the railway industry for decades. This enables new external interfaces to be created and direct contacts to manufacturers and the market to be established.

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**YEARS
MIBA
FRICTION
GROUP**

WORLDWIDE COOPERATION OF SITES IN SEVEN COUNTRIES ON THREE CONTINENTS

50 years after its foundation, the Miba Friction Group is now the division of Miba with production sites in the most countries: the seven plants in Austria, Slovakia, the Czech Republic, the USA, Mexico, India, and China work closely together in the development and production of solutions for their customers.

Sales, development, and production teams are closely coordinated worldwide and see themselves as a close-knit team with a common goal. At Miba Friction Group’s new production site in Mexico, too, you can feel the team spirit and cooperation right from the start.

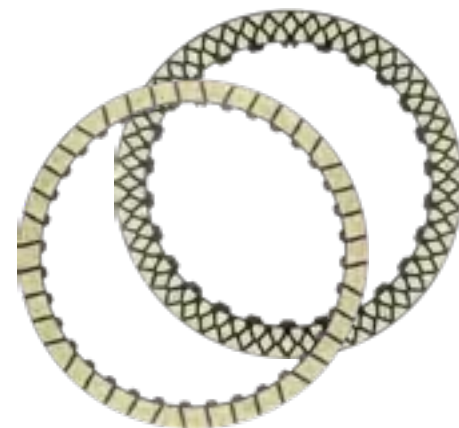
MIBA FRICTION MATERIALS: DECISIVE PERFORMANCE ELEMENTS FOR CLUTCHES AND BRAKES

Miba friction materials are used as wet and dry-running components in clutches and brakes for on- and off-highway vehicles, machinery, railways, and aircraft. They are also used in industrial applications such as cranes and conveyor systems. In addition to our own steel plate production, we develop and produce friction materials

made of fiber composite, sinter, carbon, or molybdenum. Our aim is to ensure greater performance and operational reliability through optimized friction coefficients and the best wear properties with smaller and lighter components.

RESOURCE-SAVING MULTI-PAD DESIGN

The crystal-shaped structure on the Miba friction materials is called multi-pad design. The design is used on friction materials for hybrid and dual-clutch transmissions. In contrast to the standard design, the multi-pad design ensures a reduction in drag losses and therefore lower fuel consumption. The design also allows the oil quantity in the clutches to be distributed more precisely. The benefits: improved performance, reduced oil volume, and savings in raw materials.



MIBA MULTILAYER TECHNOLOGY

A multilayer design structure is a friction lining made up of several layers. Each layer contributes specific properties such as high wear resistance, fast response, improved shifting comfort, and reliable fail-safe properties. Customer requirements for multilayer applications include high energy density and NVH (noise, vibration, harshness) benefits.

The multilayer friction lining can be optimized for these advantages depending on the application, which makes it suitable for use in many areas.

Innovative, holistic development approaches are required to strengthen our technological leadership with our customers.

Miba Friction Group's high level of vertical integration ranges from the selection of fibers to the validation of friction systems in application-related tests. Interdisciplinary cooperation between material development, process development, and application technology is crucial here. This enables the Miba Friction Group to offer far-reaching innovations for its customer portfolio while minimizing the CO₂ footprint in order to maximize production efficiency.



ONLINE DESIGN OF MULTI-DISC CLUTCHES

To achieve the optimal design for a multi-disc clutch, power density, noise-vibration-harshness (NVH) specifications, efficiency, and total cost of ownership must be coordinated in the best possible way. Our web application "Friction Engineering Designer", FRED for short, helps with this. It enables online design directly by our customers. Within just a few minutes, FRED provides key figures that make the technology decision easier and more transparent.



ENVIRONMENTALLY FRIENDLY BRAKE PADS DESIGNED WITH PEOPLE AND NATURE IN MIND

Material abrasion caused by braking is a burden on the environment and people. To counteract this, we at Miba are developing sintered brake pads with optimized wear behavior. Furthermore, intensive research is being carried out into non-ferrous metal-free brake pads in order to replace copper with more environmentally friendly alternatives. One area of application is the circular economy. Specifically, brake pad systems are used that can be fitted with friction material on a modular basis. When the pad is worn to its limits, it is dismantled and replaced. With this approach, the production-intensive pad carrier can be reused.



Learn more about Miba friction materials

MORE EFFICIENT AIRCRAFT ENGINES WITH MIBA SPUTTER TECHNOLOGY



Aviation places the highest demands on quality and precision. Based on these principles, a team of experts at Miba Gleitlager Austria specializes in Miba's special sputtering process for internal coatings on gears. This results in surface properties that contribute to the feasibility of a special engine design in which a reduction gear optimizes the speeds of individual components. The result is a higher overall efficiency, which is accompanied by significant improvements in fuel consumption as well as pollutant and noise emissions. Today, the gears coated by Miba are used in a significant proportion of newly delivered single-aisle aircraft.

OWN PLANTS STRENGTHEN FLEXIBILITY

Another decisive factor in the success of the project is Miba's broad in-house expertise, which includes not only the coating process but also the PVD machines used for it. These are developed and built by Miba Automation Systems and the Technology Competence Center of the Miba Bearing Group and can therefore be quickly and efficiently adapted to new customer requirements. Work is currently being carried out in close cooperation with the customer on the development and testing of lead-free coatings for gears and bearing bushings for aviation applications. In the future, these should not only contribute to an improved environmental balance but also to the health protection of our employees.



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CUSTOMER RELIES ON MIBA KNOW-HOW

The successful series production of the Miba sputter technology was preceded by a long-term research and development process, which continues to this day in close cooperation with the customer. In addition to pure technology development, the comprehensive testing expertise of the Miba team is particularly valued – an area that is of central importance in meeting high aviation safety standards. The engine manufacturer therefore repeatedly relies on the expertise of the Miba test bench team when analyzing cases of damage. In order to also have the right answers for future requirements, new test procedures are also constantly being developed that reflect real-world conditions in even greater detail.



**LESS FUEL CONSUMPTION AND CO₂ EMISSIONS
DURING FLIGHT ARE MADE POSSIBLE BY ENGINES
WITH MIBA SPUTTER TECHNOLOGY**



Energy use



ALTERNATIVE FUELS: NEW DRIVE CONCEPTS WITH MIBA KNOW-HOW

Greater environmental friendliness is a global focus in the development of drive technologies. Because battery electric solutions do not make sense in all areas of application from a technological perspective, drive manufacturers in sectors such as marine and railway are increasingly switching to alternative fuels.

In order to support our customers in this technological change, a team at Miba Gleitlager Austria is working intensively on new fuel concepts. Since end applications have very different requirements in terms of fuel energy density, several approaches are being pursued – including methanol, ammonia, and hydrogen. While hydrogen is particularly suitable for areas such as rail transport, the potential fields of application for ammonia include the marine sector.

NEW REQUIREMENTS FOR BEARINGS

As components that determine the function and service life of engines in a wide range of industries, Miba bearings help to ensure that engines function reliably and efficiently even under extreme conditions. The Miba

team works in close cooperation with its customers and external research institutes to ensure that this remains the case even when operating with alternative fuels. This is because the changes in the combustion process also result in new requirements for the materials used in bearings.

During the combustion process, gases can get past the piston rings into the engine oil and affect its composition. This oil aging also has a subsequent effect on all parts that come into contact with the oil. Adapting the components to these new chemical properties is therefore crucial for the long-term functionality and reliability of the drives.

In order to carry out appropriate simulations and material compatibility tests, an oil analysis laboratory has been set up in Laakirchen, where the condition of oils and their effects on bearing materials can be analyzed. The procedures include the examination of additives, the determination of acidity, and the analysis of metal impurities in the oil. In addition to preventing corrosion, the aim is also to maintain desirable tribological layers, which contribute to reduced wear and a longer service life of the bearings.

MIBA TECHNOLOGY FOR HOMOGENIZATION IN THE FOOD INDUSTRY

When people think of Miba bearing technology, they primarily associate it with its use in vehicles, ships, aircraft, or industrial plants. But there are many other applications for our products in the industrial goods sector. One of these is homogenization, a standard process in the food industry. In homogenizers, the fat in milk is broken down into small particles with a diameter of less than one micrometer. This prevents the cream from separating. Juice producers also use this method to prevent fruit or

vegetable fibers from settling. In addition, more nutrients are released than in juice production without homogenization. Because of the low temperatures during processing, the natural taste is also better preserved. Miba produces bearings for homogenizers from a wide range of manufacturers. In addition to the food industry, these are also used in the production of cosmetics and in the chemical, biotech, and pharmaceutical industries.



BEARINGS FOR EMERGENCY POWER GENERATORS IN DATA CENTERS

Data centers are the backbone of modern digital infrastructure and are becoming increasingly important worldwide. They are critical infrastructure because failures can at least partially paralyze the digital world and lead to data loss and security risks. To avoid this, they are equipped with emergency power generators, in which Miba bearings are used.



MIBA BEARING TECHNOLOGY FOR MOBILITY AND INDUSTRIAL APPLICATIONS



Learn more about Miba bearings

ENGINE BEARINGS FOR EFFICIENT AND RELIABLE DRIVES

Miba bearings are among the components that determine the function and service life of engines in a wide range of applications. They are used to support the crankshaft and camshaft and, thanks to the minimization of friction, wear, and corrosion, they offer a longer service life and lower maintenance costs. Thanks to their compact design and high power density, considerable fuel savings and a higher payload can be achieved. The focus is always on

the needs of our customers. As a development partner, we therefore support engine manufacturers right from the development phase and work with them to design solutions that are precisely tailored to their specific requirements. By constantly developing new bearing designs, we ensure that modern engines deliver efficient and ecologically compatible top performance even under extreme conditions.

BEARINGS FOR A WIDE RANGE OF INDUSTRIAL APPLICATIONS

The Industrial Bearing Branch of Miba Bearing Group produces hydrodynamic bearings and labyrinth seals for machines with rotating shafts, such as turbines, compressors, expanders, and pumps, but also generators,

gearboxes, or refiners in pulp & paper. These applications are required for power generation, but also in the oil and gas industry, as well as in the chemical industry.

LEAD-FREE BEARINGS PROTECT THE ENVIRONMENT AND HEALTH

A team of developers at Miba is working intensively on lead-free bearing technology. Thanks to the special sulfur additive, the lubricating properties of lead can be replaced, while at the same time increasing fatigue strength.

This lead-free bearing therefore combines a long service life with the robustness of lead-containing alloys. As a result, the product not only protects the environment but also the health of our employees in production.

OPTIMIZED MAINTENANCE AND REPLACEMENT WORK

New digital products with added value for our customers are a key development focus at Miba. For example, bearings equipped with sensors can continuously measure and evaluate data on their condition. This is made possible by specially developed telemetry in

combination with a data analysis system. Early detection of impending engine damage and the optimization of maintenance cycles are the goals of this development. This can, for example, save unnecessary maintenance or replacement work on ships.

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ONLINE TOOLS FOR OUR CUSTOMERS

With our Bearing Calculator, we offer our customers an online tool that provides an initial assessment of whether their application falls within the broad field of application of hydrodynamic bearings within a few minutes and without expert knowledge.

With the online product configurator "Tilting Pad Journal and Thrust Calculator," we can also offer our customers further added value. The configurator supports the design of radial and axial tilting pad bearings and helps to find the perfect bearing for the individual requirements of our customers. It helps our customers to save time and money and improve the performance of their applications.



You can test our Bearing Calculator here



MIBA SINTER GROUP: SOLUTIONS FOR ELECTRIC AND CONVENTIONAL DRIVES

ELECTRIFICATION, AUTONOMOUS DRIVING AND FURTHER OPTIMIZATION OF COMBUSTION ENGINES ARE SHAPING THE FUTURE OF MOBILITY

The automotive industry is changing rapidly. Increasing electrification is not the only megatrend. Following the increasingly widespread introduction of driver assistance systems and semi-autonomous driving, fully autonomous driving will also become more and more possible in the coming years. But also the demand for combustion engines is still very high and will remain so for a long time to come from a global perspective. There is therefore a continuing need to optimize the efficiency, fuel consumption, and noise emissions of conventionally powered vehicles.

Together with its customers, the Miba Sinter Group is developing solutions for all these requirements for the mobility of today and tomorrow – for combustion engines, hybrid vehicles, and purely electric driving. Its powder metallurgical parts offer decisive advantages: they are

lighter and require less installation space than conventional solid metal components. In addition, metal powder can be pressed into a wide variety of shapes – a decisive advantage for complex geometries. Sintered components also conserve resources as there is no cutting waste.

“IN THE CUSTOMER’S KITCHEN” JOINT DEVELOPMENT WITH CUSTOMERS

Especially in times of great change, it is particularly important for the teams of Miba Sinter Group to gain a comprehensive understanding of their customers’ markets and products. This enables them to develop customized solutions together with them in close coordination and personal contact. “To be in the customer’s kitchen” is what we at Miba call this principle of developing new products in close partnership with our customers, getting them ready for series production, and launching them on the market.



Team coordination at Miba Sinter USA

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TECHNOLOGIES FOR eAXLES AND ELECTROMECHANICAL BRAKES

One example of the intensive cooperation with our customers is the development of synchronization modules for the so-called “decoupling unit” in the eAxle of a European car manufacturer. The transmission shaft is automatically decoupled from the wheels whenever no drive is required from the electric motor while driving. As soon as the drive is required again, the connection is closed. This leads to an increase in efficiency.

Miba’s solution was tailored and customized to the high requirements and customer needs. The biggest challenge was that the requirements in terms of transmittable torques and switching times could not be met with currently available synchronization modules. The Miba team put all its engineering expertise into the design of the components, material selection, and the design in such a way that the required function could be fulfilled in the smallest possible installation space. And, in typical Miba fashion, it developed the solution in close coordination and cooperation with the customer.

A pioneering eMobility project was also implemented together with a customer from China. In the future, Miba Sinter Group will produce components for the customer’s electromechanical brakes. Brake systems for electric vehicles do not use hydraulic actuation, as is familiar from conventional combustion vehicles. They have an electric motor directly on the disk brake on the wheel, which moves the brake shoes. High-ratio gearboxes ensure that this motor can be kept small and at the same time transmit high force to the brake. Here, too, existing Miba Sinter technology is used in the form of gears. It was possible to accommodate the requirements in a planetary gearbox.



Laboratory at Miba Sinter Austria in Vorchdorf

CONTINUING TO DEVELOP SOLUTIONS FOR CLEAN COMBUSTION ENGINES IN THE FUTURE

For the Miba Sinter Group, developing and producing solutions for all types of drive systems together with its customers also means continuing to work on optimizing conventional drives. For example, the team at the production site in McConnelsville, Ohio, completed a major ramp-up project at the end of 2024. A major automotive customer had relocated the production of camshaft phasing systems for the American market to Miba. The background to this is that many other suppliers have scaled back their investments in machinery and expertise for the production of components for combustion engines.

At the same time, the transition to electromobility is progressing more slowly than expected. Demand for vehicles with conventional drive systems remains very high. In this situation, car manufacturers and first-tier suppliers are consolidating their supplier network. They are shifting their orders to partners with a clear commitment to continue investing in the development of solutions for clean combustion engines and to guarantee the highest quality in production. The Miba Sinter Group is one of these suppliers. Its customers benefit from its modern machinery, its global network of production sites, its specialization in the powertrain and transmission sectors, and the extensive expertise of its employees.

“WE DEVELOP AND PRODUCE COMPONENTS FOR ALL DRIVE TECHNOLOGIES FOR OUR CUSTOMERS. TOGETHER WITH THEM, WE CREATE INNOVATIVE SOLUTIONS FOR eMOBILITY. AT THE SAME TIME, WE WILL CONTINUE TO OFFER THEM OUR EXPERTISE AND PRODUCTION CAPACITIES FOR CONVENTIONAL DRIVES IN THE FUTURE.”

Christian Hansl,
General Manager, Miba Sinter Group



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The Miba Tooling Center supplies internal customers throughout the Miba Group.

HIGH-TECH SERVICES FOR THE ENTIRE MIBA GROUP AT THE SINTER SITE IN DOLNÝ KUBÍN

The teams at the Miba Tooling Center and the Miba Press Competence Center are dedicated to providing high-tech services for the entire Miba Group. Both are based at the Miba Sinter Slovakia site in Dolný Kubín, but see themselves explicitly as service providers for all Miba divisions and production sites worldwide.

The Miba Tooling Center (MTC) has its roots in toolmaking for Miba Sinter Slovakia. Since 2018, it has been developing and producing tools for its internal customers throughout the Miba Group, for which a large new building was constructed at the plant site in Dolný Kubín. The MTC now employs 100 people, including 85 toolmakers and 15 specialists in process technology, programming, and tool design. It is particularly impressive that 80 percent of the employees have previously completed a Miba apprenticeship. The extensive know-how of the employees is particularly important for the Miba Tooling Center, as the often highly complex tool specifications required demand a great deal of experience and specialist knowledge.

Tools with dimensions of up to 500 millimeters can be manufactured at the Miba Tooling Center. The CAD models for this are provided to the team in Dolný Kubín by its internal customers at Miba sites all over the world. Every order is different, and many of the MTC's products are one-offs.

The Miba Press Competence Center (PCC) is also located at the Dolný Kubín site. It specializes in the development, construction, and retrofitting of fully



Our specialists from Slovakia and Austria work for the Miba Press Competence Center.

hydraulic CNC multi-stage presses and the associated automation technology. The team also offers engineering services for the entire Miba Group and organizes training courses on all aspects of press technology. Around 20 specialists from Slovakia and Austria work closely together for all of this.

A key task is the retrofitting of systems from Miba's existing machinery. Existing Miba machines or systems purchased from third parties are brought to the Press Competence Center in Dolný Kubín and converted there. The mechanics, hydraulics, electrics, safety technology, and control software, for example, are modernized and brought up to the latest technological standards. All this is not only a cost-effective alternative to new purchases. It also reduces dependence on external suppliers.

ENVIRONMENTALLY FRIENDLY POWDER METAL TECHNOLOGY FOR VEHICLES AND INDUSTRIAL APPLICATIONS



Compared to other production processes, our powder metal technology enables maximum utilization of the material used with the lowest possible energy consumption. The high-precision and high-strength components impress with their cost efficiency and low weight. Complicated shapes such as serrations, shaped holes, and radii can be produced directly from the tool. As a result, our powder metallurgy solutions stand out

in comparison to conventional production methods due to lower waste and consumption of raw materials. There are also many applications for powder metal technology in the electrification of vehicles. Our knowledge of NVH (noise, vibration, harshness) and gearing can be used for components in eAxles such as planetary gearboxes, parking brakes, or clutch packs.

POWDER METAL TECHNOLOGY FOR eMOBILITY

Powder metal technology also offers a range of potential applications in electric vehicles. These include components in the cooling circuit (thermal applications) and for

the eAxle. Our developers are working intensively with new materials such as aluminum and copper.

USE IN ROBOTICS AND CONVEYOR SYSTEMS

There are also numerous fields of application for our powder metal technology outside the automotive industry. Whether in robotics, conveyor technology, compressors, or eBikes, the high-precision and high-strength compo-

nents are also convincing for industrial applications thanks to their cost efficiency and low weight. Their use also enables a reduced CO₂ footprint.



POWDER METAL GEARS

Powder metal gears impress with their high strength and enable complex geometries. They are the cost-optimized alternative to mechanically manufactured components and are used in reduction gears, decoupling gears, mass balancing gears, camshafts, crankshafts, planetary gears, and ring gears.



POWDER METAL TRANSMISSION PARTS

Highly complex powder metal parts are integrated into manual, dual-clutch, and automatic transmissions as well as for all-wheel and hybrid drives. The high-strength components with steel-like properties have established themselves as a cost-effective alternative to conventional forged parts. Miba manufactures powder metal transmission parts with high precision and quality.



POWDER METAL STEERING PARTS

Powder metal technology is an established process in the production of steering parts. High-quality requirements and cost efficiency are the most important parameters for helical gears in electric steering systems. Other areas of application may include tooth guides, clutches, and gear wheels.



Learn more about Miba powder metal parts

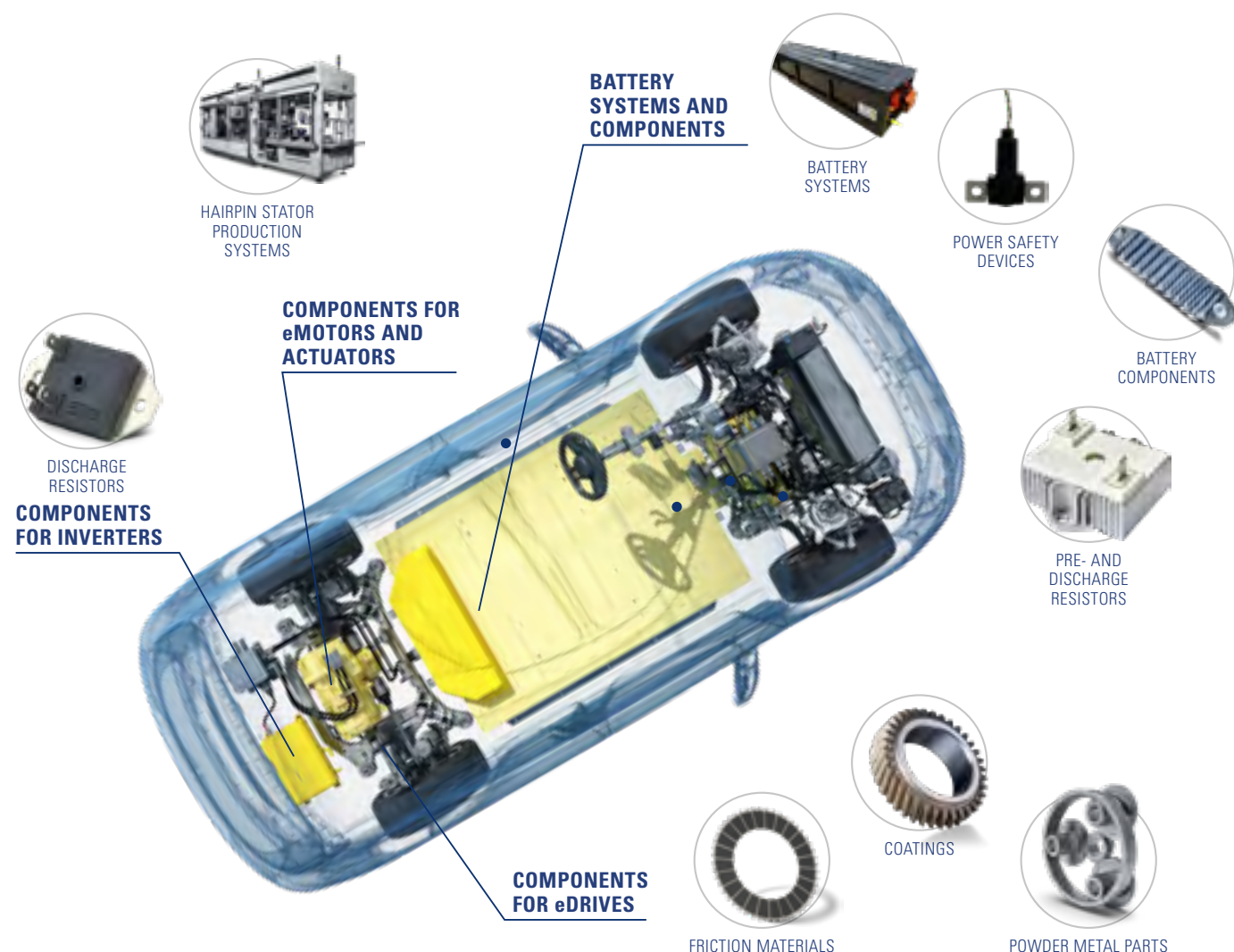
eMOBILITY WITH MIBA



BROAD PRODUCT RANGE FOR ELECTRIFICATION

As a solution provider with decades of automotive experience, we work with our customers to develop and pro-

duce their products for purely electric and hybrid drives. Many of these are already in series production worldwide.



MIBA RESISTORS PROTECT THE ELECTRICAL SYSTEM OF VEHICLES

Our resistors ensure that the electrical voltage in the system is built up and dissipated again immediately and safely. They protect the electrical system from damage, extend the service life, and increase reliability. More and more customers from the automotive industry around the world are relying on resistors from the Miba Group in their series production.



MIBA FRICTION TECHNOLOGY ENABLES HIGH-PERFORMANCE AND EFFICIENT TORQUE DISTRIBUTION FOR eVEHICLES

The number of drive solutions will be reduced in the long term compared to combustion engines and hybrids, with the eAxle playing a special role with regard to the integration of functions. Friction systems for torque management to stabilize, agillize, and emotionalize vehicles play an important role in this. New technologies and innovative approaches are needed to meet the requirements for comfort (NVH), power density, and efficiency in the eAxle. Together with industry partners, the Miba Friction Group develops friction systems that meet the highest customer

demands and enable short application-oriented adaptation in order to significantly reduce time-to-market. The necessary development work is mainly carried out at the R&D Center in Roitham. In the test field and laboratories, decades of experience can be drawn on to ensure the necessary correlation with the environment in the vehicle.

POWDER METAL TECHNOLOGY FOR eMOBILITY

There are a number of potential applications for Miba powder metal technology in electric vehicles, for example in components in the cooling circuit (thermal applications), for the eAxle, and in brakes. Our developers are working intensively with new materials such as aluminum and copper.



SAFETY SYSTEM FOR BATTERIES AND FUEL CELLS

The Miba POWERcloser® is an electrical safety switch that, triggered by a pyrotechnic actuator, provides a high-current normally open contact. In the event of an accident, the Miba POWERcloser® short-circuits the electrical circuit in vehicles with fuel cells, thereby reliably discharging electrical circuits. This prevents the outbreak of fire and ensures that the vehicle is safe for occupants and first responders.





Learn more about Miba coating technology

COATING SOLUTIONS FOR DRIVE TECHNOLOGY AND INDUSTRY

Whether it's classic wear and corrosion protection, acoustic improvement, friction increase or reduction, visual flawlessness, or easier assembly of components:

Miba coatings are indispensable. We offer our customers various polymer, electroplating, APS, and PVD coatings.

COATING SOLUTIONS TO PREVENT FRICTION, WEAR, AND CORROSION

Our products for improving friction and wear properties are used in a wide range of applications. The coatings are applied to components, which, depending on the application, leads to better performance, weight savings, or even the elimination of entire components. Often, this is also accompanied by an anti-corrosion effect, or it is the main requirement.

PVD COATING SOLUTIONS FOR INDIVIDUAL APPLICATIONS

Our development team works with our customers on solutions for improved tribological properties of components. Coatings for bipolar plates, which protect against chemical environments and increase electrical conductivity, and silicon coatings for the semiconductor industry are also possible.

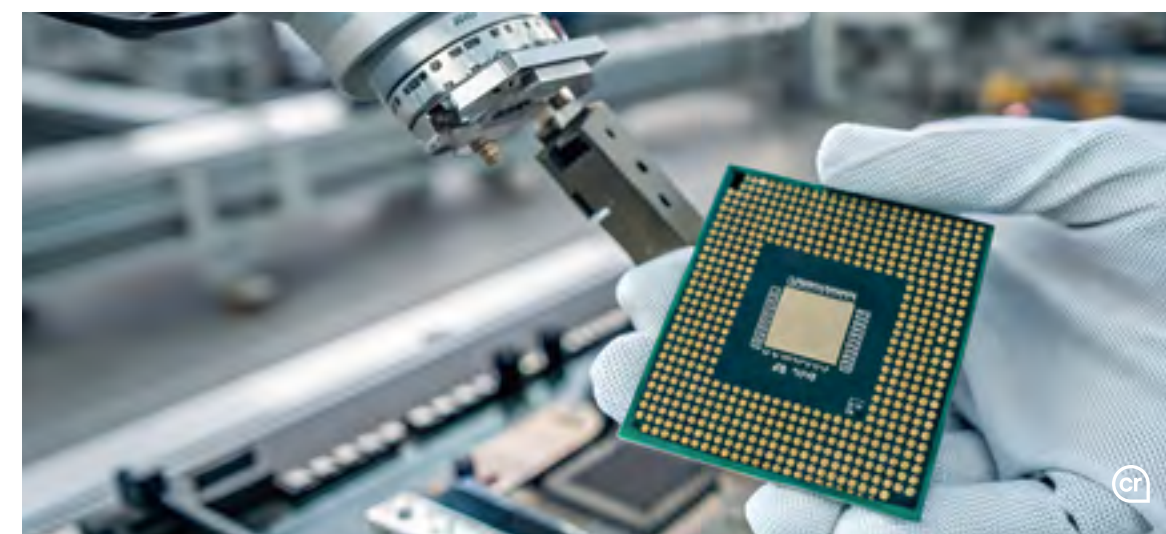
COATING SOLUTIONS FOR INCREASING THE COEFFICIENT OF FRICTION

With our special coating process, we increase the coefficient of friction of component surfaces – and thus the performance of our customers' products. Innovative coating solutions allow components to be directly and partially coated with a friction-enhancing coating for the first time. This saves on additional components, increases performance, and reduces overall costs.

COATING SOLUTIONS FOR NOISE AND VIBRATION REDUCTION

Our coatings for noise and vibration reduction have been specially developed for gears. They ensure precisely adjusted backlash, optimized NVH behavior, and protect gears from wear.

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MIBA COATINGS IN THE PRODUCTION OF HIGH-TECH MICROCHIPS

State-of-the-art microchips for 5G cell phones, autonomous driving, or artificial intelligence, for example, are manufactured using EUV lithography. In this process, extremely tiny structures are imaged on the microchips using extremely short-wave UV light. Mirrors are used to generate this UV light – and these are coated at Miba in Vorchdorf. A silicon layer is applied to the mirrors under cleanroom con-

ditions and in a high vacuum. The mirrors are then elaborately processed by the manufacturers of the complete optical systems for the EUV lithography machines. A comparison shows how precise this coating is: even if the coated mirror were as large as Germany, there would be a maximum height difference of less than one millimeter in the coating.

CREATING CAREERS AND KNOW-HOW TOGETHER

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LIFELONG LEARNING



Training at the Miba Forum

CORE VALUE OF MIBA AND BASIS FOR INNOVATION AND PRODUCT QUALITY

The expertise and experience of our employees are essential prerequisites for Miba's innovative strength, technological leadership, and high product quality. Lifelong Learning has therefore always been one of our core values (see the description of the Miba Lighthouse on page 8). It is important to us to support our employees in their professional and personal development with training and continuing education programs tailored to their individual needs. Our programs are integrated into the Miba Employee Development Cycle – as are tailored onboarding processes, feedback and development meetings, and career planning measures. In addition to the Miba Leadership Academy (MLA), the global development program for managers, apprentice training and training for various specialist areas are of great importance. We are constantly developing new offerings to meet the professional and personal requirements of our markets and products of tomorrow.



Investment in training and further education
(fiscal year 2024/25)



Apprentice training at the Miba Academy



**TRAINING AND FURTHER
EDUCATION OPPORTUNITIES
AT MIBA**



“THE MIBA EMPLOYEE DEVELOPMENT CYCLE COMBINES PERFORMANCE & TALENT MANAGEMENT WITH FEEDBACK BASED ON POSITIVE LEADERSHIP. IN THIS WAY, WE STRIVE FOR THE HOLISTIC DEVELOPMENT OF OUR EMPLOYEES IN LINE WITH OUR CORE VALUE OF LIFELONG LEARNING.”

Uta Stockbauer,
Vice President People & Culture, Miba AG



Completion of the Bearing Academy



Workshop at the MLA Leadership Lab



MIBA APPRENTICESHIP: DUAL EDUCATION WITH PURPOSE, TEAM SPIRIT AND MANY CAREER OPPORTUNITIES

MIBA APPRENTICES – OUR SPECIALISTS OF TOMORROW

The Miba apprenticeship program is the right place for young people who want to learn a profession in which they can contribute to reducing the CO₂ footprint and increasing sustainability with innovative technology. Our experienced team of trainers teaches apprentices the know-how and skills needed to manufacture Miba products for wind energy and hydropower, efficient power grids, environmentally friendly vehicles, ships, and airplanes.

Right from the start, our apprentices work on exciting projects, develop their talents, and become part of a strong team in which cooperation and cohesion are particularly important. With training content tailored precisely to the needs of the apprentices and an extensive range of additional qualifications, young professionals are prepared for the technical challenges of the future.

LEISURE ACTIVITIES AND INTERNSHIPS ABROAD

But that's not all: in addition to sound technical training, we also offer our apprentices language courses, internships abroad, personality and outdoor training. We offer the Miba apprenticeship both in Austria and in a form adapted to regional needs in other countries. In addition to the traditional apprenticeship, there are also additional options such as second-chance apprenticeships or opportunities to combine an apprenticeship with a "Matura" school-leaving certificate.

APPRENTICESHIP WITH "MATURA" CERTIFICATE

In Austria, in cooperation with the KTLA (Kremstaler Technische Lehrakademie), apprentices also have the opportunity to supplement their training with an a technical secondary school degree. There is also the Dual Academy, which offers a new form of training in the form of a

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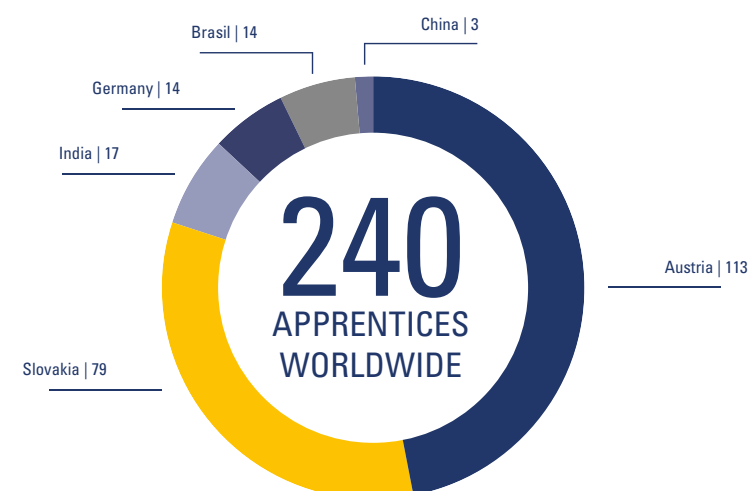
APPRENTICE TEAM DEVELOPS SUSTAINABILITY APP

Three Miba apprentices have developed a prototype for a sustainability app at the Austrian Apprentice Hackathon. It helps people calculate and reduce their daily energy consumption. A total of 1,600 apprentices from all over Austria took part in the hackathon, with the Miba team coming second in the public ranking and third in the expert ranking.

shortened apprenticeship after completing the "Matura". In Slovakia, apprenticeship training always concludes with a "Matura". For more information see page 78.

APPRENTICE SHUTTLES IN SALZKAMMERGUT

It is important to us that our apprentices get to their training location safely and reliably, even in rural regions



with limited public transport services. We therefore offer apprentice shuttles in the Salzkammergut region in Austria that take them to Miba and back home again every day. The shuttles are also used for team events and excursions.





Groundbreaking ceremony with many prominent politicians: Thomas Stelzer (Governor of Upper Austria), the mayors of the Upper Austrian Miba sites, and the Miba owner family Mitterbauer/Niss at the groundbreaking ceremony for Base 27.

BASE 27: TRAINING CENTER FOR OUR SKILLED WORKERS AND APPRENTICES

THE NEW JOINT CENTER FOR SKILLED WORKER AND APPRENTICE TRAINING FOR THE UPPER AUSTRIAN MIBA PRODUCTION SITES WILL BE BUILT IN LAACKIRCHEN BY 2026.

The two-story building will offer a wide range of uses on a floor space of 2,400 square meters. One of the most important functions will be apprentice training. Spacious workshops will be available for them, as well as for the further training of our skilled workers. The facilities will range from rooms for basic mechanical engineering training, CNC, CAM/CAD, welding, and hydraulics workshops to an automation and mechatronics laboratory. With state-of-the-art machinery, our employees will be offered a training environment that corresponds to everyday working life in our production facilities. There will also be a spacious auditorium for events, areas for working in small groups, for lectures or workshops, and a laboratory with 3D printers and laser welding equipment for the many school classes that visit Miba for career orientation days.

TRANSPARENT ARCHITECTURE

The architecture of the building relies on large glass surfaces and thus deliberately offers insights into Miba's everyday training and working life. In order to avoid

additional soil sealing, the project will be built on existing parking spaces. New car parking spaces will be created in the basement of the building. The building will be integrated into the overall concept of the Miba Campus in Laackirchen. The Viennese architecture firm Delugan Meissl Associated Architects, which has already designed the Miba Forum, was commissioned with the planning. In order to ensure an atmosphere that promotes collaboration and the exchange of ideas and in which all user groups feel comfortable, neuroscientific findings on the design of an optimal environment are used – for example in the selection of colors and materials.

INNOVATIVE CONCEPT OF A TRAINING CENTER

In a working world that is characterized by many changes such as new technologies, new forms of acquiring knowledge and skills, new types of collaboration, digitalization, automation, and artificial intelligence, we want to create a new type of space for learning, experiencing and collaborating with Base 27. In a broad discussion process, we have worked out what requirements it must meet – and we have involved future users as well as internal and external experts from the outset.



The architecture of the building is based on large glass surfaces and thus deliberately offers insights into everyday training and working life at Miba.

VIRTUAL TOUR OF BASE 27



ARE INVESTED BY MIBA IN THE BUILDING AND MACHINERY OF BASE 27

"I WOULD LIKE TO EXPRESS MY SINCERE THANKS FOR THE INVESTMENT, WHICH WILL BENEFIT UPPER AUSTRIA AS A BUSINESS LOCATION. WE CAN ONLY MASTER THE CHALLENGES OF THE FUTURE WITH TRAINING THAT IS AT THE CUTTING EDGE OF SCIENCE AND TECHNOLOGY."

Thomas Stelzer, Governor of Upper Austria



DEINE ZUKUNFTS Werkstatt

BRIDGE BETWEEN MIBA'S ORIGINS AND FUTURE

With the name „Base 27 – Your Workshop of the Future“, we are showing that our skilled workers have always been an essential basis for our success since Miba was founded in 1927 – and that they will continue to play a key role in shaping the future of Miba until the 100th anniversary of its foundation in 2027 and beyond. The new building will also create the basis for the successful career paths of our employees. The logo is based on those of mountaineering base camps – because just like them, the new building is intended to be a place of strength and exchange with others on the way to new peaks.



FROM APPRENTICE TO SITE MANAGER WITH 900 EMPLOYEES

PETER ORNETZEDER BEGAN HIS MIBA APPRENTICESHIP IN 1996. IT WAS THE STARTING POINT FOR A STEEP CAREER PATH. HE HAS BEEN MANAGING DIRECTOR OF MIBA GLEITLAGER AUSTRIA SINCE FEBRUARY 2025.

At the age of 16, Peter Ornetzeder decided to drop out of high school and start an apprenticeship as a toolmaker, lathe operator, and machine fitter at Miba. After completing his apprenticeship, he worked for seven years in shifts in tool processing and then moved to the office as a work planner. After the dedicated young employee had already been noticed, he was entrusted with more and

more extensive tasks and even spent some time at the Miba bearing plant in Ohio in the USA. He then took on management positions at Miba Gleitlager Austria, where he was most recently Production Manager for bushings and thrust washers. Since February 2025, Peter Ornetzeder has been Managing Director of the plant and thus head of around 900 employees.

Continuous learning has been an important principle for Peter Ornetzeder throughout his career. He completed the Business Lab at the Miba Leadership Academy and completed an MBA at the LIMAK Austrian Business School alongside his job.



In addition to Peter Ornetzeder, his son Luca works as an apprentice and Peter's brother Roman Ornetzeder as head of apprentice training at Miba in Laakirchen.



SECOND-CHANCE APPRENTICESHIP:

"IT'S NEVER TOO LATE TO LEARN SOMETHING NEW!"

Offering employees in production a higher qualification as a skilled worker is the aim of the second-chance apprenticeship. Around 50 employees in Upper Austria have already been able to gain an apprenticeship qualification in this way. They are achieving something very special, as the training takes place alongside their regular work in their free time. The training is financed entirely by Miba. The sixth round of training started in October 2024. Nine men and three women are taking part.

SPRINGBOARD TO TEAM LEADERSHIP

Sabine Feichtinger is a prime example of the career opportunities that a second-chance apprenticeship can open up. Before joining Miba, the 57-year-old worked in retail, as a cab driver, and as a dental assistant. She then joined Miba in 2007 and started working in quality control in Laakirchen. In her mid-40s, she began a second-chance apprenticeship and has been working as a team leader in production at Miba Gleitlager Austria in Laakirchen since completing it.



Sabine Feichtinger (pictured with Ilker Uzunoglu from her team) became team leader in production at Miba Gleitlager Austria after completing her apprenticeship in 2017.



Start of the sixth round of second-chance apprenticeships in October 2024

CUSTOMIZED TRAINING OFFERS FOR OUR SKILLED WORKERS

Our skilled workers have always been an essential basis for Miba's success. They manufacture our customers' products to the highest quality and contribute their know-how, experience, and ideas every day. We offer them

comprehensive, tailor-made training programs, ranging from technical training courses and on-the-job training to training for team leaders and shift supervisors.



MIBA APPRENTICESHIP: A ROLE MODEL FOR DUAL EDUCATION IN SLOVAKIA

ALMOST 100 YOUNG PEOPLE HAVE ALREADY COMPLETED AN APPRENTICESHIP AT MIBA STEELTEC IN SLOVAKIA. IT IS ALWAYS COMBINED WITH A "MATURA" SCHOOL LEAVING EXAM.

The introduction of apprenticeship training at Miba Steeltec in 2014 shows how a pilot project can become a successful model for an entire country. The friction materials plant in Vrábce, Slovakia, started a dual education program in close cooperation with Miba in Austria, the Austrian embassy, and the Austrian Trade Commission in Bratislava. It was the role model for apprenticeship training throughout Slovakia, which was enshrined in law shortly afterward.

Since then, almost 100 young people have completed their apprenticeship at Miba Steeltec – a training program that closely combines practical and theoretical content. For four years, the apprentices spend one week on-site at the company and then one week at one of two technical colleges in the region, with which the Miba Steeltec training team works closely together.



PROJECT "AMOS": QUALIFICATION PROGRAM FOR PRODUCTION AT MIBA STEELTEC

With the recently launched "Amos" project, Miba Steeltec offers two additional training programs for production in addition to apprenticeships. On the one hand, the program is aimed at graduates from non-technical schools. They receive condensed technical practical training for specific tasks directly in the company. This enables them to quickly learn the necessary skills and enter a career in production.

On the other hand, the offer is aimed at existing employees from production who want to develop into higher-skilled jobs and deepen their expertise. A dual training program was developed for them in collaboration with the vocational school in Vrábce.

The "Amos" project is named after Jan Amos Comenius, the "founding father" of pedagogy.



The apprenticeship at Miba Steeltec was established in 2014 in cooperation with the Austrian embassy and the Austrian Trade Commission in Bratislava. This close contact continues. In summer 2024, the Austrian ambassador to Slovakia, Johannes Wimmer, and trade counselor Bettina Trojer visited the plant.

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Presentation of the "Matura" projects to a state commission

APPRENTICE TEAMS WORK TOGETHER ON "MATURA" EXAM PROJECTS

Apprenticeship training in Slovakia is generally always completed with a "Matura" exam. To this end, Matura projects are developed in teams in which each team member is assigned an area of work, such as the planning and implementation of mechanics or electronics, design, or programming.

The Matura projects are presented to a state commission that comes to the plant for this purpose. Incidentally, around 20 percent of apprentices continue their training after graduating with a degree.



Trends and opportunities in digitalization were the focus of a Leadership Lab module that took place in San Francisco and at the nearby University of California, Berkeley.

MIBA LEADERSHIP ACADEMY: TRAINING PROGRAM FOR MANAGERS FROM ALL OVER THE WORLD

We have been offering the Miba Leadership Academy (MLA), an international development program for managers, since 2003. With the MLA, we want to actively support their career paths through the acquisition of new specialist skills as well as leadership and social skills. The program is offered in three different formats for different target groups:

BUSINESS LAB

The Business Lab focuses on entrepreneurial action, communication, and self-management. Graduates gain a better understanding of Miba, are familiar with business contexts, and know the tools of intercultural communication. Participants gain insights into our business units, meet members of top management, and visit Miba sites. The MLA Business Lab comprises two modules of five days each. The labs take place in Austria.



EMPLOYEES HAVE TAKEN PART IN THE MLA TO DATE

LEADERSHIP LAB

The MLA Leadership Lab supports business leaders from division management, site managers, and vice presidents in their leadership tasks. Accordingly, an important focus of the program is on leadership skills and strategic thinking. The Leadership Lab comprises four modules, which are held on different continents.

NEXT LEVEL LAB: NEW OFFER STARTS IN FALL

In addition to the two existing labs, we will be offering a third training program. The Next Level Lab will be aimed at members of the site management teams. During two weeks of training in Austria and in another country, the main focus will be on developing leadership skills and equipping them with the tools they need to implement strategic goals at an operational level.



Factory visit of the Business Lab at High Tech Coatings



The presentation of the final certificates of the Leadership Lab 2022 to 2024 was one of the highlights of the Miba Convention in October 2024.

EXPERT AND PROJECT MANAGEMENT TRAINING

We offer a wide range of training programs for our experts and project managers:

- Project management from basic to advanced
- Moderation and presentation training
- BEA (Bearing Engineering Academy)
- Press technician training
- PM Academy (Powder Metallurgy)
- Six Sigma Green/Black Belt
- Mentoring and coaching
- Outside-in: external training programs depending on the specialist area as well as visits to specialist congresses and conferences
- Negotiation training

CREATING OUR HIGH-PERFORMANCE CULTURE TOGETHER

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HIGH-PERFORMANCE CULTURE: THE KEY TO OUR SUCCESS

Our Miba High Performance Culture has enabled us to deliver excellent and above-market results throughout the 1st century of our successful history. It also serves as the foundation for making us fit for our 2nd century and ensuring a sustainably successful future for Miba. Our aim is: Creating our 2nd century together.

We all share a powerful winning aspiration, that enables us to go the extra mile for world class results together, performing consistently above average. We are highly self-motivated and support each other in overcoming challenges in a human and efficient way guided by our positive leadership principles while pursuing a healthy way of life and managing our energy mindfully.

This strong Miba High Performance Culture enables us to own our future and share the joy of achieving great results together in order to play and win in the “Champions League”.



WE WANT TO PLAY – AND WIN – IN THE “CHAMPIONS LEAGUE”!

Our high-performance culture provides the foundation for shaping a successful future and achieving great things together. We want to play – and win – in the “Champions League”.

OUR DEFINITION OF HIGH-PERFORMANCE CULTURE

CUSTOMER FOCUS

... constantly focusing on customer’s needs, seeking to enhance their experience and exceeding their expectations.

CONSISTENT EXCELLENCE

... delivering high-quality results consistently with an attention to detail and efforts to minimize errors over time.

ACHIEVEMENT OF AMBITIOUS TARGETS

... setting, achieving and even overachieving ambitious targets.

SKILL MASTERY

... disposing and constantly developing in-depth knowledge in the areas of expertise while acting as an entrepreneur and understanding financial, operational and business concepts.

EFFICIENCY

... working faster by using fewer resources while continuously optimizing the performance.

INNOVATION

... being highly able to innovate and implement new ideas.

SELF-DRIVENNESS AND RESILIENCE

... being self-driven and resilient in headwinds to perform at one’s best.

ADAPTABILITY

... adapting quickly to change and focusing on constant self-improvement.

WORK ETHICS

... having strong work ethics including a can-do attitude, managing time effectively, being willing to walk the extra mile and responding and reacting quickly.

PROACTIVE PROBLEM-SOLVING & DECISION-MAKING

... identifying and solving problems before they escalate and making the right decisions in a human way.

SELF-REFLECTION

... being self-reflective and proactively seeking feedback.

THESE BEHAVIORS SHALL NOT BE MISINTERPRETED AS ISOLATED PROOFS OF HIGH PERFORMANCE:

EXCESSIVELY LONG WORKING HOURS

... may occur to be necessary but are never the only proof of high performance.

MICROMANAGEMENT

... is not expected while being familiar with details, being well prepared and knowing your numbers is.

PEOPLE PLEASING

... and unconditional obedience usually do more harm than good. “Clarity is kindness” and “courage over comfort” - based on these two principles an open and honest feedback in a respectful manner and telling the (maybe) uncomfortable truth are key.

WORKING DURING WEEKEND, VACATION AND WHILE BEING SICK

... may occur to be necessary in specific situations. Still, also high performers know about the benefits of breaks and a healthy lifestyle and master the skills of energy management.

FORMAL ATTIRE

... is not required on an everyday basis while knowing how to dress for the occasion is important.

PUZZLE PIECES FOR A SUCCESSFUL FUTURE

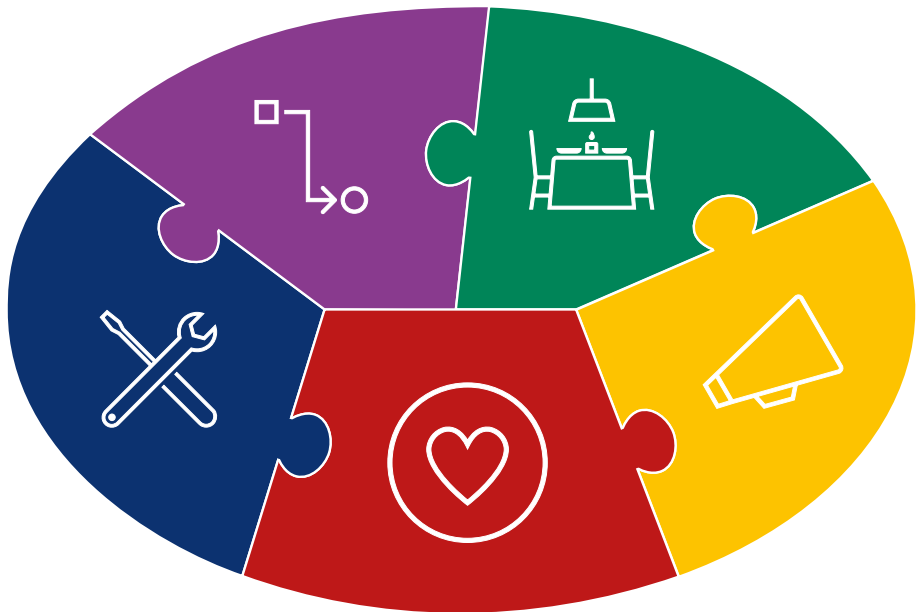
SHAPING THE PATH TO MIBA'S SECOND CENTURY

2. KEEP IT SIMPLE!

- We clarify roles
- Sharpen responsibility and accountability
- Reduce complexity
- Focus on value-added activities

3. 100 % CUSTOMER FOCUS

- The needs of our markets and our customers are our top priority
- Service departments are there to support our business success
- We know that the less time we spend on internal meetings, the more time we have for our markets and customers



1. HIGH-PERFORMANCE AND LEARN-IT-ALL CULTURE

- Commitment to being above average, excellence and hands-on mindset. We want to play and win in the "Champions league"
- Execution – just do it
- Emphasis on collaboration and continuous learning
- Driven by curiosity ("Learn-It-All" culture)

5. GET THE RIGHT THINGS DONE IN A HUMAN WAY

- Execution and empathy are not contradictions, they complement each other
- We focus on Positive Leadership to foster trust and high performance
- We focus on the task and situation we tackle now
- We do not shy away from difficult conversations
- We address issues immediately
- We are always honest about what is happening

4. THINKING AND ACTING LIKE AN ENTREPRENEUR

- We always ask ourselves: What would I do if Miba was my own company?
- We are success seekers, not failure avoiders
- Don't ask for permission, ask for forgiveness
- We encourage an ownership mentality
- We promote success orientation and empowerment



CREATING TOGETHER

AT MIBA, TEAM SPIRIT MEETS INNOVATIVE SPIRIT

CREATING TOGETHER describes what cooperation means for Miba – within our company as well as with our customers and partners. At Miba, team spirit meets innovative spirit.

For us, the spirit of innovation means **CREATING** with ideas. We want our work to contribute to greater sustainability. And we want to take responsibility for our employees, society, and the environment. This requires one thing above all: people who want to make a difference. Our high-performance culture and our strong values create the conditions for this.

Our team spirit is the driving force that inspires us and drives us forward. We all have a wealth of expertise, experience, and ideas. But we know that **TOGETHER** we are always stronger than as individuals. By exchanging ideas with others, we can learn from their experiences and take onboard their suggestions. Every idea and every talent counts in driving Miba forward together.

CREATING TOGETHER also describes the close cooperation with our customers and partners. Together with our customers, we develop and produce "Technologies for a cleaner planet" – solutions for the efficient and clean generation, transmission, storage, and use of energy. Together with our partners, we are committed to projects in education, social issues, and culture. We see this as an important contribution to taking responsibility for society.

#creatingtogether

Miba's new communication line shows how we are **CREATING TOGETHER** with team spirit and a spirit of innovation. We want to find the best solutions. Around 100 employees from seven countries stood in front of the camera as models for the photo shoots.



Video and photo shoot for the new communication line



MIBA FORUM: EXCHANGE AND COOPERATION

The Miba Forum in Laakirchen is our company's head-quarters and center for meeting customers, learning, and innovating. It is a place to come together, exchange ideas, and work together. With its open architecture, the building is designed to promote creativity and innovation and offer a suitable environment for every work situation with more than 4,000 square meters of office areas, meeting and training rooms, areas for intensive teamwork, retreats for individual work, and generously designed café areas. Architecturally, the Miba Forum is a modern interpretation of the square farmhouse that is widespread in Upper

Austria. It, thus, combines our regional roots with the spirit of innovation that is deeply rooted in our corporate culture.



POSITIVE LEADERSHIP: OUR LEADERSHIP CULTURE

Our managers play a particularly important role in the development of our employees. They are the carriers of our coaching-oriented management style, which we have already practiced in the past and continue to develop with elements of positive leadership for the future. In this way, we want to meet the requirements of new ways of working in a fast-moving and complex environment. The Positive Leadership approach is based on positive emotions and focuses on activating the positive energy of our employees, thus promoting their intrinsic motivation. By making feedback an integral part of our work and focusing

on the strengths of each and every individual, we are developing our corporate culture further. This enables us to grow as individuals, as teams, and as a company.



HAVE ALREADY ATTENDED THE POSITIVE LEADERSHIP TRAININGS AT MIBA



Training of employees from the new Miba site in Mexico at Miba Steeltec in Vrábce, Slovakia

GLOBAL COOPERATION AND DIVERSITY ARE THE BASIS FOR INNOVATION AND PRODUCT QUALITY

The collaboration of people with a broad spectrum of expertise and experience, different lifestyles, views, and attitudes is one thing above all: a driver of innovation and the basis for product quality. The exchange of different

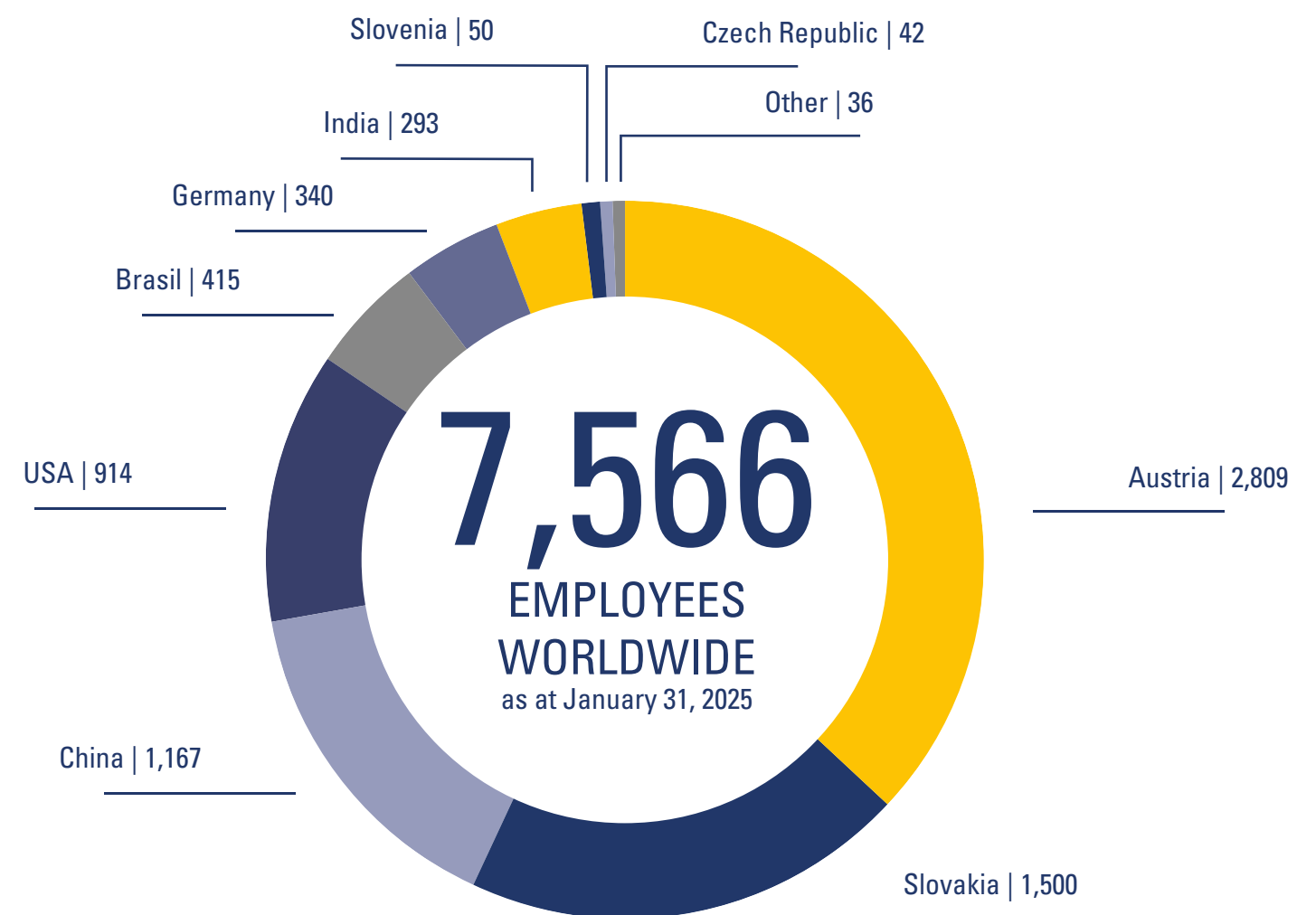
mentalities and cultures gives rise to completely new, innovative ideas. That is why we at Miba rely on global co-operation, across the borders of countries, departments, and business units.



percentage of women
at Miba worldwide
(fiscal year 2024/25)



average age of our employees worldwide
(fiscal year 2024/25)



CREATING RESPONSIBILITY TOGETHER

#creatingtogether



WE TAKE RESPONSIBILITY FOR OUR EMPLOYEES



Preventive healthcare at Miba Sinter Brasil

OCCUPATIONAL HEALTH & SAFETY

GLOBAL FOCUS ON HEALTH, SAFETY, AND FITNESS

Health is our greatest asset. We therefore have numerous initiatives around the world to make the working environment even safer for our employees and to provide them with the best possible health and safety support. The Environment, Health & Safety (EHS) teams at our sites are constantly working to further improve occupational safety at our production plants. An important indicator of the success of their measures is the accident rate, which is measured by the number of accidents resulting in more than three days of absence per 1,000 employees per year. With a value of 8.2 in the past fiscal year, it is far below the current industry average of 18.6. Some Miba sites, such as Miba Industrial Bearings Brasil, have even been operating their production facilities accident-free for more than a year and a half.

We believe that one of the main factors in accident and injury prevention is strengthening knowledge and safety awareness among our employees. We therefore rely on comprehensive training measures and regular exchanges of experience – also across locations – in order to learn proactively. In addition to wearing the right personal protective equipment (PPE), infrastructural measures are just as important. The installation of sensors in forklift trucks and special LEDs in hazardous areas, for example, contributes to the protection of employees in the production halls.

PROMOTING HEALTH AND FITNESS

We see it as our responsibility to support the long-term well-being of our employees. That is why there are ongoing measures to promote health and fitness at Miba sites worldwide. These include training programs for body-friendly working conditions or for sitting correctly at a desk. Height-adjustable measuring tables are also used in production to make it easier to maintain a healthy posture while working. In addition, initiatives such as first aid courses, blood donation campaigns, and campaign days with health checks and check-ups were offered at our sites regularly last year.



Health Day featuring preventive check-ups at Miba Sinter Slovakia

Because physical activity also plays an important role in our health, there is a group of dedicated employees in Upper Austria who regularly organize leisure and fitness activities under the motto “Miba in Motion”. These include volleyball and tennis tournaments, joint participation in running events, and weekly fitness sessions at the Miba Forum. Another initiative by employees demonstrates how sport can be combined with sustainability: they motivate each other to achieve top performance by cycling as many kilometers of their commute to work as possible.



The “Miba in Motion” team at the business run in Gmunden

#creatingtogether



Joint family movie night in Upper Austria

CELEBRATIONS AND LEISURE ACTIVITIES

For us, the motto #creatingtogether embodies more than the aspiration to jointly develop innovative solutions for our customers. We also see it as an expression of the special team spirit and cohesion



Diwali celebration at the Miba Engineering Center India in Pune

at Miba. This can also be felt away from the workplace: we regularly organize leisure activities for our employees at our sites around the world. These include joint cinema or concert events, basketball games, or organizing Miba sporting events such as tennis or beach volleyball tournaments. We also celebrate festivals together and celebrate local cultural traditions with the employees at our sites..



COMBINING FAMILY AND CAREER: AN IMPORTANT PREREQUISITE FOR EQUAL OPPORTUNITIES

MIBA CRÈCHE IN LAAKIRCHEN

Balancing work and childcare can be a major challenge for working parents. To support our employees in this regard, Miba has been offering a crèche in Laakirchen (Upper Austria) in cooperation with the aid organization “Hilfswerk” for ten years. The facility, which is located in the Margarethe Mitterbauer House, has been continuously developed since its inception and has become a clear expression of the family values that are particularly important to Miba as a family-owned company.

Currently, 20 children of employees from surrounding Miba locations are cared for at the crèche. For many of them, attending the Miba crèche represents an important stage in their development, as it is their first opportunity to spend a few hours away from the familiar surroundings of their home and without their parents. This makes it all the more important for the dedicated educationalists and assistants to provide caring support that not only allows the children to settle in gently, but also responds to their basic needs right from the start and offers them security,

a sense of belonging, and time for individual discovery, play, and exploration.

MASTERING CHALLENGES TOGETHER

Smooth and trusting cooperation is an indispensable part of childcare. The fact that the crèche team has grown to seven people in February 2025 makes an important contribution to this. This means that during core hours, there are always three staff members working in each group. Miba covers the additional costs. This structure enables high-quality care for the children and allows the team to respond even better to their individual needs. After all, these needs change over time: one-year-olds now also attend the crèche, some of whom are just learning to walk. At this important stage of development, additional support is very important – for example, when the staff prepare the children for a joint outing and carry them from the first floor to the ground floor.

It is clear that the crèche team works together very well and that their cooperation is characterized by mutual appreciation and trust. Good communication and enjoyment of work promote team spirit, and monthly meetings provide a forum for discussing upcoming issues and educational approaches. The team has developed specific methods and solutions to best meet the needs of children, parents, and employees. Daily communication with parents is also an important part of this.

ADDED VALUE FOR FAMILIES, THE COMPANY, AND SOCIETY

The Miba crèche offers children an early opportunity to develop social skills. Those who grow up without siblings in particular have the chance to interact with their peers, learn to be considerate of others, and follow rules. A regular daily routine promotes children's self-confidence from the outset and makes it easier for them to start kindergarten later on.

The company crèche not only helps Miba employees resume their careers after having children, but also makes it easier for them to balance family and work life afterwards: they can go to work knowing that their children are being professionally cared for and are close by.



have been cared for since the Miba crèche was founded in 2014

SINCE TEN YEARS: CHILDREN'S PROGRAM DURING THE SUMMER VACATIONS

The summer vacations, which are particularly long in Austria at nine weeks, are a challenge for many working parents. To support our employees in caring for their children during this time, Miba traditionally organizes a multi-

week vacation program at the company site in Laakirchen. In summer 2024 it took place for the tenth time and was more popular than ever: more than 150 children between the ages of four and 14 took part.



WE TAKE RESPONSIBILITY FOR SOCIETY

MIBA FUTURELABS: A PLACE TO EXPERIENCE AND TRY OUT TECHNOLOGY IN PRACTICE

Programming robots and using them to solve various tasks, trying out drones and virtual reality goggles, experimenting with artificial intelligence and learning about its practical applications in the home, creating objects you have designed yourself using 3D printing with plastic, wood, or even chocolate: you can do all this and much more at the Miba FutureLabs. They are a hands-on workshop where a variety of digital technologies can be tried out. And they show how widely they are being used today and will be used in everyday private and professional life in the future. With the Miba FutureLabs, we want to spark enthusiasm for technology, especially among young people. We want to give them the opportunity to deal intensively and practically with their opportunities and challenges. We want them to gain experience and knowledge so that they can actively shape the future. The Miba FutureLabs are financed entirely by Miba and operated jointly with "OTELO – Open Technology Laboratory".

The program is therefore primarily aimed at children and young people. A three-hour workshop is offered for school classes, for which Miba covers the costs, and it is adapted to the age and prior knowledge of the participants. More than 1,000 schoolchildren can take advantage of the program each year. The level of interest is demonstrated by the fact that all dates are already fully booked by the end of the school year. The Miba FutureLabs will also be open to selected groups during the summer vacations and offer workshops as part of the KinderUni, a science program for kids,, for example.

EXPANSION ALREADY PLANNED

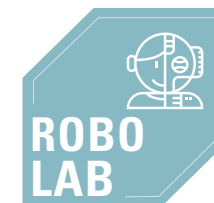
The Miba FutureLabs are based in the center of Laakirchen. They currently comprise seven labs, i.e. experience stations. But the plan is not to stop there: new labs will soon be added to show how technology can contribute to sustainable, clean energy.



FURTHER INFORMATION AND REGISTRATION FOR SCHOOLS



WE CURRENTLY OFFER THESE SEVEN LABS:



In the Robo Lab, programming and controlling robots requires coordination, logical thinking, and spatial awareness.



In the Health Lab, tools are explored with full physical effort, with which health and fitness can be viewed from new angles.



The Mixed Reality Lab merges the real and digital worlds and shows where virtual and augmented reality can be used.



The Mobility Lab demonstrates the impact that drones and other technologies could have on the world of mobility and transportation in the future.



The Media Lab focuses on creativity and imagination when producing images, videos, and music.



The AI & Smart Lab invites you to experiment with chatbots and other AI-based technologies and shows their fields of application.



In the Making Lab, ideas transform into finished parts—whether made of chocolate, plastic, or wood, whether 3D-printed or laser-cut.



Opening of the Miba FutureLabs: Martin Hollinetz (OTELO), Valerie Weixlbaumer-Pekari (Project Manager Miba), Therese Niss (Managing Director Mitterbauer Beteiligungs-GmbH), F. Peter Mitterbauer (CEO Miba AG)



The Miba FutureLabs are housed in their own building right in the center of Laakirchen in Upper Austria.



COMMITMENT TO EDUCATION AND EQUAL OPPORTUNITIES

“MINTALITY” CAMPAIGNS FOR MORE WOMEN IN TECHNOLOGY

A career in STEM (science, technology, engineering, and mathematics) offers many career prospects and above-average earning potential. Nevertheless, women are still underrepresented in these professional fields. The MINTality Foundation was set up to change this. Eleven Austrian companies and interest groups have joined forces on the initiative of Therese Niss, Managing Director of Mitterbauer Beteiligungs-GmbH. The aim is to get girls and young women interested in technology and science and to promote their entry into STEM professions.

One of many measures to achieve this was the MINTality corporate school year in 2024, in which partner companies accompanied classes from certified STEM secondary schools. In the case of Miba, close cooperation was established between Miba Battery Systems and the Bad Leonfelden secondary school. In joint workshops, schoolgirls were able to learn more about the job profiles at Miba and talk to employees about their path to a technical job.



“THE STEM SECTOR OFFERS EXCITING JOBS, VERY GOOD PAY AND MANY CAREER PROSPECTS. THAT’S WHY IT’S SO IMPORTANT TO GET GIRLS AND YOUNG WOMEN INTERESTED IN TECHNICAL TRAINING AND CAREERS.”

Therese Niss, Initiator of the MINTality Foundation and Managing Director of Mitterbauer Beteiligungs-GmbH



PROMOTION OF EDUCATIONAL AND SOCIAL INITIATIVES

teachforaustria

FOR EQUAL OPPORTUNITIES IN THE EDUCATION SYSTEM

Equal opportunities in the education system – that is the goal of “Teach for Austria”. This important initiative focuses on schools in socially disadvantaged areas. University graduates become temporary teachers there and provide additional support for the students. As part of the cooperation with Teach for Austria, Miba managers also teach in the schools on a regular basis. For example, Christian Hansl, General Manager of the Miba Sinter Group, gave pupils at the Ebelsberg secondary school in Linz an insight into powder metallurgy and its exciting applications. He also discussed technical job and career opportunities with the young people.



As part of the cooperation, Miba Manager Christian Hansl held a lesson.



READING AS A DOOR OPENER

In a Red Cross initiative, volunteer reading coaches accompany and support children with reading deficits as a supplement to school lessons. We support the project in the Gmunden district and welcome the reading coaches to the Miba Forum once a year.



We have been supporting the Red Cross reading coach program for many years.



CAREER SPRINGBOARD

The TU Wien talent program offers students a platform to get to know successful companies, make contact with them, and, thus, build a professional network for their professional future. Students receive support from the TU Career Center.



EDUCATION PROMOTES INTEGRATION

With START, we are supporting an initiative that awards scholarships to committed students with a migration background. A comprehensive educational program and individual advice are designed to support these young people in their personal and professional development.



SCHOOL AND MECHATRONICS APPRENTICESHIP

The CAP educational initiative enables pupils to complete a fully-fledged apprenticeship as a mechatronics technician alongside upper secondary school, which ends with an apprenticeship certificate shortly after graduating from high school. A vacation internship and management courses are also included.



HIGH-QUALITY TALENT DEVELOPMENT

The Delta Academy at the University of Leoben is a support program for selected students during their studies. The guiding principle is to support them in their career prospects and to develop the potential of responsible junior managers for companies.



Creating impact together: The winning team of the Franz Mitterbauer Award, our annual Miba Innovation Award, donated the prize money to SOS Children's Villages in their home countries. Miba has doubled the amount.

PROMOTION OF ART AND CULTURE

CULTURE SPARKS CREATIVITY – CREATIVITY SPARKS INNOVATION –
INNOVATION SPARKS SUSTAINABILITY

Art and culture not only enrich our everyday lives. They also inspire and promote creativity and new ideas. These are all important foundations for our innovative strength,

which we use to develop and produce new technological solutions for a cleaner planet.



“SALZKAMMERGUT FESTWOCHEEN GMUNDEN” FESTIVAL

Miba was founded in the Salzkammergut almost 100 years ago, and our company has close ties to the region and the people who live there. We employ around 2,600 people here. Especially as a family-owned company with such strong regional roots, it is important to us to support and promote special cultural initiatives such as the “Salzkammergut Festwochen Gmunden” festival. As part of the partnership, our employees also have the opportunity to attend events as part of the festival at a reduced price.



SALZBURG FESTIVAL



Miba supports the Salzburg Festival, which can look back on a history of more than 100 years and is now considered one of the world's most important festivals of classical music and performing arts. With opera, drama, and concerts, it offers a broad artistic program for which renowned artists from all over the world are invited to Salzburg.



WIENER KONZERTHAUS

VIENNA CONCERT HALL

In addition to its classical program, the traditional Vienna Concert Hall is also a venue for festivals and contemporary music as well as a stage for international jazz. It, therefore, offers an extensive program for all tastes. The promotion of young musicians is also a top priority.



THE CLEVELAND ORCHESTRA

CLEVELAND ORCHESTRA

The Cleveland Orchestra is one of the five largest and most important symphony orchestras in the United States – a nation in which Miba is represented by seven production sites and employs more than 900 people – the best prerequisite for actively supporting this traditional orchestra.



SCIENCE FOR CHILDREN

The KinderUni Upper Austria offers exciting workshops and excursions for five to 15-year-olds during the summer vacations. The children gain new insights into science, technology, and culture. We support the program as a general sponsor and regularly welcome groups.



RUNNING FOR WATER WELL CONSTRUCTION

Miba is a partner of the KAKIHE association founded by two employees. Every year, the association organizes the Five Bridges Run along the Traun River. The proceeds from the event benefit projects for a better drinking water supply in Cambodia.



TAKING OFF TOGETHER

With the Aerospace Team Graz, Miba is supporting an interdisciplinary team of students at Graz University of Technology. Together, they are working towards the goal of developing a rocket and competing in the international European Rocketry Challenge.



SOS CHILDREN'S VILLAGE ALTMÜNSTER

We support residents of the SOS Children's Village Altmünster by covering their school costs for one year. This makes it easier for them to buy school materials and take part in school projects.



PROMOTING AN INTEREST IN TECHNOLOGY

The Lego League aims to make computer science and robotics fun at secondary schools. Teams have to solve tricky tasks with their Lego robots. Miba supports the Ohlsdorf secondary school as a sponsor.



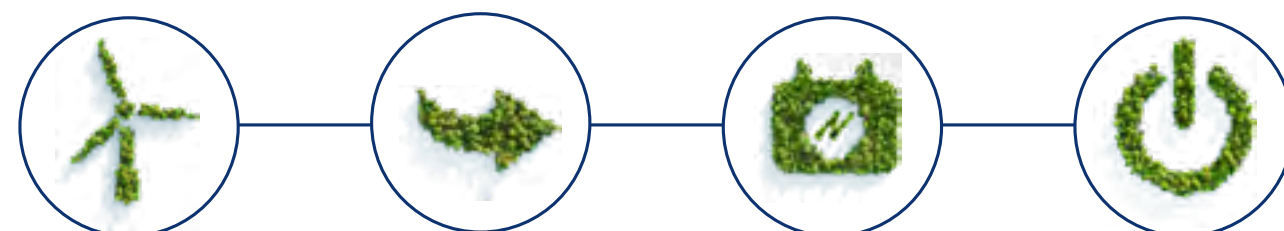
HELP FOR ROMA FAMILIES

We have been supporting the projects of Father Georg Sporschill SJ for many years, including the ELIJAH association. This supports Roma families and their children in Romania.

WE TAKE RESPONSIBILITY FOR THE ENVIRONMENT

MIBA TECHNOLOGIES HELP OUR CUSTOMERS REDUCE THE CO₂ FOOTPRINT OF THEIR PRODUCTS

TECHNOLOGIES FOR A CLEANER PLANET



ENERGY GENERATION

- 90 percent of manufacturers worldwide use our resistors for their power electronics in wind turbines.
- Miba friction materials slow down wind turbine rotors safely.
- Miba bearing technology enables the construction of ever more powerful wind turbines.
- Our technologies optimize speed and power in clutches and brakes.
- The Miba industrial bearings plant in Brazil is one of the world's three largest suppliers of bearing technology for hydropower plants.

ENERGY TRANSMISSION

ENERGY STORAGE

ENERGY USE

- Our resistors and heat sinks are important technologies for reducing energy losses in high-voltage power grids.
- With our batteries we assist our customers in electrifying their products, such as vehicles, tunnelling machines or snowcats. Generators for construction sites or events are also being switched from diesel to electric operation.
- Miba battery storage systems ensure that electricity from photovoltaic systems can be stored efficiently and safely.



- Miba products ensure greater energy efficiency and thus lower fuel consumption in the powertrains of cars, trucks, buses, ships, airplanes, construction and agricultural machinery.
- With our products we reduce the installation space required and the weight of our customers' products.
- The use of metal powder for Miba Sinter products reduces the consumption and waste of raw material compared to conventional production.
- Miba products withstand even the greatest stresses – so they need to be replaced less often. This saves our customers costs and protects the environment.
- With a wide product range of solutions for eMobility we are supporting the mobility industry in its electrification – our resistors, safety systems and battery solutions for electric vehicles are already in series application worldwide.

OUR CLIMATE GOALS

CO₂zero
OUR AMBITION: CO₂-Neutrality by 2040

With "Technologies for a cleaner planet," Miba has had a corporate mission since 2013 which focuses on sustainability, a cleaner planet and, thus, an even more livable world.

We want to contribute to this above all with our products. Our company has also defined the goal of achieving climate-neutral production by 2040.

RESOURCE SAVINGS IN THE PAST FISCAL YEAR

ENERGY, WATER, WASTE



OVER 1,000 HOUSEHOLDS

... could be supplied for a year with the energy we saved in the past fiscal year.

Efficient and economical use of energy is one of our most important goals. In the past financial year, we were able to save 4,233 megawatt hours of energy. This is enough to supply more than 1,000 households with an average annual consumption of 4,000 kilowatt hours each with electricity for an entire year.

18 YEARS OF DAILY BATHING

... could be achieved with the amount of water we have saved.

Within the 2024/25 financial year, we reduced our water consumption worldwide by 981,000 liters. This is enough to fill a standard bathtub with a capacity of 150 liters 6,540 times – and thus bathe every day for almost 18 years.



31 LARGE SEMITRAILERS

... would be needed for the amount of waste we avoided last year.

Avoiding waste is a significant contribution to environmental protection. In the past financial year, we were able to save 765 tons of waste. This amount could be used to load 31 large 40-ton semitrailers, each of which has a payload of 25 tons.



WORLDWIDE CO₂ REDUCTION PROJECTS



AUSTRIA

- **Miba Sinter Austria:** Conversion of the firing of the flame curtain in furnaces from gas to electricity
- **Miba Sinter Austria:** Introduction of an automatic start-stop system for sintering furnaces
- **Miba Gleitlager Austria:** Optimization of extraction and compressed air systems and thermal building refurbishment of a production area
- **High Tech Coatings:** Heat recovery from compressed air generation
- **Miba Resistors Austria:** Use of green energy from solar panels on the new production building
- **Miba Cooling Austria:** Integration of vacuum brazing furnaces and compressors into the heating network for waste heat recovery

CHINA

- **MPCC Sinter:** More efficient positioning of products in the sintering furnace thanks to a new automation process
- **MPCC Bearing/Coating/Friction:** Optimization of the energy requirement in cooling
- **MPCC Sinter:** Reuse of compressor waste heat for water heating
- **MPCC Sinter:** Modernization of production machines (in cooperation with Miba Sinter Austria)

INDIA

- **Miba Drivetec India:** Green energy from solar panels on the factory roof

SLOVAKIA

- **Miba Sinter Slovakia:** Development of a new firing technology for sintering furnaces (in cooperation with Miba Sinter Austria)
- **Miba Steeltec:** Conversion of industrial furnaces from gas to electric operation
- **Miba Steeltec:** Reducing the temperature in little-used rooms

USA

- **ABM:** Increased efficiency in the foundry process, purchase of a new machine
- **Miba Sinter USA:** Changing the programming of the calibration presses to switch off the pumps after a long period of inactivity
- **Miba Sinter USA:** Collecting and reusing oils from the dipping stations during calibration

GERMANY

- **Miba Industrial Bearings Germany:** Replacement of burners, pumps, measurement, and control systems in the heating system

BRAZIL

- **Miba Sinter Brasil:** Optimizing thermal processes and maximizing capacity to save energy in heat treatment furnaces and tin tanks

CZECH REPUBLIC

- **Miba Fibertec:** Hot water preparation using solar panels on the factory roof

CREATING SUSTAINABLE GROWTH TOGETHER

MIBA FACTS



MIBA 100

OUR GROWTH STRATEGY UNTIL 2027

In 2027, we will celebrate the 100th anniversary of our founding by Franz Mitterbauer. And we have committed to growing our annual revenue to EUR 1.5 billion by then. Our corporate strategy “Miba 100” describes how we want to achieve this goal, and also sets the course for Miba’s development after 2027, in the second century of the company’s history.

The corporate strategy “Miba 100” stands on a strong foundation, our corporate mission “Technologies for a cleaner planet.” For more than ten years, since 2013, this has given us the direction, motivation and drive for our day-to-day work. With our technologies we want to make a contribution to a cleaner planet and thus to a world that is even more worth living in. For us and for future genera-

tions. In addition, our corporate mission also creates large growth opportunities – through to 2027 and beyond.

SOLUTION PROVIDER FOR OUR CUSTOMERS

We want to utilize these growth opportunities by directing our focus towards technologically demanding, economically attractive and growing market segments along the entire energy value chain, where we strive for technology and product leadership. With Miba technologies in our customers’ applications we want to contribute to making the generation, transmission, storage and use of energy even more efficient, and thus more sustainable and more eco-friendly.



We want Miba to grow like a tree, sustainably and healthily. With strong business areas which together constitute Miba’s strength. Reinforced by our values and operating principles, the expertise of our 7,600 employees worldwide, and their passion for success.

OUR MISSION:

TECHNOLOGIES FOR A CLEANER PLANET



Being a solution provider for our customers is part of our DNA. In the future too we want to work closely together with our customers to proactively develop and produce solutions for their technological challenges.

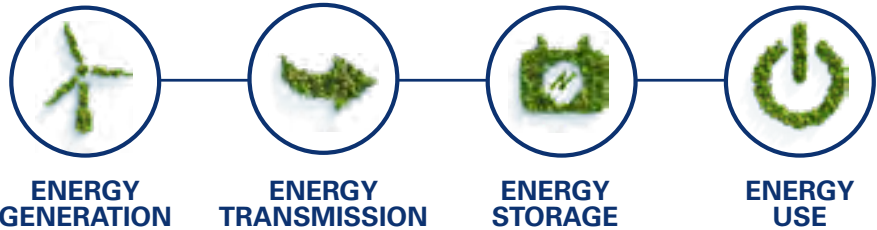
ORGANIC GROWTH AND ACQUISITIONS

On the one hand, our growth will come organically from our existing business areas, above all with new products in new markets. On the other hand, Miba also wants to grow substantially via acquisitions.

We are seeking companies in highly promising, technologically demanding niches along the energy value chain that are well established in the market, share our values and corporate culture, and want to grow further together with us under our guidance.

OUR VISION:

NO POWER WITHOUT MIBA TECHNOLOGY



We want to grow with products for applications in technologically challenging niches along the entire energy value chain, as described in our vision “No power without Miba technology.”

MANAGEMENT BOARD

SUPERVISORY BOARD

Dkfm. Dr. Wolfgang C. Berndt
Chairman of the Supervisory Board
Independent, Member of the Supervisory Board of Miba AG since June 27, 2008

Dr. Therese Niss
Deputy Chair
Independent, Member of the Supervisory Board of Miba AG since June 17, 2018

Prof. KR Ing. Siegfried Wolf
Independent, Member of the Supervisory Board of Miba AG since June 25, 2015

Dr. Martin Brodey
Independent, Member of the Supervisory Board of Miba AG since July 14, 2022

Mag. Georg Kapsch
Independent, Member of the Supervisory Board of Miba AG since August 27, 2024

Johann Forstner
Delegated member
Member of the Supervisory Board of Miba AG since 2009

Helga Gottenhumer
Delegated member
Member of the Supervisory Board of Miba AG since 2023

DI Dr. h.c. mult. Peter Mitterbauer
Honorary Chairman

Christoph Ederer
Management Board Member of Miba AG
(since July 1, 2023)

Also responsible for: Miba Bearing Group, Mergers and Acquisitions, Supply Chain Management

F. Peter Mitterbauer
CEO of Miba AG
(since July 1, 2013)

Also responsible for: Miba Sinter Group, Miba Power Electronics Group, Communications, People & Culture, Strategy, Innovation and Technology, Internal Audit

Martin Liebl
Management Board Member of Miba AG
(since February 1, 2020)

Also responsible for: Miba Friction Group, eMobility, Miba Automation Systems, Quality

Michael Hummelbrunner
CFO Miba of AG (since February 1, 2024)

Also responsible for: Finance and Controlling, IT/Digitalization, Legal and Compliance, Procurement and Supplier Management

GLOBAL PRESENCE

31 PRODUCTION SITES AND
7,600 EMPLOYEES

As at: January 31, 2025, employee numbers rounded

Miba Sinter Group

- Miba Sinter Austria**
Vorchdorf, Austria
- Miba Sinter Slovakia**
Dolný Kubín, Slovakia
- Miba Sinter USA**
McConnellsville, OH, USA
- Miba Sinter Brasil**
Indaiatuba, Brasil
- Miba Precision Components (China) – Sinter Branch**
Suzhou, China
- Sintercom India***
Pune, India

Miba Bearing Group

- ENGINE BEARING BRANCH**- Miba Gleitlager Austria**
Laakirchen, Austria
- Miba Bearings Materials**
Aurachkirchen, Austria
- Miba Bearings US**
McConnellsville, OH, USA
- ABM Advanced Bearing Materials**
Greensburg, IN, USA
- Miba Precision Components (China) – Bearing Branch**
Suzhou, China
- High Tech Coatings**
Vorchdorf, Austria
- INDUSTRIAL BEARING BRANCH**- Miba Industrial Bearings US**
Grafton, WI, USA
- Miba Industrial Bearings US**
Columbus, NE, USA
- Miba Industrial Bearings US (Houston)**
Deer Park, TX, USA
- Miba Industrial Bearings Germany**
Osterode, Germany
- Miba Industrial Bearings Brasil**
Cataguases, Brasil
- ADMOS Gleitlager**
Berlin, Germany

Miba Friction Group

- Miba Frictec**
Roitham, Austria
- Miba Steeltec**
Vráble, Slovakia
- Miba Fibertec**
Šteti, Czech Republic
- Miba HydraMechanica**
Sterling Heights, MI, USA
- Miba Precision Components (China) – Friction Branch**
Suzhou, China
- Miba Drivetec India**
Pune, India
- Miba Precision Technologies Mexico**
Ramos Arizpe, Mexico

Miba Power Electronics Group

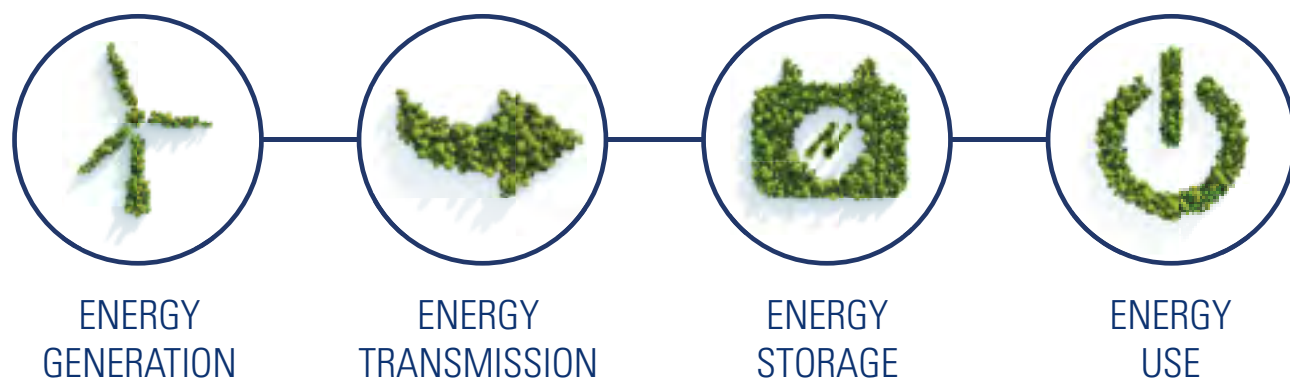
- Miba Resistors Austria**
Kirchbach, Austria
- Miba Cooling Austria**
Ligist, Austria
- Miba Electronics Slovenia**
Šentjernej, Slovenia
- Miba Resistors US**
Middletown, PA, USA
- EBG China***
Qingxi/Shenzhen Area, China

- Miba Automation Systems**
Aurachkirchen, Austria
- Miba eMobility**
Laakirchen, Austria
- Miba Battery Systems**
Bad Leonfelden, Austria

EUROPE
4,900 employees
15 production sites

ASIA
1,400 employees
6 production sites

* Companies in which Miba has shareholdings



PRODUCT PORTFOLIO

OUR TECHNOLOGIES FOR A CLEANER PLANET



POWDER METAL PARTS

Miba's powder metal parts are characterized by complex design that integrates several functions in one component, high precision, strength, and low weight. Our components are used in engines, transmissions and the electric steering systems of cars, where they make an important contribution to increasing efficiency and saving fuel. In addition, there are many uses for Miba powder metal parts in electric drivetrains, industrial applications such as household appliances or air-conditioning equipment, leisure equipment (fitness equipment, eBikes), conveyor technology, and trucks.



BEARINGS

Engine bearings are components in internal combustion engines in trucks, ships or locomotives that play a role in determining the function and service life of the engine. They are used to support crankshafts and camshafts, minimize the friction that develops during operation, and protect the engine from damage or failure. They increase the efficiency by withstanding higher ignition pressure and thus bring about energy gains. Our bearing technology is increasingly being used in wind power, where in the wind turbine gearboxes it provides a solution for ever higher demands on performance. In the future it will also be possible to use Miba bearings as rotor main shaft bearings in wind turbines in the form of individual bearing segments, which simplifies maintenance tasks and thus saves costs.

Industrial bearings are a crucial part for the performance of rotating equipment, and support both radial and axial loads. Industrial bearings are used in turbomachinery such as compressors, gas and steam turbines, generators or pumps, and are designed for the most demanding applications with high sliding speeds.

FRICITION MATERIALS

Friction materials are crucial to the performance of clutches and brakes, in which they are used to optimize speed and power. Components from the Miba Friction Group reduce both the weight and size of transmissions and axles. Miba friction materials are fitted in tractors, construction machinery, trucks, cars, high-speed trains, motorcycles, aircraft, and also in wind turbines.



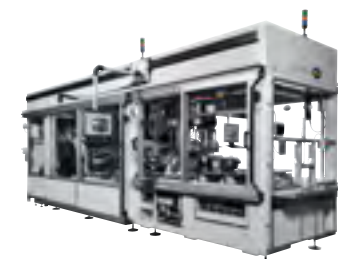
BATTERY SYSTEMS AND COMPONENTS

With our battery systems and the Miba FLEXCOOLER® we offer solutions for a variety of applications: our products are used in road vehicles and off-highway vehicles, as well as in mobile and stationary energy storage.



SPECIAL MACHINERY

Special machinery from Miba is used for high-precision and high-speed machining of small to very large components. Miba Automation Systems is a leader in robotics and automation, as well as in mobile and stationary special machinery. In addition, the wind power industry is one of the company's most important markets. The extensive product range also includes the design and development of prototypes, as well as the construction of production facilities for electric motor stators.



COATINGS

Miba develops customized coating solutions to enhance functional surfaces. The core technologies are polymer and anti-friction coatings, electroplated coatings and PVD coatings. Our coatings are distinguished by optimum functionality and maximum service life. They are used in components for engines and transmissions, as well as for industrial applications.



POWER ELECTRONIC COMPONENTS

The Miba Power Electronics Group continuously works on solutions for power electronics that are tailored directly to the respective customer. Our resistors and heat sinks contribute to the efficient generation, transmission and use of electrical energy. Miba power electronics are used in electric vehicles: our resistors can be found in series application in electric vehicles.



OUR MISSION:

TECHNOLOGIES FOR A CLEANER PLANET



ENERGY GENERATION



ENERGY TRANSMISSION



ENERGY STORAGE



ENERGY USE

