

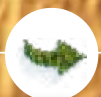
BECAUSE OUR CUSTOMERS MATTER

HOW MIBA TECHNOLOGIES
CONTRIBUTE TO OUR CUSTOMERS'
SUSTAINABLE PRODUCTS

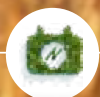
OUR MISSION:
TECHNOLOGIES FOR A CLEANER PLANET



ENERGY
GENERATION



ENERGY
TRANSMISSION



ENERGY
STORAGE



ENERGY
USE

ANNUAL REPORT

2023/24

ENGLISH



HIGHLIGHTS & AWARDS

23/24

May 23

Groundbreaking for new plant in Mexico

In the north of Mexico, a modern friction materials plant is being constructed, covering an area of 5,000 square meters. After its completion in spring 2024 Miba Friction Group produces components there for the local market.



June 23

Miba doubles production space in Kirchbach, Styria

The expansion of our site in Kirchbach in Southern Styria began with a formal groundbreaking ceremony. With the additional space, Miba is creating room for the plant's strong growth, especially in the eMobility sector.



July 23

Market launch of the VOLTstation
Miba Battery Systems presented the latest generation of its mobile and emission-free energy storage. In January 2023 Miba acquired 100 percent of the shares in the Austrian battery specialist.



August 23

80 children at Miba vacation program

For the ninth time Miba organized vacation care for its employees' children. For three weeks, the Miba Forum was transformed into a space for playing, handicrafts and experimenting for 80 children aged between four and 14.



September 23

Long Night of Industrial Culture

Interested visitors were able to take a look behind the scenes at Miba Gleitlager Austria and get to know its products in a relaxed atmosphere. The apprentice workshop also opened its doors.



November 23

Nomination for the Austrian National Innovation Award

The Miba POWERcloser was one of the six finalists for the Austrian National Innovation Award ("Staatspreis Innovation"). It acts as an important safety system in electric vehicles, protecting occupants and emergency services in the event of a crash.



January 24

Miba creche celebrates anniversary
With the in-house creche, Miba has been contributing to the compatibility of family and career for ten years. 127 children have attended the creche since it opened.



Launch of the Miba FutureLabs

Miba created a digitization playground which invites children and teenagers to a fun journey of discovery through the world of technology and innovation.



REGIONALITÄTSPREIS (UPPER AUSTRIAN REGIONALITY PRIZE)

"Champion" for the Upper Austria region
Miba AG



ENERGY GLOBE AWARD

For the Miba FLEXcooler
Miba AG and Miba eMobility

LEADING EMPLOYERS

LEADING EMPLOYERS 2023
Top 1% of employers in Austria
Miba AG



BEST RECRUITERS 23/24

In Silver
Miba AG



US-A-BIZ AWARD 2023

In Silver in the category "Investment"
Miba AG



AUSTRIA'S LEADING COMPANIES

From Die Presse, PwC and KSV1870
Miba Resistors Austria (EBG)



GE VERNOVA

CERTIFICADO DE RECONHECIMENTO

In the category "On Time Delivery" from GE Power Conversion Campinas
Miba Industrial Bearings Brasil

Bundesministerium Arbeit und Wirtschaft

STAATSPREIS INNOVATION (AUSTRIAN NATIONAL INNOVATION AWARD)

From the Federal Ministry of Science, Research and Economy
For the Miba POWERcloser (finalist)

SIEMENS

OUR STARS FOR GWE

Nominee for Best Logistics
From SIEMENS GWE
Miba Resistors Austria (EBG)



EMPLOYER OF THE FUTURE

From the German Innovation Institute for Sustainability and Digitalization
Miba Industrial Bearings Germany Osterode

CompanyWall

COMPANY WALL BUSINESS AWARD 2023

Miba Electronics Slovenia (EDMS)



HEALTHY COMPANY OF THE YEAR 2023

From Union zdravotná poisťovňa
Miba Sinter Slovakia



FAW GROUP TECHNICAL SUPPORT AWARD 2023

From FAW Group
Miba Precision Components (China)



SUPPLIER OF THE YEAR 2023

From JDEC
Miba Precision Components (China)



WEICHAI DEVELOPMENT PARTNER 2023

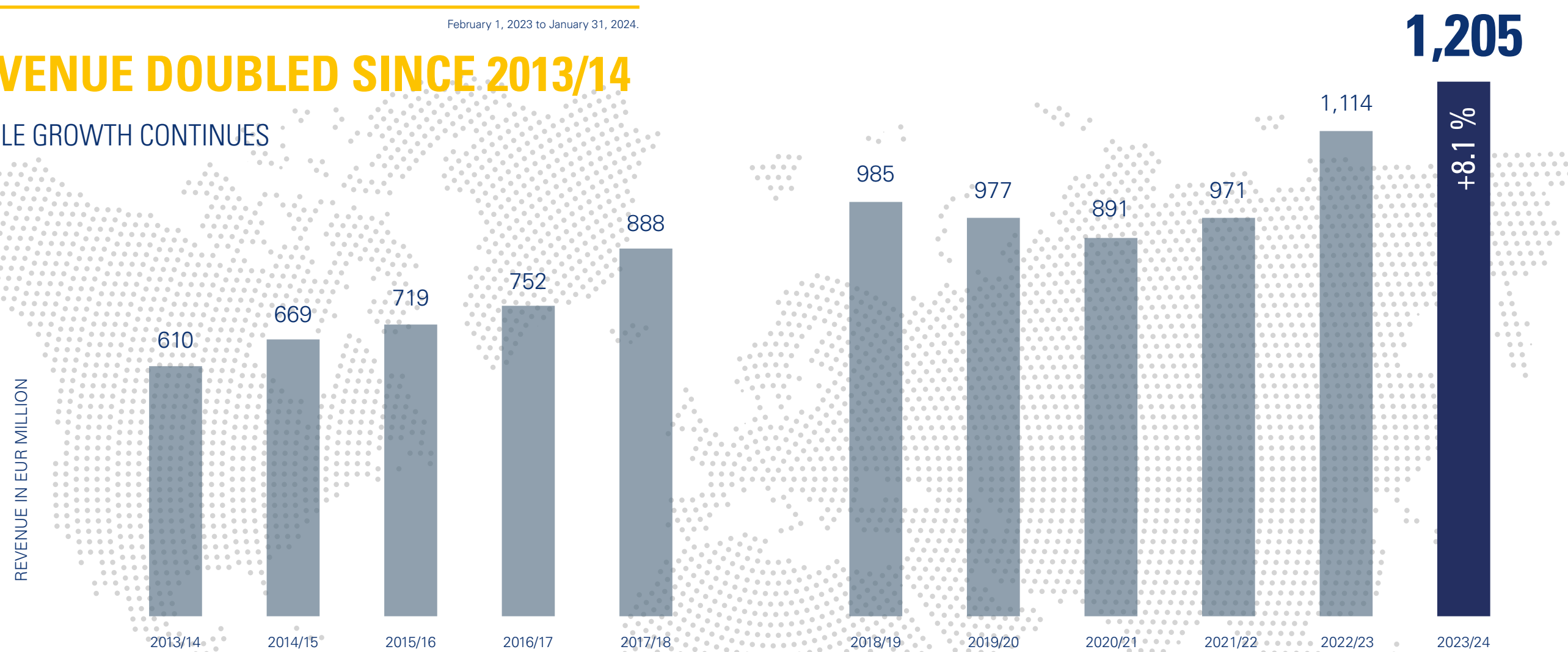
From Weichai Power
Miba Precision Components (China)

KEY FIGURES 2023/24

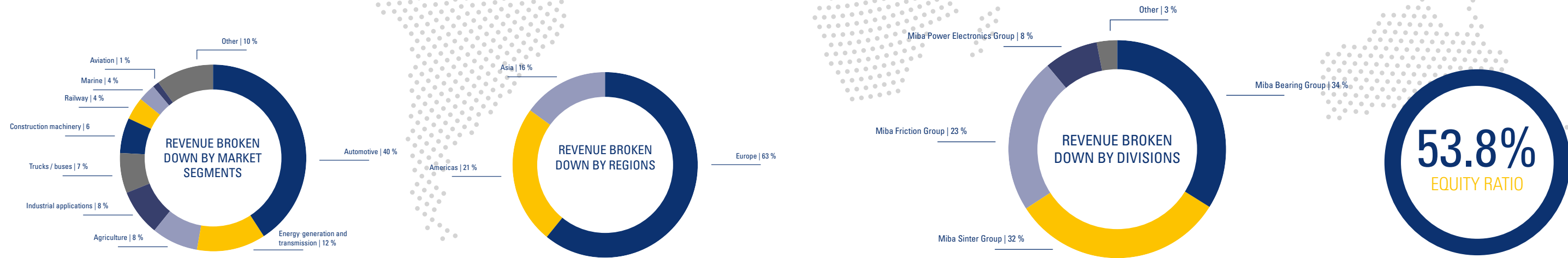
February 1, 2023 to January 31, 2024.

REVENUE DOUBLED SINCE 2013/14

STABLE GROWTH CONTINUES

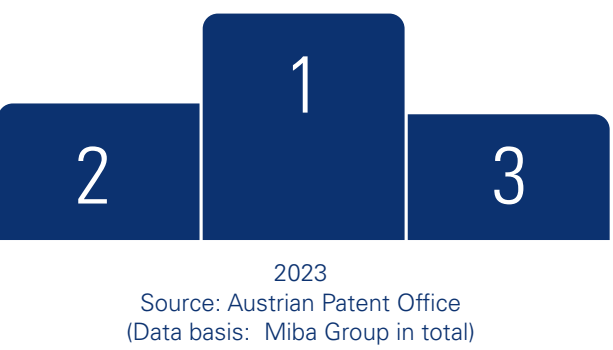


ANNUAL REVENUE 2023/24 IN DETAIL



INNOVATIVE SOLUTION PROVIDER FOR OUR CUSTOMERS

NO.1
PATENT LEADER IN
UPPER AUSTRIA



AMONG THE
TOP 3
PATENT APPLICANTS
IN AUSTRIA

2023
Source: Austrian Patent Office
(Data basis: Miba Group in total)

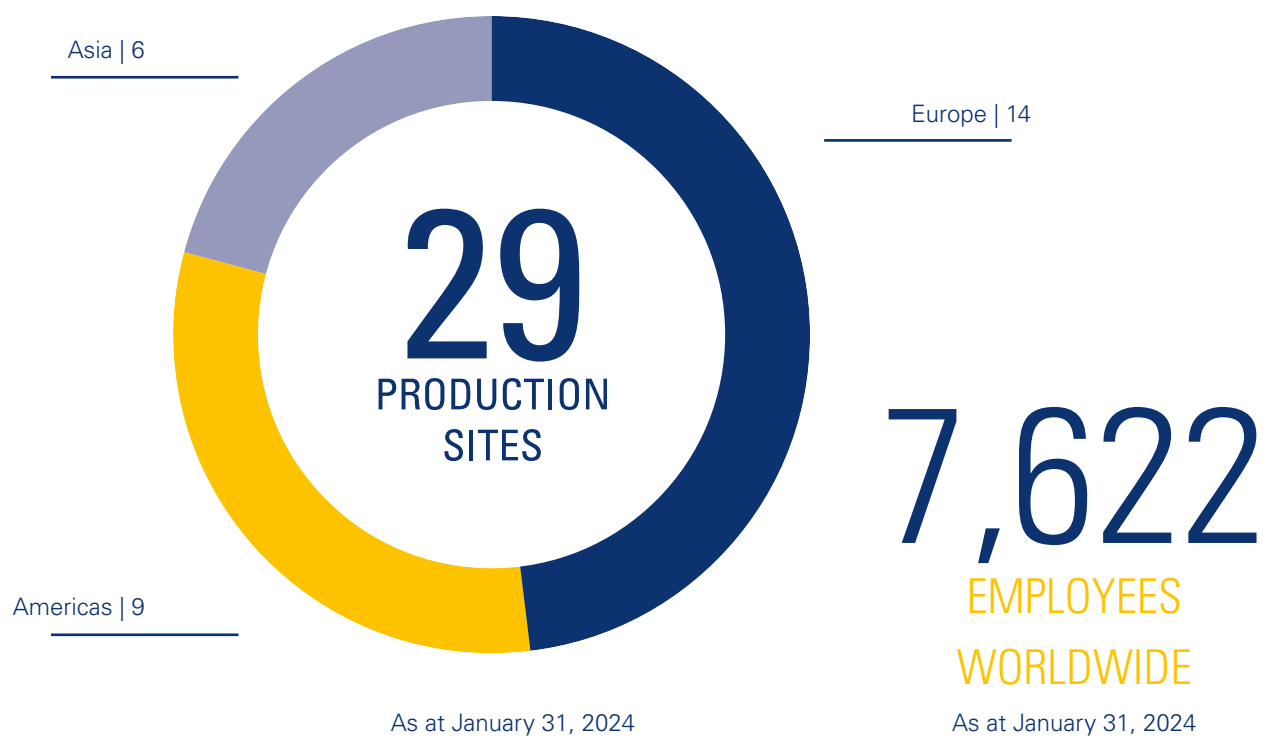
422
PATENTS HELD
BY MIBA

As at January 31, 2024

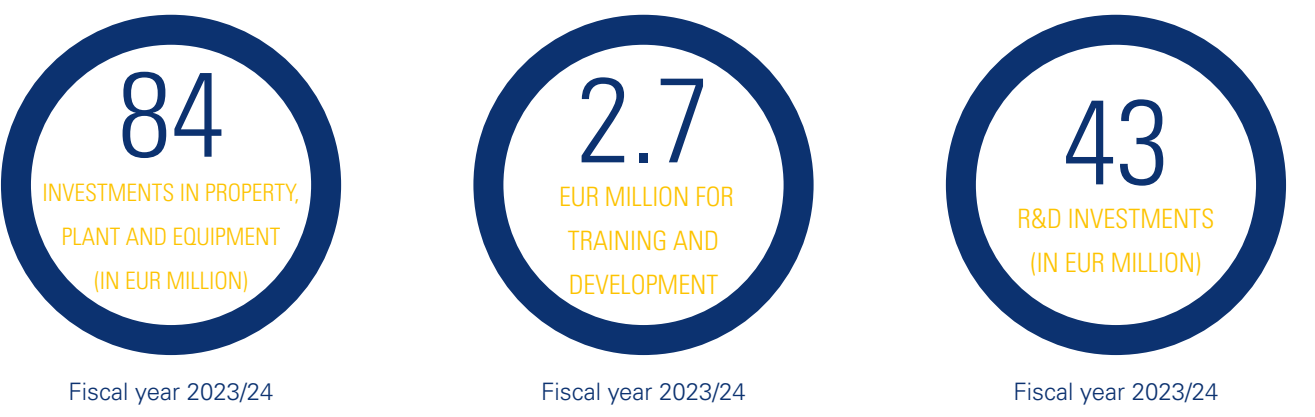
3.5 %
R&D RATIO

Fiscal year 2023/24

PRESENT ON ALL THE IMPORTANT CUSTOMER MARKETS WORLDWIDE



EUR 130 MILLION INVESTED IN THE FUTURE



LIST OF CONTENTS



IMPRINT

PUBLISHER

Miba AG, Dr.-Mitterbauer-Straße 3,
4663 Laakirchen, Austria, www.miba.com

EDITORIAL STAFF

Michael Breneis, Wolfgang Chmelir,
Ulrike Reisenberger, Ortrun Schandl

CONCEPT AND DESIGN

P8 Marketing GmbH, www.p8.eu

PRINTER

Samson Druck

TRANSLATION

Greller-Schweickhardt GmbH

PICTURE SOURCES

Miba AG, Laakirchen
Hermann Wakolbinger
Matthias Witzany
iStockphoto.com, Shutterstock.com, Freepik.com

To optimize the illustrations in this report, some images were generated or optimized by means of Artificial Intelligence. These images are identified by the following symbol:



PLEASE NOTE

Rounding, typesetting and printing errors cannot be excluded. Projections relating to Miba AG's future performance are estimates that have been arrived at based on the information available at the time this annual report went to press. If the assumptions underlying these projections do not materialize, or if risks occur at magnitudes other than those calculated, the actual results may deviate from the projections.

FOREWORD BY F. PETER MITTERBAUER,
CEO MIBA AG



01

Pages: 4–65

BECAUSE OUR CUSTOMERS MATTER

P. 6 | Mission, Vision and Miba Lighthouse
P. 9 | Focus on Customer Benefits
P. 10 | Innovation creates Added Value
P. 14 | Customer Solutions for Energy Generation
P. 24 | Customer Solutions for Energy Transmission
P. 32 | Customer Solutions for Energy Storage
P. 40 | Customer Solutions for Energy Use



02

Pages: 66–75

BECAUSE OUR PEOPLE MATTER

P. 68 | Worldwide Cooperation and Positive Leadership
P. 71 | Lifelong Learning
P. 73 | New Training Center
P. 74 | Apprenticeships with a Mission



03

Pages: 76–89

BECAUSE OUR RESPONSIBILITY MATTERS

P. 78 | Responsibility for our Employees
P. 82 | Responsibility for Society
P. 86 | Responsibility for the Environment



04

Pages: 90–99

MIBA FACTS

P. 92 | Strategy Miba 100
P. 94 | Management Board and Supervisory Board
P. 96 | Company Locations
P. 98 | Product Portfolio



BECAUSE OUR CUSTOMERS MATTER

“WE WANT TO BE THE SOLUTION PROVIDER FOR OUR CUSTOMERS’ TECHNOLOGICAL CHALLENGES – AND SUPPORT THEM IN REDUCING THE CO₂ FOOTPRINT OF THEIR OWN PRODUCTS WITH MIBA TECHNOLOGIES.”

F. Peter Mitterbauer



Ladies and gentlemen, dear employees,

“Because Our Customers Matter” is the title of our Annual Report this year. We chose this title deliberately. Miba stands for a culture which places our customers at the center. All our internal actions and priorities need to have added value for them. We want to understand their markets and technological challenges – and be their preferred partner in developing and producing solutions for greater energy efficiency and sustainability. We want our Miba technologies to support our customers in reducing the CO₂ footprint of their own products. We want to shape their future markets together with them, and support them in developing their USPs.

REVENUE DOUBLED IN THE LAST TEN YEARS

Miba’s growth path shows how well we are succeeding in this. In the past ten years we have doubled our revenue, and even tripled it in the past 15 years – during this period we grew twice as fast as the world economy. Also in the last fiscal year 2023/24 our revenue increased again by more than eight percent to EUR 1,205 billion.

INNOVATION AND TECHNOLOGY LEADERSHIP

The basis of our success lies in innovation and our striving for technology leadership. Driven by our mission “Technologies for a cleaner planet” we develop solutions for the efficient and sustainable generation, transmission, storage and use of energy. We are proud to be one of the Austrian innovation leaders, with more than 400 patents, 300 employees in research and development, and a traditionally high R&D ratio. In 2023, with 48 patent applications, we were once again one of the top 3 companies in Austria.

HIGH EQUITY RATIO OF 53.8 PERCENT

In order to shape markets together with our customers, we make major investments in the future: in the last fiscal year alone we invested EUR 130 million in our production sites, in research and development, and in our employees’ expertise. As an economically successful and financially independent company with an equity ratio of 53.8 percent, we have the leeway needed to do this. We are continuing our investment program, with EUR 40 million just for constructing new plants and extending the existing ones in Mexico, China and Styria, as well as for a new training and development center for apprentices and specialists in Laakirchen, Austria.

PRODUCT QUALITY AND IDEAS FOR SOLUTIONS

This new training and development center is indicative of a clear attitude: our employees’ expertise guarantees our product quality and ideas for new solutions, and therefore we make large investments in their training and development. We also offer a working environment that is characterized by flat hierarchies, a Positive Leadership culture, openness to new ideas, and facilities to support the compatibility of family and career.

With all of this we want to create the prerequisites so that together – customers, employees, partners and friends of our company – we can shape the technologies and products for the markets of today and tomorrow. I would like to thank you for your interest in Miba and the trust you have placed in us.

Yours

Peter Mitterbauer

F. Peter Mitterbauer

CEO Miba AG

01 BECAUSE OUR CUSTOMERS MATTER



Battery assembly at Miba Battery Systems

OUR MISSION:

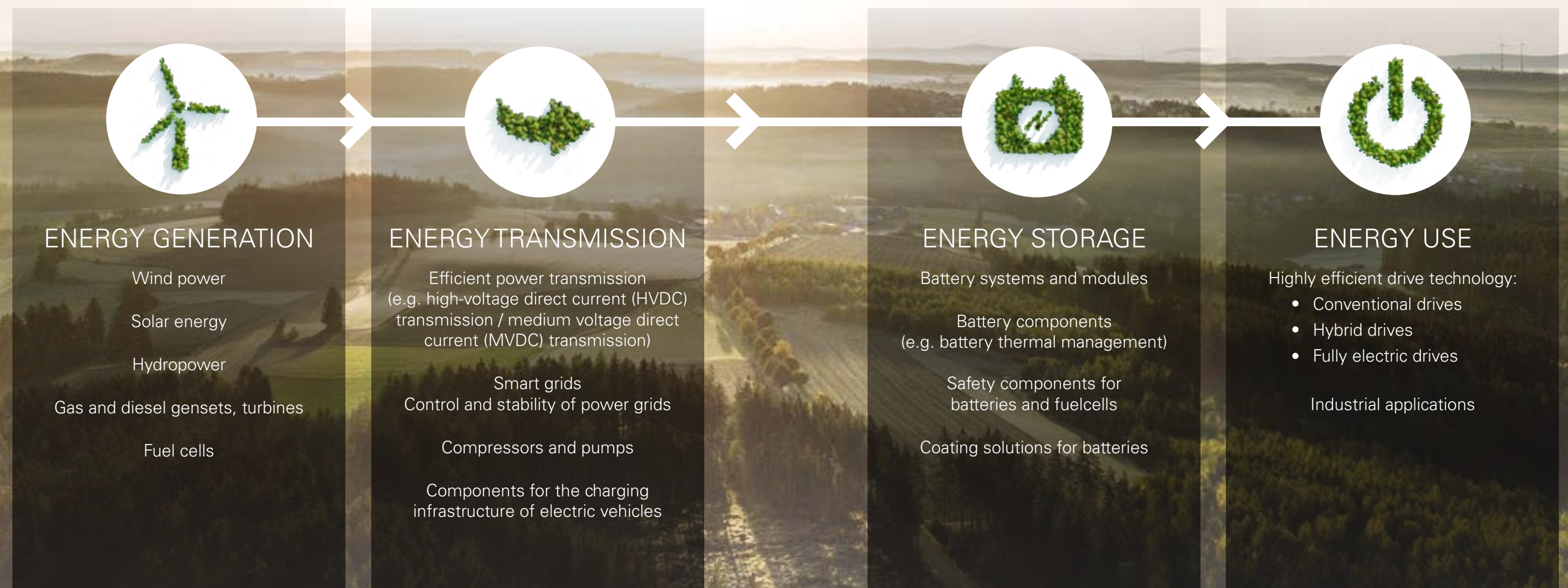
TECHNOLOGIES FOR A CLEANER PLANET

OUR VISION:

NO POWER WITHOUT MIBA TECHNOLOGY

Miba technologies help our customers reduce their products' CO₂ footprint. Used in our customers' applications, we want them to contribute to making the generation, transmission, storage and use of energy even more efficient, and thus more sustainable and more eco-friendly.

We strive for product and technology leadership in technologically challenging niches along the entire energy value chain. The illustration shows the areas in which Miba technologies are already making this contribution today, and the product areas we want to increasingly develop in future.



MIBA LIGHTHOUSE

The Miba Lighthouse is our system of values and operating principles that guides us in our day-to-day work and in our decisions. Our customers and our cooperation with them play a particularly important role in this: 100 percent customer focus, innovation, the highest quality for our

products and processes are among our most important operating principles. And our striving for technology leadership has been a core value at Miba from the very beginning.

MISSION
TECHNOLOGIES FOR
A CLEANER PLANET

VISION
NO POWER WITHOUT
MIBA TECHNOLOGY



“WE WANT TO THINK ABOUT EVERYTHING IN TERMS OF OUR CUSTOMERS’ BENEFITS”

MIBA BOARD MEMBERS CHRISTOPH EDERER, MICHAEL HUMMELBRUNNER AND MARTIN LIEBL ON THE IMPORTANCE OF OUR CUSTOMER FOCUS FOR INNOVATION, PIONEERING SPIRIT AND QUALITY-CONSCIOUSNESS, AND ON FINANCIAL STRENGTH



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

In times of major technological changes, it is more important than ever that we understand our customers and their challenges. That we are out and about with them, and listen to them. If we think about everything in terms of the benefit to our customers, then we can work together with them as a partner and solution provider to develop their technologies of tomorrow, and take them to series production. Our employees create the basis for this, as they know their customers, their markets and technologies better than anyone else. Our corporate culture must encourage them to take responsibility and find the best solutions together with our customers.

MICHAEL HUMMELBRUNNER, CFO MIBA AG
Over the past 15 years, on average Miba has grown twice as strongly as the world economy. Our success as a company and our commitment to financial stability and independence create the basis for substantial investments in our future in research and development, new technologies, new production capacities and in our employees’ expertise. With these investments we are creating the basis to grow together with our customers, and shape their products and markets of tomorrow.



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

Our Miba technologies need to create a genuine USP for our customers’ products. This is our most important objective. At the heart of such success there are usually a few people who work together with great passion and unerringly find a solution for our customers despite all the obstacles. We encourage this pioneering spirit and urge to innovate by providing great scope for personal creativity, flat hierarchies and open communication. Alongside this – and equally important – is our absolute commitment to the utmost quality in production and in our day-to-day contact with our customers.

INNOVATION AND TECHNOLOGY: VALUES AT THE HEART OF OUR CORPORATE CULTURE



WE WANT TO BE THE SOLUTION PROVIDER FOR OUR CUSTOMERS' TECHNOLOGICAL CHALLENGES

"Nothing is impossible" was always the maxim of our company founder Franz Mitterbauer, and we have always embodied his attitude as a core value of our corporate culture. As an innovation leader we want to be the solution provider for the technological challenges of our customers. Together with them, we want to develop products that create true added value for their end applications.

This involves three dimensions:

Desirability:

Would the customer like to buy the Miba product? Are we creating added value for them?

Feasibility:

Can Miba find a technological solution for our customer's challenge?

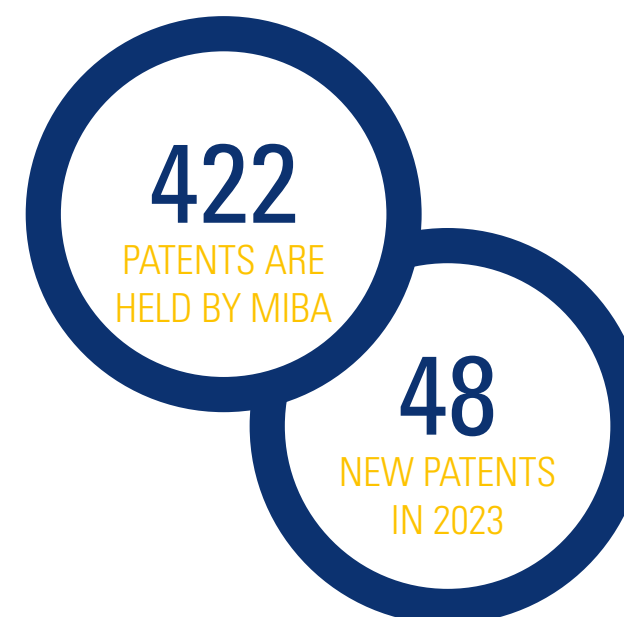
Viability:

Is there a sustainable market for Miba in which we can also make money?



"INNOVATION IS ABOUT PEOPLE!
WE WORK CLOSELY WITH OUR CUSTOM-
ERS WORLDWIDE TO CREATE UNIQUE
TECHNOLOGIES FOR A CLEANER PLANET."

Edoardo Morra, Vice President Innovation, Miba AG

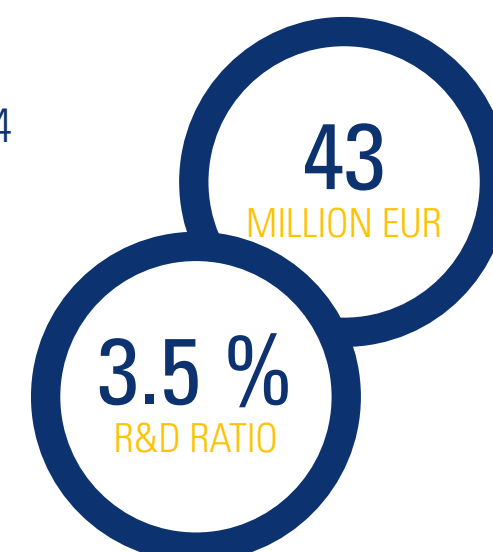


MIBA IS PATENT LEADER

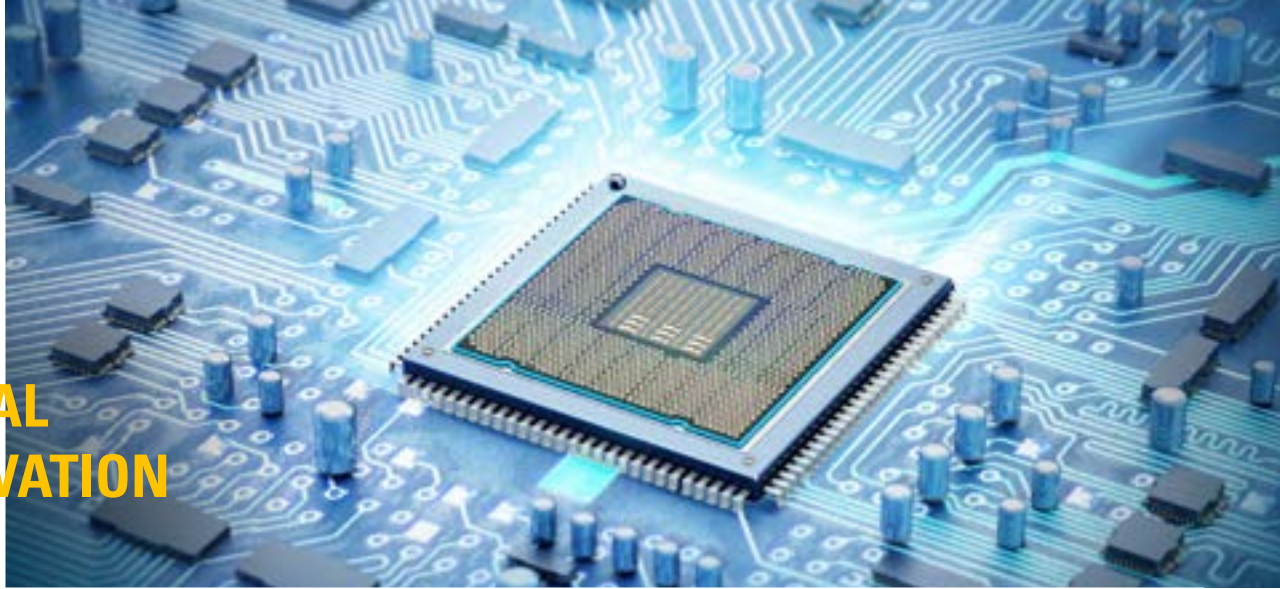
Every year the Austrian Patent Office collects data on which companies have registered most patent applications and utility models. In 2023, the Miba Group, in other words all our companies taken together, was the number one for the third time in succession in Upper Austria. In the Austrian national ranking we were in the top 3 for 2023, also for the third time.

INVESTMENTS IN RESEARCH AND DEVELOPMENT IN FISCAL YEAR 2023/24

As one of the Austrian innovation leaders, we have traditionally made substantial investments in research and development. The focus of our innovation is on increasing the efficiency and convenience of our customers' end products. In so doing, we concentrate on the development of technologies for end applications for the sustainable generation, transmission, storage and use of energy – entirely in line with our corporate mission "Technologies for a cleaner planet".



DIGITAL INNOVATION



DIGITAL TWINS AND PRODUCT CONFIGURATORS: ADDITIONAL CUSTOMER BENEFITS

Digitization is changing customer experiences. We are committed to innovative solutions such as product configurators and digital twins to offer customers individual, realistic 3D product views. With international teams of IT specialists and engineers who use design-thinking

methods, we develop customer-focused innovations. For us, digitization is a continuous process. Our digitization strategy remains one of the keys to success in a changing sector.

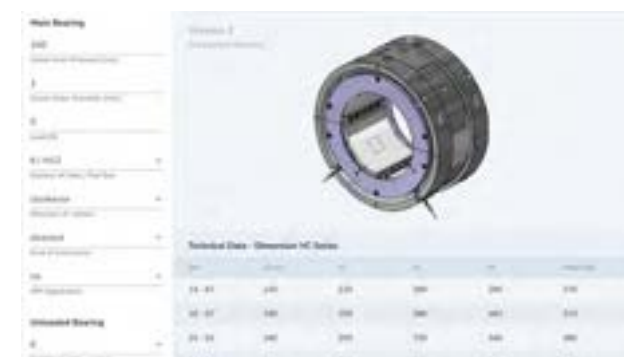
OPTIMAL CONFIGURATION FOR MULTI-DISK CLUTCHES WITH WEB APP FRED



The optimal configuration for a multi-disk clutch requires the best possible coordination of the power density, noise, vibration, and harshness (NVH) requirements, efficiency and total cost of ownership. Our web app "Friction Engineering Designer", or FRED for short, is a great help here, by enabling our customers to create their configuration directly online. Within just a few minutes FRED supplies the key figures to make the technology decision easier and transparent.

BEARING CALCULATOR ENABLES ONLINE PRODUCT CONFIGURATION

Our Industrial Bearing Branch is tapping into the potential of online product configuration. During the past year they have worked intensively on expanding their digital services and thus offering customers more possibilities. The bearing calculator enabled new configurators for radial and axial tilting pad bearings, which will help our customers find the perfect bearing for their individual requirements. We are convinced that these tools will assist our customers in saving time and money, and improving the performance of their applications.



IMPROVED PROCESSES THANKS TO ARTIFICIAL INTELLIGENCE: INTRODUCTION OF MAIA

The introduction of MAIA, Miba's own AI assistant, was an important step towards the integration of Artificial Intelligence in our work processes. MAIA promotes efficiency and provides data-based findings.

Maia
Miba AI Assistant

WORLDWIDE EXPANSION OF PRODUCTION CAPACITY



DOUBLING OF PRODUCTION AREA IN KIRCHBACH IN STYRIA

Our production plant for high-tech resistors in Styria is one of the examples of how at Miba we are utilizing the opportunities offered by the energy turnaround and eMobility. In just the last two years, the company has doubled its revenue from EUR 18 million to almost 37 million. We are now extending the site with an additional two-story building. The production area is growing from 3,000 to 6,300 square meters. The work will be completed in the coming year.



NEW FRICTION MATERIALS PLANT IN MEXICO

We are constructing our first production site in Mexico in Ramos Arizpe in the state of Coahuila. The first step is the construction of a friction materials production site with a production area of 5,000 m². Completion will take place in the first half of 2024.

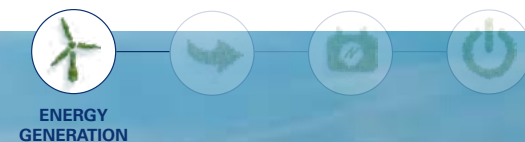


SECOND PRODUCTION SITE IN THE SHENZHEN REGION IN CHINA

In addition to the power resistors plant opened three years ago, we are constructing a further production site in Qingxi in the Shenzhen region in China. The reason is the strong growth of our business, particularly with resistors for electric vehicles. The construction of our first new plant three years ago already doubled our production area to 12,000 square meters. In the new plant around a kilometer away there will be a further 7,000 square meters available in the future.



CUSTOMER SOLUTIONS FOR ENERGY GENERATION





MIBA MACHINES TO BUILD THE WORLD'S LARGEST MONOPILES FOR WIND TURBINES

SIF NETHERLANDS RELIES ON THE EXPERTISE OF MIBA AUTOMATION SYSTEMS (MAS)

Wind energy is one of the safest, most environmentally friendly and cheapest forms of electricity generation and therefore a key component in the clean energy supply of the future. The largest wind turbines on the market with an output of 18 megawatts, for example, generate electricity for around 40,000 households every year. Many of these wind turbines are located off-shore at sea and are erected using monopiles, that are single-pile foundation towers, from the Dutch Sif. For the production of XXXL monopiles, Sif relies on the expertise and machines of Miba Automation Systems (MAS) for weld seam preparation.

SIF IS A TOTAL SOLUTIONS PROVIDER OF MONOPILES FOR WIND TURBINES.

With a company history dating back to 1948 and more than 2,500 monopiles produced, Sif is a total solutions provider of monopiles for wind turbines. Specializing in XXXL monopiles, Sif can produce monopiles up to 11 diameters. Sif employs around 600 people at two production sites in the Netherlands and is currently investing around 330 million euros in the expansion of production capacity in Maasvlakte, where the world's largest monopile factory is being built.

"MIBA AUTOMATION SYSTEMS PLAY AN IMPORTANT ROLE IN THE PRODUCTION PROCESS FOR THE WORLD'S LARGEST WIND TOWERS."

Klaus Weberndorfer, Managing Director Sales, Miba Automation Systems

MONOPILES ARE NOW THE MOST COMMONLY USED FOUNDATIONS FOR OFFSHORE WIND TURBINES

They offer the best price-performance ratio and are used in water depths of 50 to 60 meters. The broad knowledge of welding high-quality, super-strong steel alloys for heavy and cold conditions makes Sif one of the leading suppliers

"WE VALUE OUR COLLABORATION WITH MIBA BECAUSE OF THEIR HIGH DEGREE OF PROACTIVENESS AND THEIR COMMITMENT TO CONTRIBUTING NEW IDEAS TO JOINT DEVELOPMENT PROJECTS. THIS CREATES ADDED VALUE FOR OUR PRODUCTION AND ULTIMATELY FOR OUR CUSTOMER."

Frank Kevenaer, COO Sif Netherlands B.V.

BECAUSE OUR CUSTOMERS MATTER



Sif

& MIBA AUTOMATION SYSTEMS





The load out of a monopile

NEW TECHNOLOGY FROM MIBA AUTOMATION SYSTEMS PLAYS AN IMPORTANT ROLE IN THE PRODUCTION PROCESS

In close cooperation between Sif and Miba Automation Systems, a completely new processing technology has been developed that has not yet been used in any comparable machine on the market. These innovative production machines enable the Sif Group to manufacture the largest XXXL cans and cones, with a diameter of 11 meters (prepared to scale up to 13 meters) and a weight of over 2,500 tons.



More about SIF Monopiles

PARTNERSHIP FOR ALMOST 15 YEARS

Sif and Miba Automation Systems have been partners for almost 15 years, during which numerous development projects have been jointly implemented. Based on Miba's extensive technological experience, the close cooperation between the two companies' development teams in weld seam preparation has optimized the manufacture of monopiles. In addition to the flexibility and partnership-based cooperation, Sif also values the proactive introduction of new ideas and perspectives in joint development projects. Together, ideas are driven forward from the initial concept to the successful completion of projects.

This partnership is also in line with the joint commitment to sustainability. Monopiles manufactured by Sif using MAS milling machines will play a crucial role in supporting the growth of the offshore wind industry, helping to reduce our dependence on fossil fuels and promote a clean, sustainable future. The market for onshore and offshore wind turbines continues to be a growing one, with monopile production capacity currently still lower than market demand. Optimizing the production processes with the help of state-of-the-art machines can help to meet the high demand.



Support Rolls for state-of-the-art milling process from Miba Automation Systems

In addition to the development of completely new production machines, Miba Automation Systems also focuses on the further development of existing machines to make them even faster and more powerful.

Machines from Miba Automation Systems are suitable for weld seam processing on jackets, monopiles, foundations and transition pieces (off-shore), as well as for use in the construction of ever larger wind towers (on-shore).

"MAS LONGITUDINAL AND CIRCUMFERENTIAL SEAM MILLING MACHINES FOR WELD SEAM PREPARATION SAVE MORE THAN 50 % OF THE COSTS COMPARED TO CONVENTIONAL GRINDING AND GOUGING FOR OUR CUSTOMERS."

Klaus Weberndorfer, Managing Director Sales, Miba Automation Systems

FACT BOX

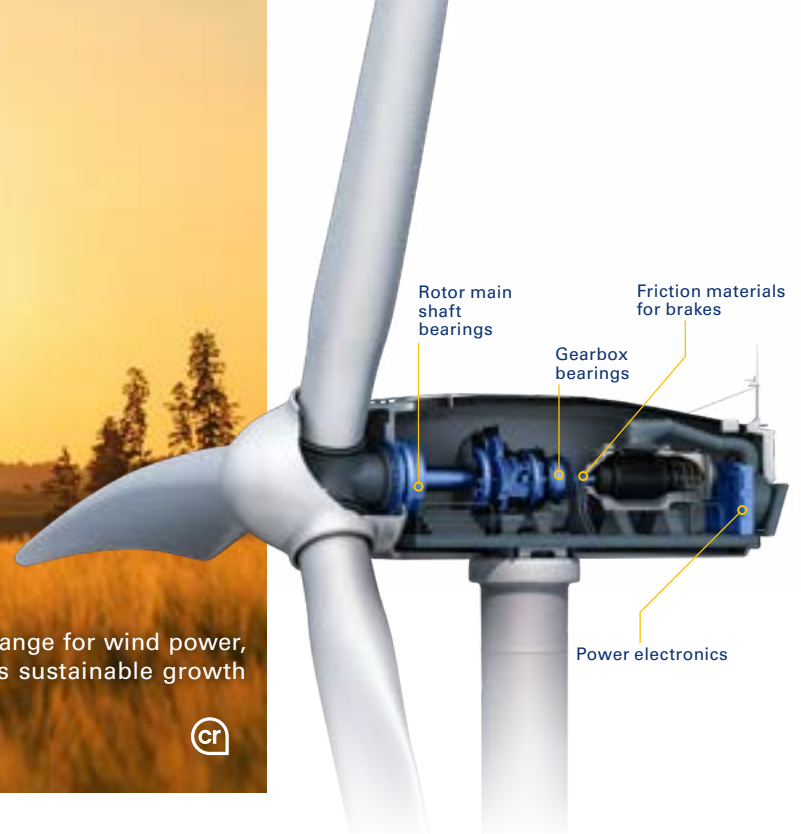
MAS longitudinal and circumferential seam milling machines for weld seam preparation offer:

- maximum precision
- cutting depths of up to 150 mm
- feed rates of over 1.000 mm per minute





WIND POWER



With a wide product range for wind power, we want to shape this sustainable growth market.



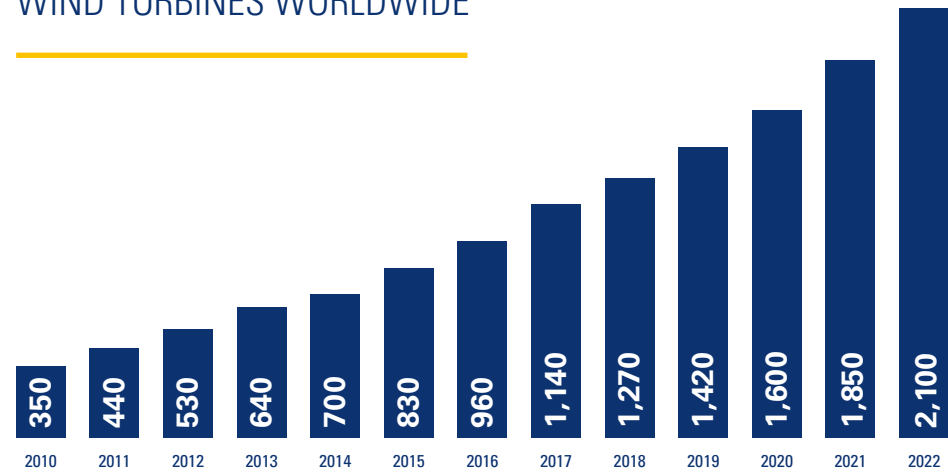
WIND TURBINE GEARBOXES: BEARINGS FOR EVER-HIGHER PERFORMANCE REQUIREMENTS

The wind turbines of the future will be designed for production capacities that are more than twice as high as those today, yet the installation space will not be increased any further. The traditionally used roller bearings can scarcely cope with these demands, so manufacturers of wind turbine gearboxes are switching to Miba bearing technology.



Bearing for wind turbine gearbox

POWER GENERATION FROM WIND TURBINES WORLDWIDE



World in total (TWh)

Source: Energy Institute

NEW ROTOR MAIN SHAFT BEARINGS CONCEPT 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 enables them to be serviced directly on the tower, making expensive cranes unnecessary when replacing bearings. This saves the turbine operators a lot of money, so through the simple servicing the new concept can realize substantial cost savings for our customers.

essary when replacing bearings. This saves the turbine operators a lot of money, so through the simple servicing the new concept can realize substantial cost savings for our customers.

MIBA FRICTION MATERIALS SAFELY SLOW DOWN WIND TURBINES



Miba friction materials for safe operation

To increase safety in strong wind and prevent an energy overload, the rotors of wind turbines have to be slowed down. The safest method of doing this is using 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 can be attributed to the use of high-quality materials and state-of-the-art production processes.

90% OF ALL WIND TURBINE MANUFACTURERS USE MIBA RESISTORS

Miba power resistors are used in wind turbines to limit the power and voltage, for, harmonic limitation or as measuring sensors to improve the grid quality. This makes the turbines more efficient and more robust, and is also the reason why around 90 percent of wind turbine manufacturers rely on our technology.



Miba resistor

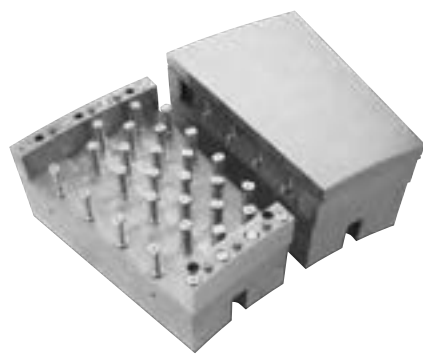
COOLING TECHNOLOGY PROTECTS ELECTRONICS

Miba cooling technology ensures that the function-critical electronic parts in wind turbines are always kept at the right temperature, and are thus protected. To enable precision planning of maintenance cycles, our cooling

technology is also digitized. This not only saves money for the users, but also prevents damage and unnecessary maintenance work.



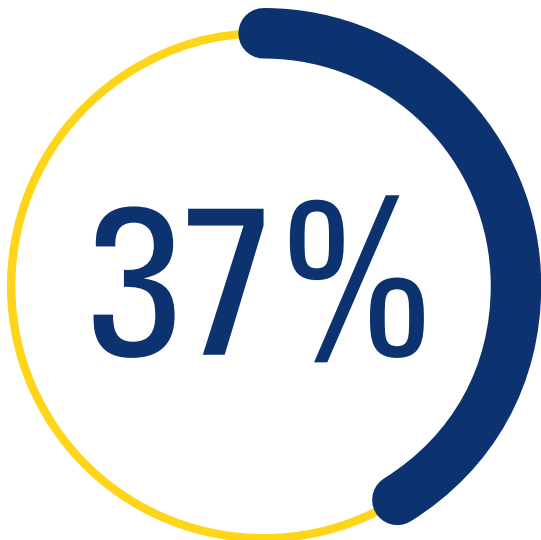
HYDROPOWER



Bearing for hydropower

BEARING TECHNOLOGY FOR HYDROPOWER PLANTS

Miba's industrial bearings production site in Cataguases, Brazil, is one of the world's three largest suppliers of hydrobearings, in other words bearings for turbines in hydroelectric power plants. The Miba bearings technology is used in small (electricity production less than 30 megawatts), medium-sized (electricity production between 31 and 80 megawatts) and large hydropower plants (over 80 megawatts).



37%

HYDROPOWER HAS THE HIGHEST SHARE OF THE RENEWABLE ENERGY PRODUCTION CAPACITY (2022)

Source: International Renewable Energy Agency

MACHINES FOR POWER PLANT CONSTRUCTION

Miba Automation Systems (MAS), our machine construction specialist, is active in power-plant construction. Thanks to MAS, which develops and produces

CNC machines, turbine components can be manufactured more precisely and more efficiently.



SOLAR ENERGY



POWER ELECTRONICS FOR SOLAR POWER SYSTEMS

Our resistors in thick film technology can be found in the power invertors of almost all the solar systems produced by well-known manufacturers. Here they enable the best relationship between component size and performance – especially when compared to wire wound resistors, as our technology enables a larger number of resistors to be installed in a single housing.

In addition, Miba coolers and heat pipes protect the electronic components in solar equipment from overheating. The application of new technologies has enabled the efficiency and power density to be increased even further.



Miba technology for solar energy





ENERGY
TRANSMISSION

CUSTOMER SOLUTIONS FOR ENERGY TRANSMISSION



RENEWABLE ENERGY: SYNCHRONOUS CONDENSERS ENSURE GRID STABILITY



BECAUSE OUR
CUSTOMERS MATTER



& MIBA BEARING GROUP

ANDRITZ TECHNOLOGY SAFEGUARDS THE STABILITY OF POWER GRIDS. MIBA BEARINGS ARE USED FOR MOUNTING THE ROTORS IN THE 400-TON ELECTRIC MACHINES

Renewable, clean energy, such as that generated by wind, solar or hydropower systems, is one of the most important keys to achieving ambitious climate goals. But the strength of the wind is not always the same, nor does the sun always shine just as long and intensively during the course of the day. Against this background, the synchronous condensers from Andritz are used to avoid consequences in terms of grid stability. These are electric machines weighing around 400 tons. They are neither used as motors nor generators, and the rotor of the condenser is not connected to either a drive train or a turbine. Instead, synchronous condensers store energy for a short time in the rotor's natural inertia, and return it to the grid again as needed. This keeps the grid frequency at a constant high level of 50 or 60 Hz, depending on the nominal frequency. Synchronous condensers also ensure that the voltage is stabilized in the event of short circuits, for example if a tree falls onto an overhead line.

MAJOR PROJECT FOR GRID STABILITY IN AUSTRALIA
The Andritz technology is already in use in Brazil and North America to balance out the lower grid stability caused by wind and photovoltaic systems. The company is currently working on the completion of another major solar energy project in Australia, a country that is an ideal location for this with up to 3,000 hours of sunshine a year. The project comprises the supply of four synchronous condenser units, including all the necessary electrical energy systems, protection and control units, split between two installations.

Miba bearing technology is being used here: the around 170-ton rotors of the electric machines are being mounted in horizontal pedestal bearings produced by Miba. "We decided on Miba as our partner because it delivered the necessary answers for our high requirements," says Andritz Project Manager Josef Frieß. "Bearings are function-critical components for our technology, as the form the connection between the rotating mass in the motor and the base of the machine." For this reason there

are huge demands especially on the rigidity. "The quality of the bearings used has a direct impact on the functional reliability of many other components," adds Josef Frieß. It also contributes to the reliability and fail-safe performance of the entire system, for which an availability of at least 99 percent is a basic requirement.



Horizontal pedestal bearing from Miba

"WE DECIDED ON MIBA AS OUR
PARTNER BECAUSE IT DELIVERED THE
NECESSARY ANSWERS FOR OUR HIGH
REQUIREMENTS."

Josef Frieß, Project Manager, Andritz





Synchronous condensers are around 400 tons electric machines to safeguard grid stability.

WORLDWIDE COOPERATION WITH MIBA SITES

Josef Frieß believes that close cooperation during the engineering phase is particularly important for such a project: "We greatly appreciate how intensively Miba has become involved." Specialists from our company from the sites in Laakirchen in Austria and Osterode in Germany worked intensively with Andritz. The bearings for the project are produced at the Miba industrial bearings plant in Cataguases in Brazil – which, by the way, is one of the three largest manufacturers in the world for bearing solutions for hydropower plants, known as hydro bearings.

GREAT GROWTH OPPORTUNITIES

In the future Josef Frieß sees great growth opportunities for the synchronous condensers from Andritz. He says the market demand for projects is large, and alongside North and South America and Australia, the demand from Europe is increasing all the time. "This will mean ever larger installations being used. We are thinking of connecting our electric machine to a flywheel," he says. This would lead to even greater technological demands, for instance on the rigidity of the bearings used: demands that at Miba we want to solve by contributing our expertise and innovative strength in the future too.



Illustration of the synchronous condenser from Andritz

GLOBAL DEVELOPMENT EXPERTISE

The bearing solution for the synchronous condenser from Andritz was developed by the R&D team at Miba Industrial Bearing Branch. It operates on three continents and works in close cooperation with Production on a large number of customer requirements and a wide range of applications and specifications. This broad wealth of experience forms the core of the R&D work.



Andritz and Miba are working together on a major solar power project in Australia

"THE ENERGY TURNAROUND IS CREATING GREAT GROWTH POTENTIAL FOR OUR CUSTOMERS. SUPPORTING THEM WITH INNOVATION AND NEW TECHNOLOGICAL SOLUTIONS IS OUR MOST IMPORTANT OBJECTIVE AND INCENTIVE FOR OUR WORK."

**Clemens Honeder, Managing Director,
Miba Industrial Bearing Branch**



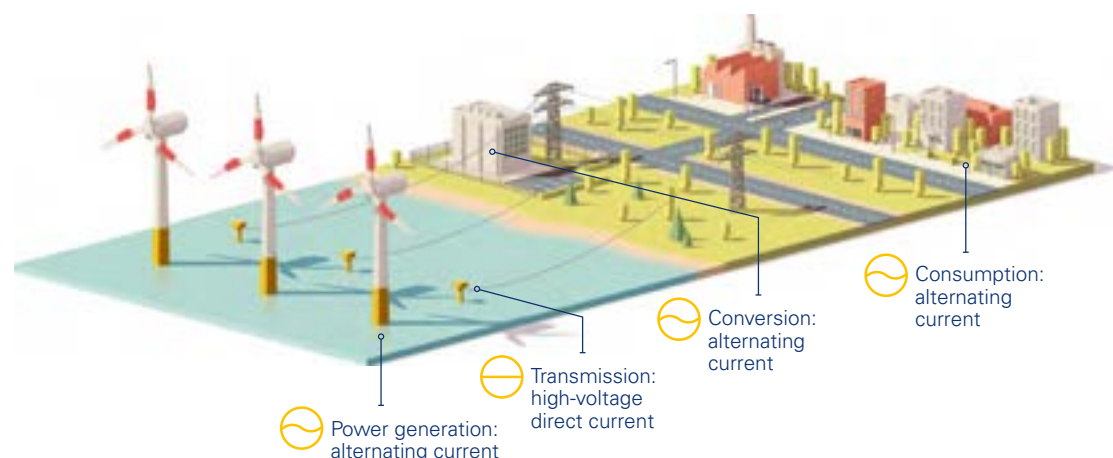
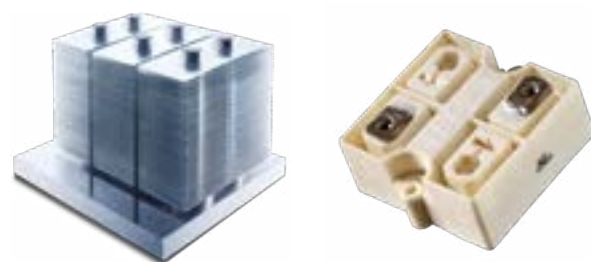
MIBA TECHNOLOGIES FOR ENERGY TRANSMISSION

POWER ELECTRONICS FOR HIGH-VOLTAGE DIRECT CURRENT TRANSMISSION

Sustainably generated energy often has to be transmitted over long distance, such as from offshore wind parks to the cities inland. High-voltage direct current transmission (also known as HVDC technology) is used to ensure that the transmission of electricity takes place with the lowest possible energy loss. For this, the alternating current generated is firstly converted into direct current, and then converted back into alternating current again in the region where it is to be consumed. At best, the energy loss per 1,000 kilometers is then only three percent, while for conventional transmission technology the figure is one percent per 100 kilometers for just a 320 kW line.

Resistors and cooling technology from the Miba Group protect the semiconductor switches and other applications from voltage fluctuations, and ensure that the function-critical elements are optimally cooled.

Resistors and cooling technology for high-voltage direct current transmission



SMART GRIDS – INTELLIGENT ENERGY MANAGEMENT

Smart grids are the approach employed by energy providers to ensure optimal control of the utilization of the power grids in a consumption region. All parts of the system are monitored via a digital system, which guarantees the maximum stability, reliability and efficiency.

Miba high voltage resistors are used in smart grids to measure the voltages in the cable, and thus detect blackouts or malfunctions quickly and locally. This safeguards the stability of the entire grid, and faults can be rectified systematically and rapidly. Smart grids enable precise central monitoring and control of the overhead lines, for instance in very extensive regions of the USA. In this way, line connections that are down can very rapidly be located and restored to operation again.

In future smart grids will also be a means of optimizing the grid infrastructure and using it efficiently. When there is sufficient wind and sun for generating a lot of power, for example electric cars could be used as decentralized storage – or the power could be directed into local and central stationary battery storage. Alternatively, at times of high power availability, the grid operators can connect appliances such as heat pumps or wallboxes for electric cars to the grid to stabilize it.

RESISTORS AND COOLING TECHNOLOGIES FOR THE CHARGING INFRASTRUCTURE

Miba power resistors and cooling solutions are fitted in fast and ultra-fast chargers in the power range from 150 to 350 kilowatts, where they ensure that higher power levels are safely dissipated. This enables the power

electronics to function smoothly even in the event of a breakdown, meaning they offer an important protective function for the charging infrastructure.



CUSTOMER SOLUTIONS FOR ENERGY STORAGE





THE POWER OF SILENCE: BATTERIES FROM MIBA BATTERY SYSTEMS FOR eRACING KARTS

BECAUSE OUR
CUSTOMERS MATTER

ROTAX.

& MIBA BATTERY SYSTEMS

IN MOTOR RACING IT ALL COMES DOWN TO THE MAXIMUM PERFORMANCE AND RELIABILITY. THE LATEST eRACING KARTS FROM ROTAX RELY ON BATTERIES FROM MIBA BATTERY SYSTEMS

From zero to 100 kph in 3.5 seconds, a maximum speed of 135 kph and torque of 190 Nm – with eKarts from BRP-Rotax speed, power and performance meet adrenalin-charged fun in electric form.

BRP-Rotax, the Austrian subsidiary of the Canadian BRP Inc., is a leader in the development and production of propulsion systems. BRP-Rotax has been committed to future-proof mobility and technological progress for more than 100 years.

The innovative Rotax four- and two-stroke high-performance engines are used for BRP products such as Ski-Doo and Lynx snowmobiles, Sea-Doo Personal Watercraft, Can-Am on- and off-road vehicles, as well as for karts and recreational aircraft. With sustainable products such as the high-performance E20 eKart series, BRP-Rotax is also a pioneer in the field of alternative powertrain models.

MOTOR RACING IS NO LONGER IMAGINABLE WITHOUT ELECTRIC VEHICLES

Sporting excellence also requires technical excellence, so for its electric racing karts BRP-Rotax relies on the high-performance batteries that were developed together with Miba Battery Systems (MBS). As a pioneer among European battery developers, MBS has accompanied BRP-Rotax during the development of the electrified karts.

Here MBS batteries have to correspond to the highest performance standards of a racing series: the toughest racing conditions in desert states such as Bahrain, or cold conditions such as those on the British Isles, reaching full power in a short time or sustaining the impact of enormous forces on a relatively small vehicle. Due to a kart's low center of gravity, with the driver sitting just a few centimeters above the ground, lateral acceleration rates of up to 3G are reached.

To satisfy these requirements, Miba Battery Systems worked together with the development engineers at BRP-Rotax to develop a specific high-performance battery. Despite the compact installation space, the battery provides the highest performance and reliability, which are necessary for a racing series.

The cells are interconnected on the basis of the special MBS laser welding technology. The battery is characterized by a low weight, the robust connection of the cells, and resistance to vibration. The MBS battery also impressed the customer with its long lifetime and failsafe performance.

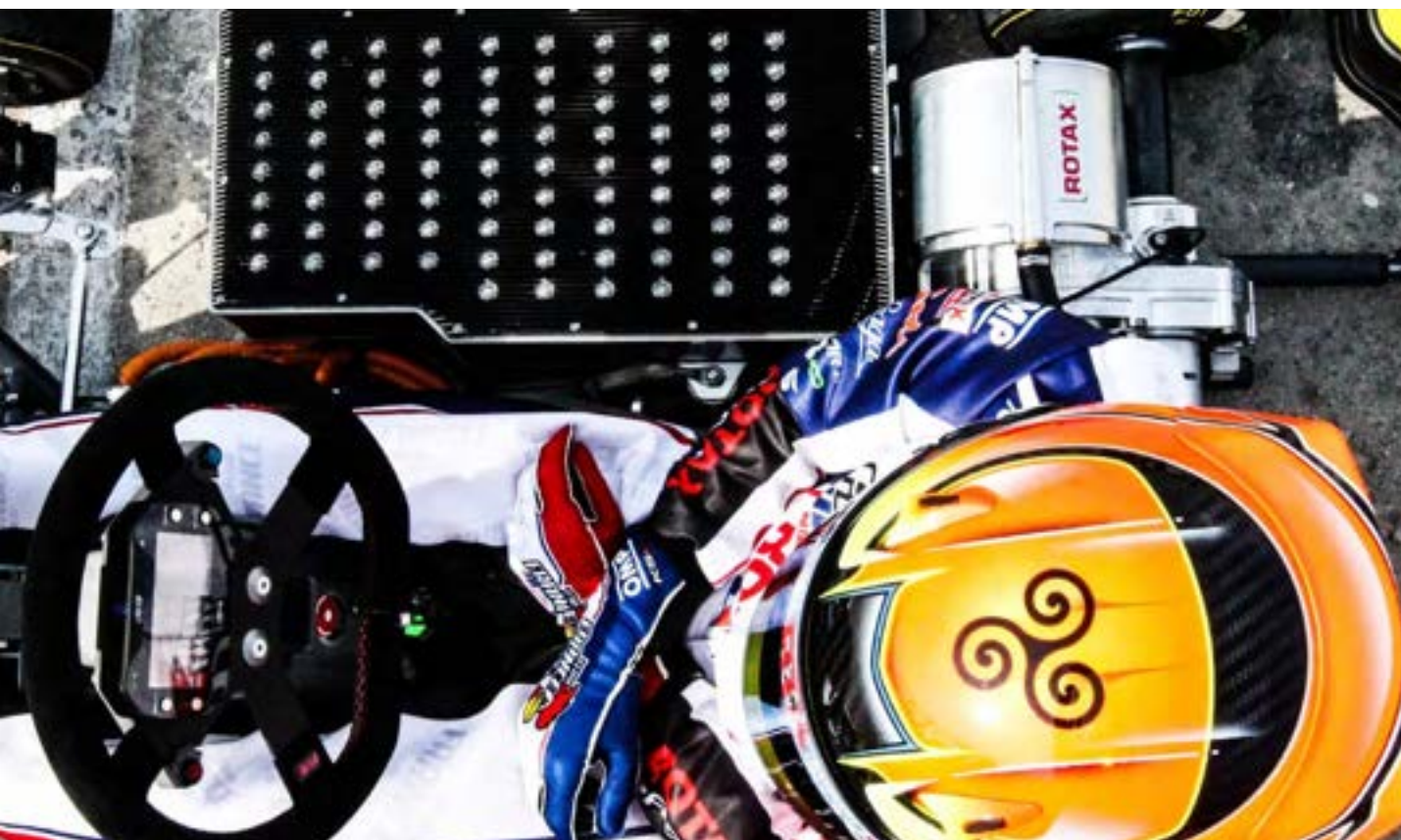
“ELECTRIFIED RACING KARTS HAVE TO
FUNCTION UNDER THE TOUGHEST
CONDITIONS. OUR BATTERIES
IMPRESSED THE CUSTOMER WITH
THEIR RELIABILITY AND LONGEVITY.”

**Stefan Gaigg, Managing Director
Miba Battery Systems**

The battery even lasts through several seasons of constant racing use. It is also FIA-approved for use in kart racing, and thus fulfils the required quality and safety standards of the Fédération Internationale de l'Automobile (the international automotive federation - FIA).

The kart battery is enhanced with MBS's own Battery Management System (BMS), which is optimized for racing applications and enables the battery temperature and performance to be monitored.





For BRP-Rotax, it is not just the geographical proximity in the same province that makes Miba Battery Systems a good partner for motor racing battery technology. BRP-Rotax is able to benefit from the expert knowledge and many years' experience in development and production at Miba Battery Systems. MBS developer teams offer wide-ranging support in the design and validation of a customized battery solution in terms of its performance, reliability, longevity and economic efficiency. In the cooperation with Miba, BRP-Rotax also particularly values the flexibility and hands-on mentality in the project teams.

BATTERY TECHNOLOGY FROM MIBA BATTERY SYSTEMS

MBS develops and produces both customized and standardized battery packs for low to high-voltage applications (48 to 800 volts). Batteries from MBS are designed for long distances (energy) as well as the maximum output (performance) and can be used in almost all applications.

ROTAX E20

As well as the aspiration to provide the utmost performance, BRP-Rotax and Miba are also united in their commitment to the environment. With its E20 karts, BRP-Rotax is smoothing the way for sustainable kart sport and a clean, easy driving experience.

The E20 offers an overall performance increase of around 25 percent, a weight reduction of around 7 percent, and a clearly improved weight distribution compared to its predecessor model. Batteries from Miba make a substantial contribution to this, to enable the karts also to be in pole position in future in terms of sustainability and clean drive technologies.



More about Rotax E20 and Miba batteries



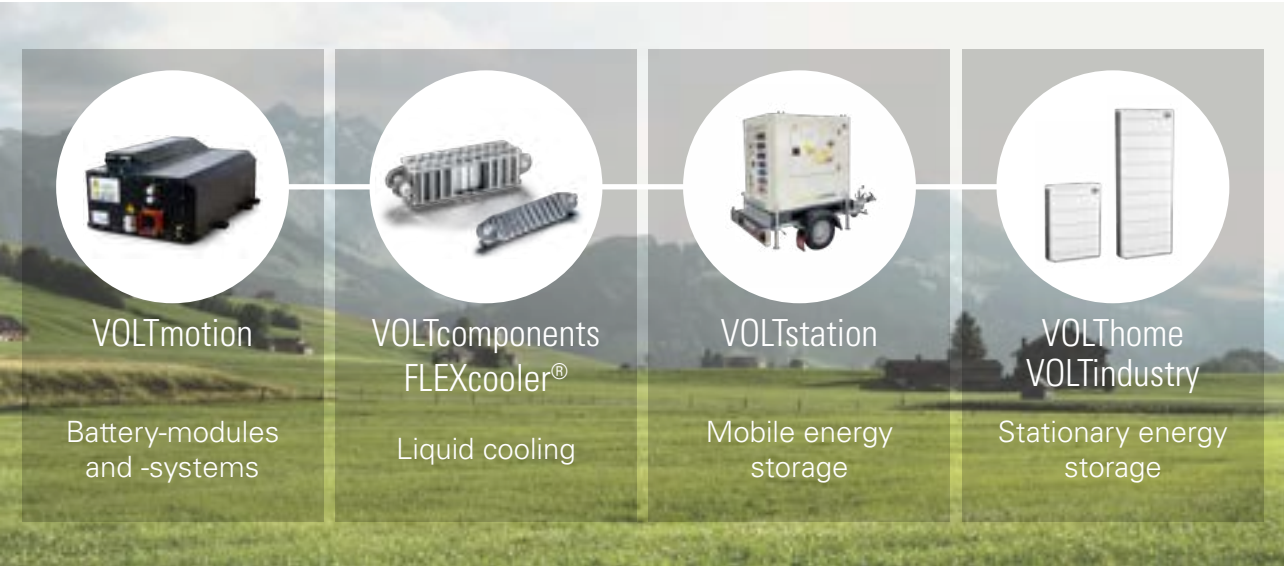
MIBA VOLTFACTORY #01 AUSTRIA'S TECHNOLOGICALLY LEADING BATTERY PRODUCTION PLANT

Our world is becoming electrified: cars, buses and boats, motorbikes and light commercial vehicles, construction machinery, self-driving forklifts in production, drones, and even snowcats – all these end applications are increasingly becoming electrically powered. At the heart of these drive systems are battery systems like those we develop and produce at the Miba VOLTfactory #01. In addition, at the Bad Leonfelden site in the Mühlviertel in Austria we produce the Miba FLEXcooler, an innovative and multi-award winning temperature management system for batteries.



In an area of 3,900 square meters, the Miba VOLTfactory #01 has an annual production capacity of around a gigawatt. It is the technologically leading battery production plant in Austria. Our team was the first supplier worldwide to develop a special laser contacting process for welding battery round-cell systems. The battery systems are produced on a fully automated production line, the VOLTjet. Self-driving robots support production and logistics. The modular structure of the battery systems means that customer-specific requirements can be implemented very rapidly.

MIBA BATTERY SYSTEMS AND BATTERY COMPONENTS



With four product lines, Miba Battery Systems, our battery systems and battery components specialist, offers solutions for a large number of applications. Under the brand VOLTmotion we supply a customized battery solution for both road vehicles and off-highway vehicles. The Miba FLEXcooler is our multi-award winning, innovative solution for the thermal management of batteries. With

the VOLTstation we have a compact and mobile energy storage in our product range that is ideal for use on construction sites or at events. Moreover, from early summer 2024 our product range will be supplemented by our new product line for stationary energy storage for private homes and industry.

VOLTMOTION – CUSTOMIZED BATTERY SOLUTIONS FOR VEHICLES

Under the brand VOLTmotion we supply customized battery solutions for both road vehicles and off-highway vehicles. The different dimensions enable the batteries to meet the common construction space requirements, and the modular approach means that different interconnection options can be implemented. By upscaling the battery packs with serial/parallel connections, they can be extended into larger battery systems according to the customer requirements. The Miba FLEXcooler is installed in the battery packs.

The battery systems are developed and produced in accordance with the automotive standards that have the highest quality requirements. As proof of their high standards, the battery systems are provided with various certifications by accredited laboratories.



Miba battery systems are developed and produced in accordance with the highest automotive standards

VOLTSTATION – ENVIRONMENTALLY FRIENDLY MOBILE ENERGY STORAGE REPLACES DIESEL GENERATORS

The Miba VOLTstation is an eco-friendly alternative to diesel generators, for instance on construction sites, at events and for many other applications. In both stationary and mobile use it provides power quietly and with

no emissions. With its modular and compact design, it is easy to transport and simple to operate by means of a touch screen.



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 due to the close connection between the battery cells and the cooling system. With its flexible form, our technology adapts optimally to the battery cells. The advantages are on the one hand its low weight, and on the other hand

the fact that gap fillers, materials used to fill the space between the battery cell and the cooling system, are no longer needed. The Miba FLEXcooler can be used for prismatic, cylindrical and pouch battery cells.



Find out more about Miba battery technologies



Miba FLEXcooler

CUSTOMER SOLUTIONS FOR ENERGY USE

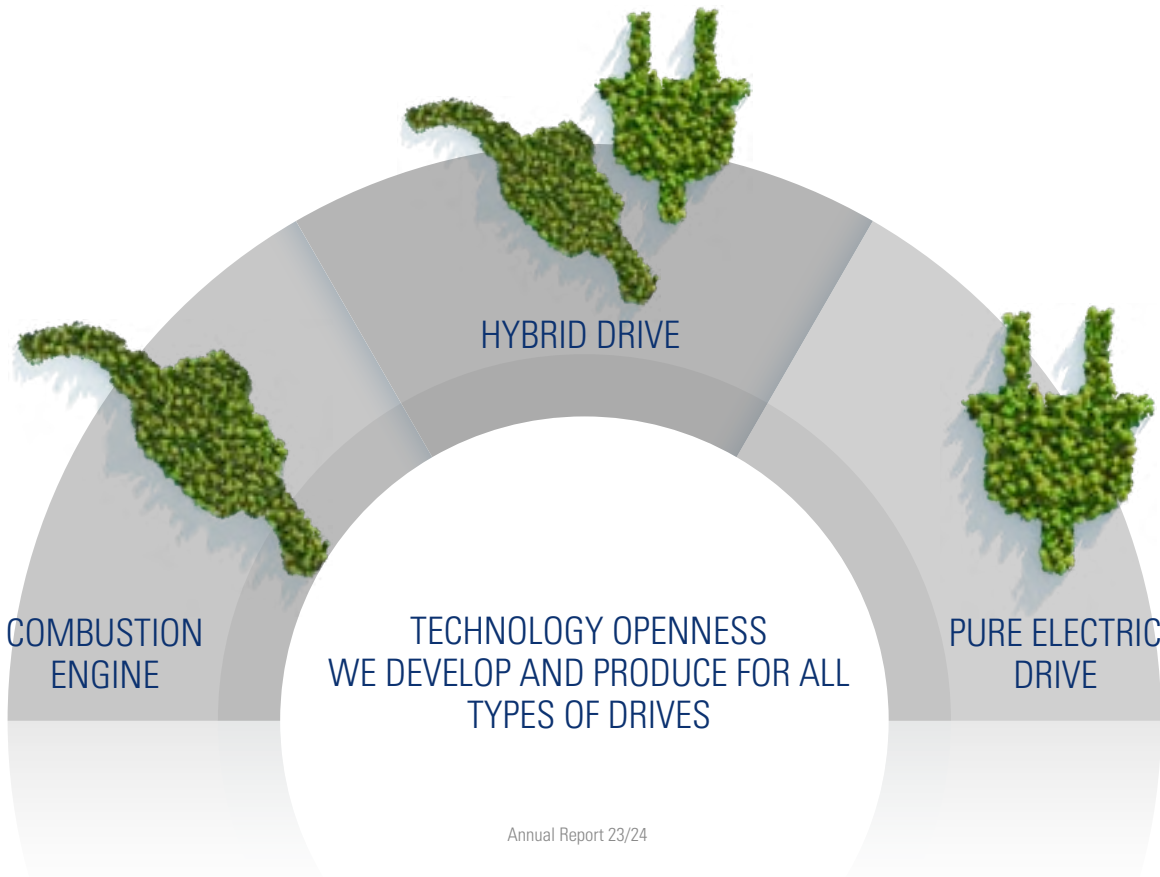


TECHNOLOGY OPENNESS

WE OFFER OUR CUSTOMERS SOLUTIONS FOR ALL TYPES OF DRIVES

No matter whether it is 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 solution that is the best for

our customers. And always with one goal: to make drive-trains even more energy efficient, environmentally friendly and quiet.



WIDE PRODUCT RANGE FOR MOBILITY

We develop and produce a wide range of mobility components for our customers. Miba products are used in a large number of end applications.





CLUTCH TECHNOLOGY FOR HIGH PERFORMANCE REQUIREMENTS IN INDIA

MORE THAN 20 YEARS OF OF CLOSE PARTNERSHIP BETWEEN SETCO AUTOMOTIVE AND MIBA

Heavy traffic, high payloads, many unpaved roads: the performance requirements on trucks in India are particularly high. This is especially true for the clutches, which have to withstand high loads and are therefore a very important and function-critical component in the drivetrain. Finding innovative technological solutions to these needs has always been the goal of Setco Automotive, India's largest manufacturer of clutches for trucks and other commercial vehicles like tractors, since its incorporation in 1982. "Resistance and longevity are some of the product characteristics that make Setco clutches unique not only for our OEM customers, but also make an important contribution to the end users by securing an extended service life and reduced maintenance requirements" says Chairman and Managing Director Harish Sheth. "We also focus on performance excellence as a contribution to drivability and efficiency, to providing customizable solutions to meet diverse demands of our customers, on continuous innovation as the core of our product development philosophy and on a global market presence."

MIBA CLUTCH BUTTONS – CRUCIAL COMPONENTS FOR SETCO

Cerametallic buttons were first introduced in India by Setco and Miba together. We worked jointly with our OEM customers in explaining the benefits of these buttons. This gave Setco an unique advantage in India. No wonder that for more than twenty years, Miba has been the exclusive supplier of clutch buttons for the company. "Miba's expertise is invaluable to us, it helps us to achieve the perfect balance between friction performance and longevity in our clutch systems", describes Harish Sheth. "Miba's ceramic buttons are crucial components for us. They provide the durability, heat resistance, and friction properties necessary for optimal performance." What Harish Sheth particularly appreciates is Miba's commitment to innovation and technological advancement. Both companies work closely together to refine the composition and design of the clutch buttons, where Miba can contribute its know-how about materials and high quality manufacturing.



Miba sintered clutch button



Setco clutches

"MIBA IS A TRUSTED PARTNER AND A SOURCE OF COMPETITIVE ADVANTAGE FOR US IN THE AUTOMOTIVE INDUSTRY. OUR COLLABORATION IS CHARACTERIZED BY A SHARED VISION, PROACTIVE ENGAGEMENT, AND A RELENTLESS PURSUIT OF EXCELLENCE."

**Harish Sheth, Chairman and Managing Director,
Setco Automotive**



BECAUSE OUR
CUSTOMERS MATTER

SETCO
AUTO SYSTEMS
Efficient Engineering

& MIBA FRICTION GROUP



Setco Chairman Harish Sheth and Miba Board Member Martin Liebl at the ribbon-cutting for a new sintered clutch button production line in Pune in January 2024.

INTENSE COLLABORATION TO ADDRESS TECHNOLOGICAL CHALLENGES

The collaboration between Setco and Miba started more than twenty years ago, since when it evolved from a supplier-customer relationship into a more strategic partnership. “Over time, we’ve worked closely with Miba’s technical experts and engineers to leverage their expertise and capabilities in materials science, friction technology, and product design. This collaborative approach has enabled us to address complex technological challenges, enhance product performance, and drive innovation in our clutch systems,” says Harish Sheth. Regular communica-

tion, joint development projects and knowledge sharing helped to strengthen the partnership and to reach milestones together.

PRODUCTION IN INDIA FOR INDIA

As part of our “Local-to-local” philosophy, Miba produces the clutch buttons for Setco at our Miba Drivetec friction materials plant in Pune in India. In 2019, Miba moved into this new production plant in Pune, more than doubling the production area compared to the previous location. Around 160 employees produce friction materials for customers, primarily in India. Since then, Miba has continued to grow strongly in India and has invested in the expansion of production capacities. As part of the close relationship between the two companies, Setco’s Chairman and Managing Director Harish Sheth joined Miba Board Member Martin Liebl for the ribbon-cutting of a new clutch button production line in January 2024. And he is sure that there are many further market potentials: “As we continue to innovate and collaborate with partners like Miba, we’re well-positioned to capitalize on these opportunities and play a meaningful role in shaping the future of mobility and energy.”



Miba CEO F. Peter Mitterbauer at the opening of a kindergarten in rural India. The financing for building this school was provided by Miba. Setco is operating 18 such kindergartens, where besides education, food, clothes and medical facilities are also provided to all children.

“MIBA DOESN’T JUST SUPPLY COMPONENTS; THEY ACTIVELY COLLABORATE WITH US AS A STRATEGIC PARTNER. THEIR TECHNICAL EXPERTISE, PROACTIVE ENGAGEMENT, AND WILLINGNESS TO WORK CLOSELY WITH OUR TEAM MAKE THEM INVALUABLE COLLABORATORS IN OUR PRODUCT DEVELOPMENT AND IMPROVEMENT EFFORTS.”

Harish Sheth, Chairman and Managing Director, Setco Automotive

MIBA’S LOCAL-TO-LOCAL PHILOSOPHY

With around 30 production sites worldwide, Miba upholds the principle of manufacturing our technologies directly in our customers’ markets. This approach ensures that we can work closely with our customers in their individual regions and understand their specific markets and technological challenges. It also provides short delivery routes, an important basis not only for product availability, but also a significant contribution to a lower CO₂ footprint in the supply chain.

“IN ORDER TO UNDERSTAND MARKETS AND THEIR REQUIREMENTS AND TO DEVELOP OPTIMAL SOLUTIONS FOR THEM, WE COUNT ON LONG-TERM CUSTOMER RELATIONSHIPS. OUR LONG-STANDING COOPERATION WITH SETCO IS A VERY GOOD EXAMPLE OF HOW CLOSE PARTNERSHIP ON EYE TO EYE LEVEL DRIVE GROWTH AND SUCCESS FOR BOTH PARTNERS.”

Martin Liebl, Board Member Miba AG



MIBA FRICTION MATERIALS: CRUCIAL PERFORMANCE ELEMENTS FOR CLUTCHES AND BRAKES



Miba friction materials are used as wet- and dry-running components in clutches and brakes of road vehicles and off-highway vehicles, machines and airplanes. They are also found in industrial applications such as cranes and conveyors. As well as our own steel plate production, we develop and produce friction materials from fiber,

composite, sinter, carbon or molybdenum. We aspire to ensure greater performance and operational safety through optimized friction coefficients and the best wear characteristics in ever smaller and lighter units.

RESOURCE-SAVING MULTI-PAD DESIGN



The crystalline structure on Miba friction materials is referred to as multi-pad design; this design is used on friction materials for hybrid and dual-clutch transmissions, where in contrast to the standard design it reduces drag losses, and thus ensures lower fuel consumption. Furthermore, the design also enables the oil quantity to be distributed more precisely in the clutches. The advantages are improved performance, reduced oil volume, and savings in terms of raw materials.

MIBA PCC – FOR CONSTRUCTION SITE- AND SPECIAL VEHICLES FACING HEAVY DEMANDS



The clutch lining is essential for the transmission of the engine torque and the wear on the pressure plate, and is responsible for the shifting comfort. The frequent gear shifts on construction sites and in special vehicles result in heavy demands on the friction material. With Miba PCC we offer the perfect solution: the first clutch lining in the world to combine the benefits of sinter and organic materials. Through the material composition and the process technology applied, Miba PCC guarantees a high friction coefficient stability and high wear-resistance – while simultaneously minimizing friction vibrations and mating-plate wear. The result is an uncompromising combination of wear-resistance, switching comfort and increased power density.

ECO-FRIENDLY BRAKE PADS FOR RAILWAYS AND THE CIRCULAR ECONOMY

Material abrasion produced when rail vehicles are braking causes a pollution problem for the environment and people. To counteract this, at Miba we develop sintered brake pads with optimized wear behavior. We are also conducting intensive research into brake pads that are free from non-ferrous metals, so as to replace copper with alternatives that are more eco-friendly. We have an additional focus on the circular economy, specifically on using brake pad systems which can be fitted modularly with friction material. Once this is totally worn out, it is removed and replaced. This process means that the manufacturing-intensive brake plate can be re-used.



Find out more about Miba friction materials

ONLINE DESIGN OF MULTI-DISK CLUTCHES

The optimal design for a multi-disk clutch achieves the best possible combination of power density, noise, vibration and harshness (NVH), efficiency and total cost of ownership. Our web application Friction Engineering Designer, or FRED for short, can be of assistance here. This

enables our customers to design their products directly online. Within just a few minutes, FRED provides the key figures that make the technology decision easier and transparent.



Energy use



MIBA BEARINGS ENABLE EFFICIENT LARGE ENGINES



BEARINGS AND BUSHINGS FROM MIBA BEARING GROUP ARE AMONG THE MOST IMPORTANT COMPONENTS FOR REDUCING CO₂ EMISSIONS AND NOISE IN JDEC'S MULTI-TON LARGE ENGINES

JDEC is an established Chinese manufacturer of large engines based in Jinan, around 400 kilometres south of Beijing. Depending on the performance level, JDEC's gas and diesel engines are used in a wide variety of applications. These include ships and construction machinery, as well as industrial applications and power generation. Miba supplies JDEC with modern engine bearing solutions for camshafts, connecting rods and crankshafts, making it one of its most important technological partners. The

collaboration dates back 20 years. It began with JDEC's strategically important type 190 engine, in the development of which Miba provided important support. This was followed by numerous other joint projects to date. "We have built a solid and close collaboration based on our many years of joint business," summarizes Xiaowen Qin. He is responsible for purchasing at JDEC.



"BEARINGS AND BUSHINGS FROM MIBA ARE RELIABLE AND HAVE EXCELLENT PERFORMANCE AND QUALITY, WHICH SUPPORTS JDEC A LOT IN FURTHER INCREASING THE RELIABILITY OF OUR ENGINES."

Qin Xiaowen, Director of Purchasing, JDEC

RELIABLE QUALITY CREATES A COMPETITIVE ADVANTAGE

For JDEC, the proven quality of Miba engine bearings is one of the keys to making its engines even more powerful and reliable. "All the bearings and bushings from Miba are reliable and have excellent performance and quality, which supports JDEC a lot in further increasing the reliability of its engines, especially the models 140, 175 and 190," says Qin. Many JDEC customers also regard the name Miba as a sign of quality. Thanks to its compact design and long service life, the Miba bearing technology makes an important contribution to increasing efficiency and thus helps JDEC to fulfil increasingly stringent requirements in terms of noise and emissions. The successful cooperation between Miba and JDEC is to be continued in the future. The JDEC team around Xiaowen Qin is already looking forward to further joint projects: "We sincerely expect to

continue this strategic partnership between us in the future, with the target of creating a winwin model for both of us."

GLOBAL PRESENCE MEANS WORLDWIDE CUSTOMER PROXIMITY

In addition to innovative products, reliable technical support is an important basis for the success of this partnership. With the engine bearing plant of MPCC in Suzhou, Miba is also geographically close to its customers and can therefore react particularly quickly to their wishes and requirements. The MPCC team is also supported by the expertise of the Miba Bearing Group's global network, which has production sites not only in China but also in Europe as well as North and South America.

"OUR BEARINGS ARE TAILORED TO THE CUSTOMER'S NEEDS, AND OFFER A HIGH-QUALITY SOLUTION FOR ALL APPLICATIONS."

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



BECAUSE OUR
CUSTOMERS MATTER



中国石油集团济柴动力有限公司
CNPC Jichai Power Company Limited

& MIBA BEARING GROUP

EFFICIENT AND RELIABLE DRIVES THANKS TO MIBA BEARINGS



Miba engine bearings are among the components that most determine the functionality and lifetime of truck and bus combustion engines. They are used for supporting the camshaft and crankshaft, where thanks to their resistance to friction, wear and corrosion they offer a longer lifetime and lower maintenance costs. In combination with their compact construction and the reduction in weight, this enables substantial fuel savings and a higher load capacity.

Our focus here is always on our customers' needs. As a development partner, we support our partners right from the engine development phase and create solutions together that are precisely customized to their requirements. By developing new bearing types, we ensure that modern engines deliver maximum performances that are efficient and ecologically compatible even under extreme conditions.

LEAD-FREE BEARINGS PROTECT ENVIRONMENT AND HEALTH

Miba has developed a new alloy that can replace the lubricating properties of lead by means of a special sulfur additive. The lead-free bearing combines high fatigue strength with the robustness of leaded bronze. The product thus protects not only the environment, but also our employees' health during production.



Find out more about Miba bearings



OPTIMIZED MAINTENANCE AND REPLACEMENT TASKS

New digital products with genuine added value for our customers are a major development focus at Miba. Digital bearings that are equipped with sensors, and thus intelligent, can continuously measure and evaluate data on their condition. This is made possible by a specially developed telemetry function with a data analysis system. This means

that impending engine damage can be identified at an early stage, and maintenance cycles can be implemented more accurately and more effectively. In the case of ships, for example, this saves premature maintenance or replacement tasks.



SPUTTER TECHNOLOGY REDUCES CO₂ EMISSIONS DURING FLIGHT BY 15 PERCENT

15 percent less fuel consumption, 20 percent less noise and 15 percent lower CO₂ emissions – the sputter technology developed by Miba contributes to all of these. The gears in the gearboxes of aircraft turbines are coated using Miba's sputter process, and the bearing function integrated via the coating requires less installation space while still achieving the same efficiency. This makes the turbine more efficient and quieter, and thus makes an important contribution to more sustainable energy use in the aviation industry. According to the pilots, the effect is so great that they no longer hear the turbine above a speed of 100 kph; they can only see that it is in operation by looking at their instruments. Gears coated with Miba sputter technology are now installed in the turbines of more than half of all new medium-sized aircraft (single-aisle aircraft) worldwide.





INNOVATIONS FOR COMBUSTION-ENGINE AND ELECTRIC VEHICLES IN THE USA

BECAUSE OUR CUSTOMERS MATTER

SCHAEFFLER

& MIBA SINTER GROUP

SCHAEFFLER OUTSOURCED THE PRODUCTION OF CAMSHAFT PHASING SYSTEMS FOR TWO WELL-KNOWN US AUTOMOTIVE MANUFACTURERS TO MIBA. NEW SOLUTIONS FOR eMOBILITY ARE ALSO IN JOINT DEVELOPMENT

The automotive supply industry is undergoing huge change globally. Many companies have cut back their investments in machines and expertise for the production of combustion engine components. At the same time the transition to electromobility is going more slowly than expected.

The demand for vehicles with conventional drives continues to be very high. In this situation, automotive manufacturers and first-tier suppliers are consolidating their supplier network. They are outsourcing their orders to partners with a clear commitment to investing in solutions for clean combustion engines in the future too, and guaranteeing the utmost quality in production. "Miba is one such supplier. Our customers benefit from our modern machine pool, our worldwide network of production sites, our specialization in the powertrain and transmission area, and our employees' great expertise," says Christian Hansl, General Manager of Miba Sinter Group. "In addition we have the financial strength for the necessary investments to continue bringing innovations for clean combustion engines to the market together with our customers."



OUTSOURCING PROJECT FROM SCHAEFFLER: PRODUCTION TO START WITHIN JUST SIX MONTHS

One of these customers is the Schaeffler Group, which has outsourced the production of camshaft phasing systems for two well-known US automotive manufacturers to Miba. "The basis for this is the partnership with our company going back many years; Schaeffler is honoring our reliability as a long-term partner. We also share the same values and a corporate culture of innovation and short decision-making routes. And naturally we also offer an attractive and competitive proposal commercially," explains Christian Hansl.

Miba is not only able to guarantee the utmost precision in the components manufactured during the outsourcing project, but also a production start within just six months.

"Within this short period we can develop and sample the tools required for production; we will manufacture using our most modern powder metallurgy equipment, supplemented by a new grinding machine in which we are investing for this order."

STRATEGIC PARTNERSHIP FOR ELECTRIC VEHICLES TOO

Alongside their partnership in terms of combustion engines, the Schaeffler Group and Miba are also working together to develop new solutions for battery electric vehicles. "For the powder metal technology there is a series of applications for electrified drives. We want to be proactive in shaping this market too in close cooperation with our customers," says Christian Hansl.

"WE ARE CONTINUING TO INVEST IN THE DEVELOPMENT AND PRODUCTION OF COMPONENTS FOR CLEAN COMBUSTION ENGINES – AND AT THE SAME TIME WE ARE WORKING ON NEW SOLUTIONS FOR eMOBILITY."

Christian Hansl, General Manager,
Miba Sinter Group



ECO-FRIENDLY POWDER METAL PARTS FOR VEHICLES AND INDUSTRY APPLICATIONS



Find out more about Miba powder metal parts technology

Miba Sinter Group's powder metal parts enable the maximum utilization of the material used. This results in a lower weight being achieved for combustion engines – reducing fuel consumption and making them even more eco-friendly. In addition, our powder metallurgy solutions score over conventional production methods because they produce less waste and consume fewer raw materials.

There are also many applications for Miba powder metal technology in the electrification of vehicles. Our knowledge of NVH (noise, vibration, and harshness) and gears can thus be used for eAxle components such as planetary gears or high-strength actuators, for parking brakes or clutch packs.

POWDER METAL TECHNOLOGY FOR eMOBILITY

Miba powder metal technology also offers a range of possible applications in electric vehicles, for instance components in the cooling circuit (thermal applications) and for

the eAxle. Our developers are working intensively with new materials for these, such as aluminum or copper.

USE IN ROBOTICS, CONVEYOR SYSTEMS OR MEDICAL TECHNOLOGY

There are also a large number of application areas for our powder metal technology outside the automotive industry. Whether in robotics, conveyor technology, compressors and electric bikes or medical technology, the ultra-

precise and high-strength components are also attractive for industrial applications due to their cost-efficiency and lower weight. Using them enables a reduced CO₂ footprint here too.



POWDER METAL GEARS

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



POWDER METAL STEERING PARTS

Powder metal technology is an established process in the production of steering parts. High quality, tight tolerances and cost efficiency are key in the production of helical toothed pulleys in electric steering systems. Other areas of application include couplings and gears.



POWDER METAL TRANSMISSION PARTS

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

“INNOVATIONS THAT CREATE GENUINE ADDED VALUE FOR THE CUSTOMER ARE FUNDAMENTAL FOR THE SUCCESS OF MIBA SINTER GROUP.”

**Christian Hansl, General Manager
Miba Sinter Group**



eMOBILITY WITH MIBA

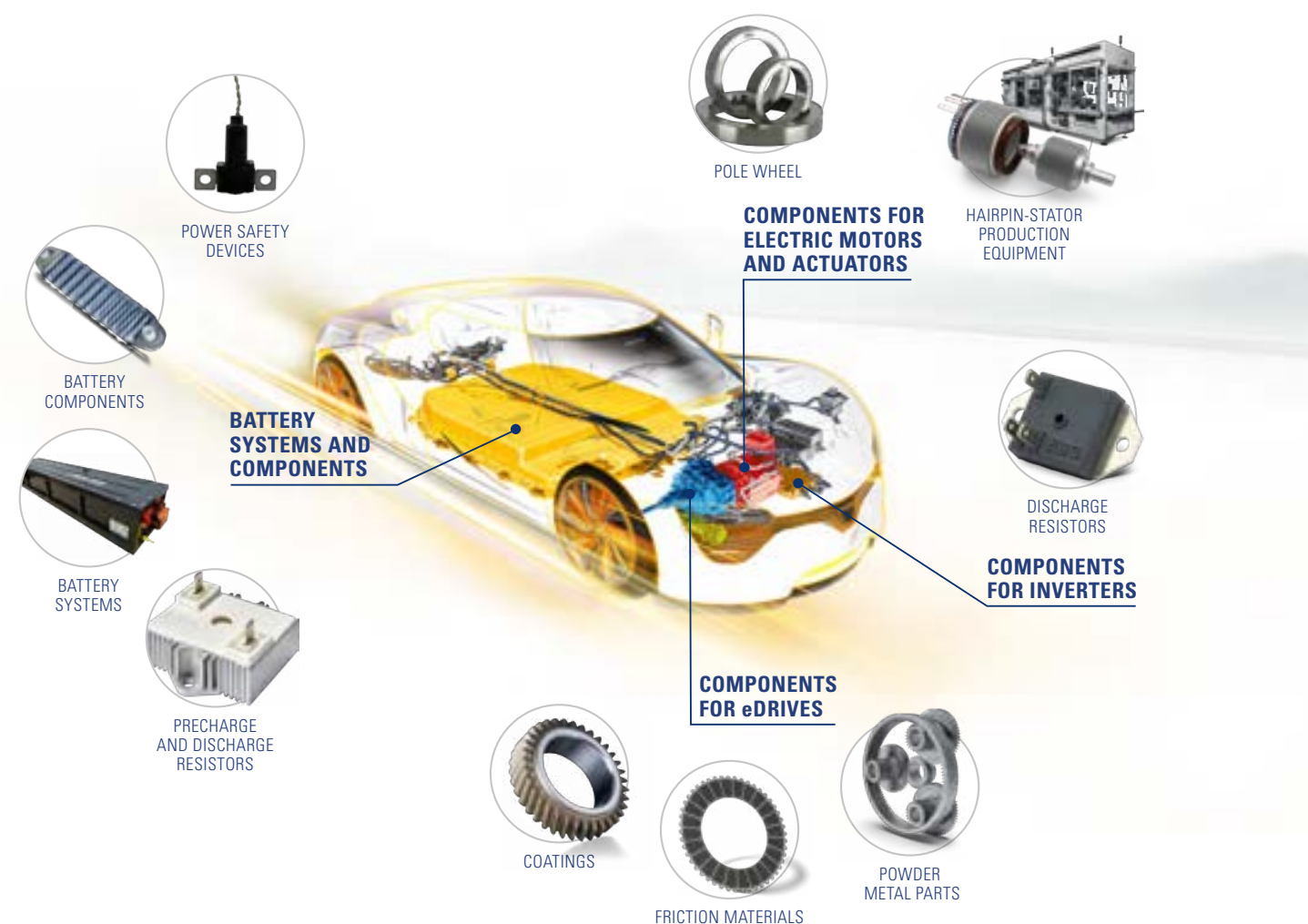


Find out more about Miba products
for pure electric and hybrid drives

BROAD PRODUCT RANGE FOR ELECTRIFICATION

As a solution provider with decades of automotive experience, together with our customers we develop and

produce their products for pure electric and hybrid drives. Many of these are already in series application worldwide.



OUR RESISTORS PROTECT THE ELECTRIC SYSTEM OF eVEHICLES

Miba resistors ensure that when an electric vehicle is turned on or off, the electric voltage in the system is energized or dissipated again immediately and safely. They protect the electric system from damage, extend its lifetime and increase its reliability. More and more automotive industry customers globally are counting on resistors from Miba Group in their series production, which is why our company is making major investments in expanding the production capacities in Austria and China. In Kirchbach (Styria) we are doubling our plant area, with 3,000 square meters reserved exclusively for future eMobility production, research and development. In China, to meet our customers' hugely increasing demand for resistors for electric vehicles, we are also building an additional production site with an area of 7,000 square meters in the Shenzhen region.



"WE ARE MAKING MAJOR INVESTMENTS IN ADDITIONAL PRODUCTION CAPACITIES FOR RESISTORS. THEY ARE INSTALLED IN ELECTRIC VEHICLES WORLDWIDE."

Jens Kuschel, General Manager
Miba Power Electronics Group

INNOVATIVE POLE WHEEL FOR MAGNETIC ENCODERS

Our High Precision Sensing team is involved among other things with coating solutions and magnetization-based measurement technology in eMobility. The focus is on magnetic rotary encoder systems. Many of the polymer-based magnetic rings currently offered on the market have disadvantages in terms of precision as well as their temperature and solvent stability, and can therefore only be used to a limited extent in electric motors and high-speed systems. To overcome these disadvantages, Miba developed a pole wheel with a special Samarium Cobalt (SmCo) coating, which is ideally suited for demanding areas of application in eMobility. With temperature-resistance to over 200 °C, rotation speeds of more than 30,000 rpm, and advantages in terms of installation space and integration cost, this solution is meeting with great interest from customers. Production began in March 2023.



MIBA FRICTION TECHNOLOGY ENABLES HIGH-PERFORMANCE AND EFFICIENT TWO-SPEED TRANSMISSIONS FOR ELECTRIC VEHICLES

Most vehicles with fully electric drives (BEV) operate with a constant 1-gear transmission ratio, and therefore have no need for a classic gearbox. However, in the future, friction systems with a 2-speed drive axle will also play a more important role, as they equally meet the demands for performance (maximum speed) and efficiency (consumption and thus range). Miba Friction Group is working together with other industry partners on a 2-speed eAxle of this type. Miba technologies are used both in transmis-

sion designs without oil cooling, which can be realized exclusively with the sintered friction material technology PCC (Pro Control Compound), and in designs that use oil cooling. As the oil technology that is required differs significantly from the oils already in use today, due to incompatibilities of individual components and the reduced lubricity, we are working closely with leading oil and additive manufacturers.



SAFETY SYSTEM FOR BATTERIES AND FUEL CELLS

The Miba POWERcloser is an electrical safety switch which functions as a high-voltage capable stop switch when triggered by a pyrotechnic actuator. In the event of an accident or any other fault that causes a short-circuit, it automatically and reliably closes the electric circuits. This prevents the outbreak of fire and ensures that the vehicle is safe for the occupants and the emergency responders. With the POWERcloser Miba was one of the finalists for the Austrian National Innovation Award 2023 („Staatspreis Innovation“).



... AND UTILITY MODELS FOR
eMOBILITY REGISTERED BY MIBA IN
2023 ALONE

POWDER METAL PARTS FOR eMOBILITY

Miba powder metal parts offer a series of possible applications in electric vehicles, such as components in the cooling circuit (thermal applications) and for the eAxle. Our developers are working intensively here with new materials such as aluminum or copper.

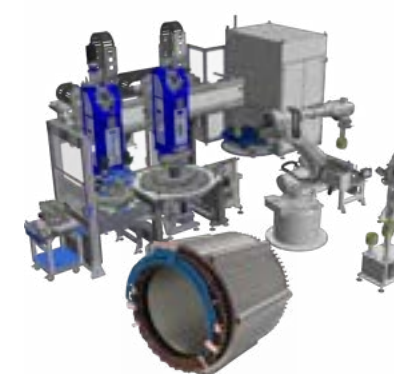


SAFE AND EFFICIENT HPC CHARGING

High charging speeds are becoming ever more important as a criterion of eMobility. From a charging capacity of 150 kilowatt we refer to HPC charging (High Power Charging). In fast and ultra-fast chargers in the power range from 150 to 350 kilowatt, Miba power resistors provide an import-

ant protective function and ensure that even higher power levels are safely dissipated. This enables the power electronics to function smoothly even in the event of a power breakdown.

PRODUCTION EQUIPMENT FOR STATORS IN ELECTRIC MOTORS



Miba Automation Systems develops and produces single machines and automated production lines for the manufacture of state-of-the-art hairpin stators. Our product range is tailored precisely to the respective customer's needs.



MIBA COOLING ASSISTS ABB TRACTION WITH FLEXIBILITY AND CUSTOMER ORIENTATION

MIBA COOLING-TECHNOLOGY SPECIALISTS SUCCESSFULLY FULFILLED A SUDDEN RISE IN ABB TRACTION'S DEMAND FOR COOLING COMPONENTS WITHIN BATTERY ELECTRIFICATION

Within ABB in general, ABB Traction is a division of the Business Area Motion. ABB Traction is globally the number one independent traction propulsion system player and employs about 1,800 people around the globe in 13 manufacturing locations. The product we are talking about is assembled in Switzerland. Miba Cooling Austria is in contact with the procurement and SCM team of ABB in Turgi.

The role of the team is to take care about the supply chain and to be the interface to suppliers in many different product categories including cooling components of power electronic modules. The specific product that is produced and delivered by Miba Cooling Austria is a high-end vacuum brazed aluminium cold plate.

Miba Cooling Austria supported ABB in the topic of a sudden increase in demand of the specific product for battery electrification of busses and railway applications. On very short notice, Miba Cooling Austria was able to triple the volume within two months by adding equipment and increasing staff. This allowed ABB to continue to supply the required quantities to their customers in time and strengthened the position of ABB in the market of traction batteries.

The mentioned products are used in traction batteries for example in railway applications like trains, metros or light rail vehicles and road vehicles like busses or off-road vehicles like mining trucks.



From the very beginning of that application, Miba Cooling Austria was the development partner of the cooling components for traction battery applications. Miba Cooling Austria supported with their experience in vacuum brazed cooling components from the simulation and validation phases till the whole serialproduction and developed and designed with ABB commonly packaging strategy to reduce as much as possible waste in deliveries.

The knowledge of Miba Cooling Austria in the field of vacuum brazed components, combined with the experience in production of those aluminum coolers can be seen as added value, as well as the reliability on a very good delivery and quality performance. Next to that, Miba Cooling Austria and ABB are especially taking care of our environment by while producing, assembling and with delivery of these components.



"NAVIGATING THE VUCA WORLD'S CHALLENGES, DAU COOLING HAS BECOME AGILE LIKE A SPEEDBOAT. THIS AGILITY, FUSED WITH OUR STANDARDS, PROCESSES, AND QUALITY, HAS LED TO SUCCESS IN FULFILLING A SPECIFIC CUSTOMER REQUEST."

**Martin Reisner, Managing Director
Miba Cooling Austria/DAU**

**BECAUSE OUR
CUSTOMERS MATTER**



& MIBA COOLING AUSTRIA/DAU

MIBA PRODUCTS FOR RAILWAYS

High-performance sintered friction materials made by Miba are used in the braking systems of high-speed trains, trams and freight wagons, and make them safer and more durable.

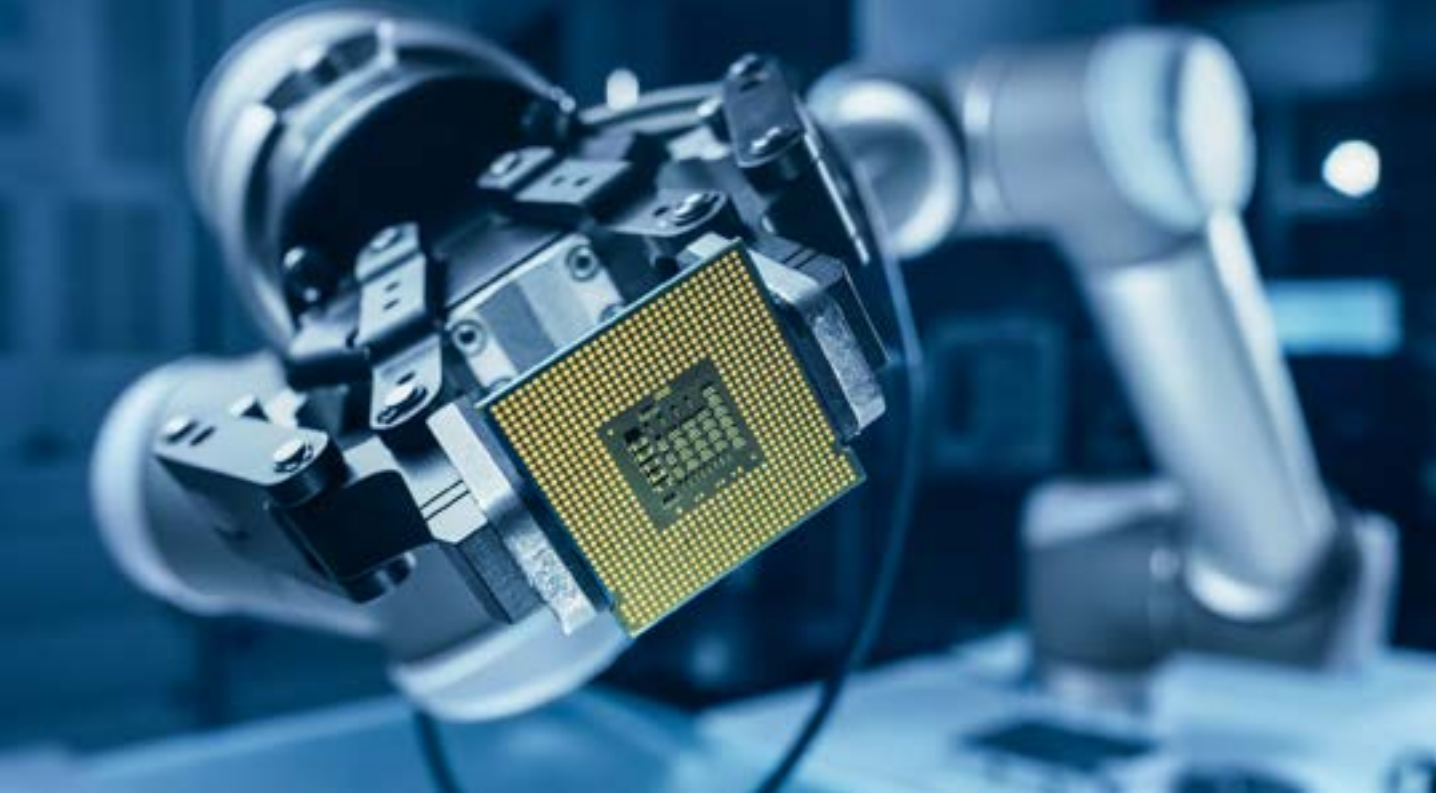
Miba engine bearings support conrods, crankshafts and camshafts in locomotives. Our Sputter and Synthec technologies improve the service life and reliability. Miba Power Electronics Group both develops high-power resistors for the safe and efficient conversion and transmission of energy, and supplies specific cooling solutions for battery-powered trams and efficient heat sinks for power electronics components which control motors and electric powertrains in high-speed trains, subways and trams.



COATING SOLUTIONS FOR DRIVE TECHNOLOGY AND INDUSTRY

No matter whether it is classic protection against wear and corrosion, improving acoustics, increasing or reducing friction, ensuring optical flawlessness or making components simpler to install: none of these applications

can be imagined without Miba coatings. We offer our customers various polymer, electroplated, APS and PVD coatings.



Chip production (generic image)

MIBA COATINGS IN THE PRODUCTION OF HIGH-TECH MICROCHIPS

Ultramodern microchips such as those used for 5G cell-phones, autonomous driving or Artificial Intelligence, are manufactured using EUV lithography, in which the tiniest structures are created on the microchips by means of extremely short-wave ultraviolet light. This UV light is generated by means of mirrors that are coated at Miba in Vorchdorf. Under clean-room conditions and in a high vacuum, a silicon layer is applied to the mirrors. The mirrors are then

intricately 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 was the size of Germany, the maximum difference in the height of the coating would be less than one millimeter.

COATING SOLUTIONS FOR INCREASING THE COEFFICIENT OF FRICTION

With our special coating process, we increase the coefficient of friction of your component surfaces - and thus the performance of your products. Through innovative coating solutions components are for the first time provided directly, partially with a friction value-increasing coating. This saves additional components, increases performance and reduces overall costs.

COATING SOLUTIONS TO PREVENT FRICTION, WEAR AND CORROSION

Our products for reducing friction and wear characteristics are used in a wide range of applications. Depending on the application and individual requirement profile, we offer you a coating solution tailored to your component. The coatings are applied to components, which, depending on the application, leads to better performance, weight savings or even the saving of entire components. Often, this is also accompanied by an anti-corrosion effect, or it is the main requirement.



COATING SOLUTIONS TO REDUCE NOISE AND VIBRATION

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

PVD COATING SOLUTIONS FOR INDIVIDUAL APPLICATIONS

With our PVD coatings, we respond individually to your requirements. Thanks to our in-house development team and many years of experience, we can offer you a wide range of possibilities. Applications for our PVD coatings include improving the tribological properties of components. We can also apply coatings for bipolar plates that protect against chemical environments and increasing electrical conductivity as well as silicon coatings for components of the semiconductor industry. We are able to coat complicated geometries and even inner diameters. Flexibility for the development of new applications and coatings, but also the ability to scale up, are what characterise us.

02

BECAUSE OUR PEOPLE MATTER



Apprentice training at the Miba Academy

WORLDWIDE COOPERATION: THE BASIS FOR INNOVATION

WE WORK TOGETHER ACROSS THE BOUNDARIES BETWEEN COUNTRIES, DEPARTMENTS AND BUSINESS AREAS

Cooperation between people with a broad spectrum of expertise and experience, different living environments, views and attitudes is one thing above all else: a driver of innovation. When different mentalities and cultures come together, it enables completely new, innovative ideas to emerge. So at Miba we are committed to worldwide cooperation, crossing the boundaries between countries, departments and business areas.

We are committed to flat hierarchies, an open discussion culture, rapid decision-making and a management culture characterized by Positive Leadership. In this way we want to inspire our employees to take new approaches and be pioneers in developing new solutions for our customers.

OUR MANAGEMENT CULTURE

In developing our employees, our managers take on a particularly important role. They drive and foster our coaching-oriented management style, which we already embodied in the past and want to systematically take to the next level over the next few years with elements of Positive Leadership.

We are further developing our corporate culture, with feedback as a fixed element and managers maintaining a long-term focus on the strengths of each and every individual. After all, we see it as a management task to activate the positive energy of our employees and thus foster their intrinsic motivation. Together we place long-term success above short-term wins and benefits for individuals, which means we can grow as individuals, as teams and as a company.



Proportion of women at Miba worldwide
(fiscal year 2023/24)



Average age of our employees worldwide
(fiscal year 2023/24)

"THE PEOPLE AT MIBA AND OUR PARTICULAR CORPORATE CULTURE MAKE US SUCCESSFUL. THEY CREATE THE BASIS FOR OUR CLEAR CUSTOMER FOCUS, OUR INNOVATIVE STRENGTH AND OUR COMMITMENT TO QUALITY."

Uta Stockbauer,
Vice President People & Culture, Miba AG





MIBA FORUM – A PLACE FOR COOPERATING AND EXCHANGING IDEAS

The Miba Forum is our company's headquarters, and our customer, learning and innovation center. It is a place for meeting up, exchanging ideas and working together. The open architecture is intended to encourage creativity and innovation. In an area of more than 4,000 square meters there are office areas, meeting and training rooms, spaces for intensive teamwork, peaceful havens for individual work, and generously sized café areas. Architecturally the Miba Forum is a modern interpretation of the square farmyards that are widespread in Upper Austria, so it combines Miba's regional roots and origin with our innovative spirit and global presence.



TEAMWORK WITHOUT BORDERS



"Our global cooperation across the boundaries between divisions or countries brings decisive benefits, such as the exchange of information and knowledge. All our employees and divisions worldwide have different strengths, which we can use well, for example, if there are particular activities that we are unable to offer locally – so we can still be close to the customer and offer the services they need."

Patrik Rac, Site Manager Miba Steeltec (Vráble, Slovakia)

"I've participated in many meetings with representatives from other Miba locations all over the world. Miba has always encouraged the cooperation and exchanges between my little location and the other larger Miba Industrial Bearings sites. Our company also enables the personal growth and training of my employees, which makes them feel valued and a part of something larger."

Cheryl Armitage, Site Manager Miba Industrial Bearings U.S. (Houston)



"For me the international cooperation within Miba is genuine synergy. I can contact my Miba Sinter colleagues all over the world with just a click to define benchmarks, exchange best practices, point out important topics and much more. These exchanges improve our performance and prevent problems. Despite being in South America, miles away from most of the Miba plants, I feel very close to them all."

Diógenes Favareto, Site Manager Miba Sinter Brasil (Indaiatuba)

LIFELONG LEARNING: A CORE VALUE AT MIBA



WE ACCOMPANY AND SUPPORT OUR EMPLOYEES IN THEIR PROFESSIONAL AND PERSONAL DEVELOPMENT

The expertise, experience and personal commitment of our employees are major prerequisites for Miba's innovative strength, technology leadership and high product quality. So lifelong learning has always been one of our core values. The training and development we offer are embedded in the Miba Employee Development Cycle. It is important to us to support and accompany our employees in their specialist and personal development with individually adapted tools. Alongside the Miba Leadership Academy (MLA), the global development resource for specialists and managers, the apprentice training and customized training courses for different specialist areas are also of great importance. We are also

intensively dealing with the impacts of the increasing complexity of the world of work on lifelong learning, and developing new offerings here.

Today focused and systematic employee development is a crucial competitive factor. So we ensure that there is a structured process by means of which our company can regularly focus on our employees' individual talents and strengths. At the center of this annual cycle is highlighting development opportunities – with the goal of supporting and encouraging the right talents in the role that is right for them. With the implementation of a modern performance and talent management tool in combination with a learning management system, Miba is also making increasing use of the possibilities offered by digitization in the HR area. In this way we gain the freedom to devote ourselves entirely to the quality of our working relationship, and establishing transparent and efficient processes alongside this. But we not only invest in our digital infrastructure, but also consider the requirements for the learning areas and environments of the future.



2.7
MILLION EUR

Investment in training and development
(fiscal year 2023/24)

MIBA LEADERSHIP ACADEMY (MLA): GLOBAL TRAINING PROGRAM FOR SPECIALISTS AND MANAGERS

Since 2003, the Miba Leadership Academy (MLA) has offered our specialists and managers a global training program. With this we want to actively accompany our employees on their career paths, both via the acquisition of new specialist competences and also in terms of interpersonal skills. The MLA offers different programs for different target groups.

BUSINESS LAB

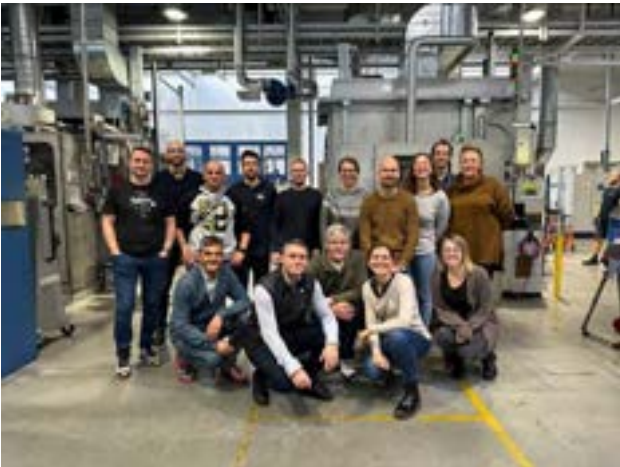
The Business Lab is centered around entrepreneurial activities, communication and self-management. Graduates understand Miba better, know about economic interconnections and are familiar with the tools of intercultural communication. The participants gain insights into our business areas, meet members of senior management and visit Miba locations. The MLA Business Lab comprises two modules of five days each. 15 employees from all over the world are admitted to the program each time it is run. The Labs take place in Austria.

LEADERSHIP LAB

The Leadership Lab prepares managers or specialist experts from different departments for tasks in senior management positions. Accordingly an important focus of the program is on leadership skills and thinking strategically. The Leadership Lab comprises five modules of six days each, which are held at different locations around the world. It is run once a year. 15 employees from all over the world are admitted to the program each time it is run. Graduates of the Leadership Lab have the option of supplementing their training with an MBA at LIMAK Business School.

464

EMPLOYEES HAVE PARTICIPATED
IN THE MLA TO DATE



Plant visit from the Business Lab at High Tech Coatings
in Vorchdorf, Austria.



Exchange with the former Austrian
Foreign Minister Ursula Plassnik
on current world politics topics
and their impact on Miba at the
MLA Leadership Lab.

OUR SKILLED WORKERS ARE OUR GUARANTEE OF THE HIGHEST PRODUCT QUALITY

With their sound training, experience and daily commitment, our skilled workers manufacture products of the highest quality for our customers every day. We offer them customized training, ranging from technical courses and on-the-job training to courses for team leaders or shift managers.



NEW TRAINING CENTER FOR APPRENTICES AND SPECIALISTS

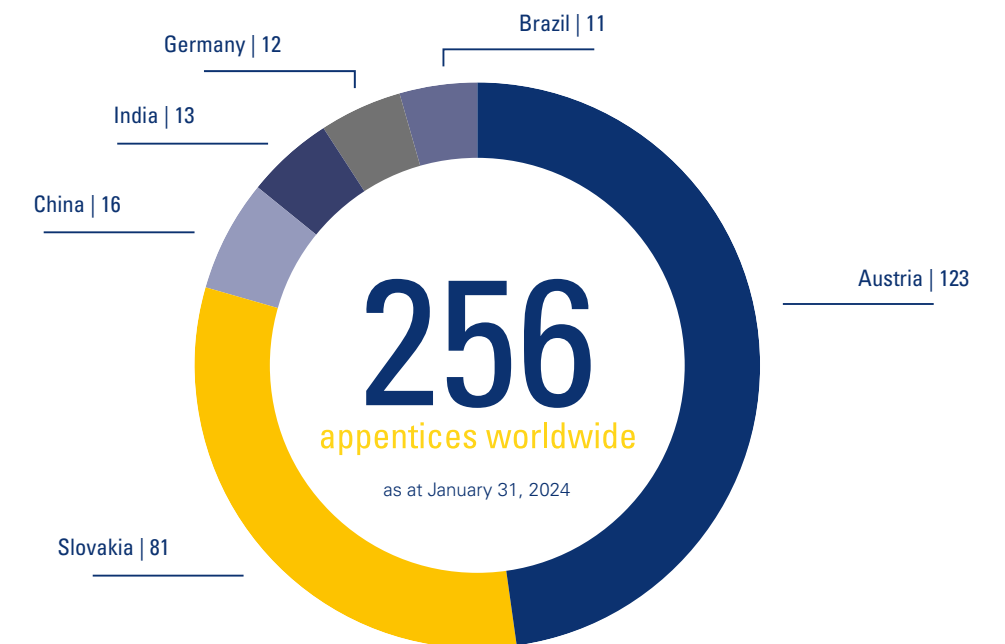


Illustration of the new building for apprentice and specialist training

In Laakirchen in Austria we are building a modern training center with workshops, labs, project and training rooms. The new building is being erected on the Miba site in Laakirchen in the immediate proximity of the current apprentice training area, the Miba Forum and the

premises of the Miba Gleitlager Austria plant. A generous-sized area for events is also being incorporated. In total there will be an available area of 1,700 square meters. Construction will start in mid-2024, with completion planned for 2025.

MIBA: APPRENTICESHIPS WITH A MISSION



APPRENTICES ARE OUR EXPERTS OF TOMORROW

Apprentices who complete their training at Miba complete a training with a purpose. In the spirit of our corporate mission "Technologies for a cleaner planet," we equip our apprentices with the skills and competences to produce Miba products for the sustainable generation, transmission, storage and use of energy.

Our customized, in-house apprentice training program is one of the secrets of Miba's success – with training content precisely coordinated with the apprentices' needs, and an extensive range of additional qualifications, young specialists are prepared for the technical challenges of the future. The most popular apprentice professions include process, metal, electrical and surface technology, as well

as mechatronics. The training incorporates state-of-the-art learning and simulation programs, as well as robots. But that's not all: as well as a solid specialist training, we also offer our apprentices language courses, internships abroad, training on interpersonal skills and outdoor training courses.

We offer Miba apprenticeships both in Austria and in other countries, where they take place in a form adapted to the regional requirements. As well as the classic apprenticeship, there are also additional options such as a "second educational path" apprenticeship or possibilities of combining an apprenticeship with a school-leaving certificate (Matura).

„SECOND EDUCATIONAL PATH“

With the „second educational path“ to become a skilled metal worker, Miba offers customized training for employees who are working in production or a related area and wish to gain a higher qualification. To date 56 people have taken up this offer.

APPRENTICESHIP PLUS SCHOOL-LEAVING EXAMINATION

In Austria the apprentices also have the option of supplementing their apprenticeship with a school-leaving certificate (Matura) from a higher technical college in cooperation with the KTLA (Kremstaler Technische Lehrakademie). There is also the choice of a dual academy, which offers a new form of training comprising a shortened apprenticeship once students have already completed their Matura.

MIBA APPRENTICE SHUTTLES IN SALZKAMMERGUT REGION

It is important to us that our apprentices living in rural regions with limited public transport can also travel to their training place safely and reliably. So since last fall, apprentice shuttles have been available to the apprentices in the Salzkammergut region to take them to Miba and back again every day. They can also be used for team events and other excursions.



INSIGHTS INTO A MIBA APPRENTICESHIP

In two videos our apprentices Patricija and Fabio provide insights into their training at Miba (in German language).



Fabio Hühnmair



Patricija Ilinovic



03

BECAUSE OUR RESPONSIBILITY MATTERS



Miba creche

WE TAKE RESPONSIBILITY FOR OUR EMPLOYEES

HEALTH: OUR MOST VALUABLE ASSET

WORLDWIDE FOCUS ON OCCUPATIONAL SAFETY, HEALTH AND FITNESS

All Miba employees should be able to be healthy when they arrive at their place of work, and still be healthy when they travel home again. So our Environment, Health and Safety (EHS) teams at all our sites worldwide are continuously developing measures to make the working environment even safer, especially in the production areas.

And with success, as current results show: an accident rate (number of accidents resulting in more than three days of absence per 1,000 employees per year) of 6.0 in the last fiscal year means that Miba has not only continued the positive trend of the previous years, but is also well below the industry average.

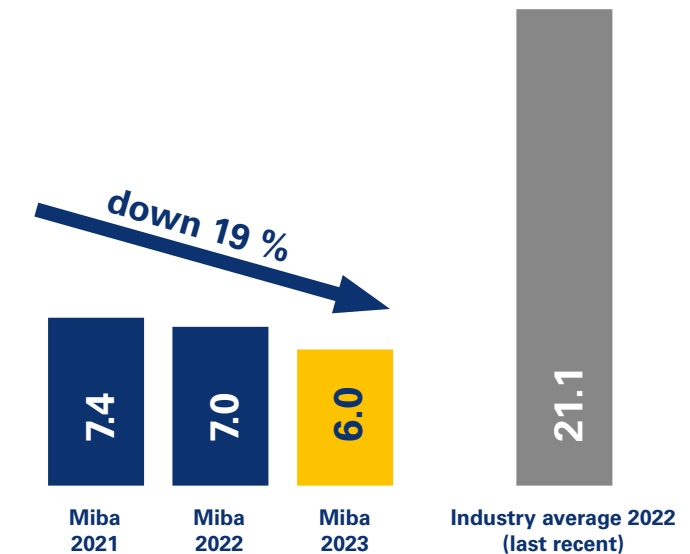
One of the main factors in the prevention of accidents and injuries is wearing the correct personal protective equipment (PPE).

Infrastructure measures are no less important for preventing accidents. For example, the installation of LEDs and sensors in forklifts and at intersections will contribute to protecting employees on the shopfloor. As an example, Miba Precision Components (China) in Suzhou near Shanghai has purchased forklifts with an AI-assisted driver assistance system, which automatically applies the brakes if there is a risk of a collision with people.

However, in addition to material factors, accident prevention comes down to one thing above all: the necessary safety consciousness among employees. So we provide extensive training measures and facilitate the regular exchange of experience across sites.

OCCUPATIONAL SAFETY: MIBA CONSIDERABLY BETTER THAN THE INDUSTRY AVERAGE

Accidents at work per year per 1,000 employees



HEALTH PROTECTION AND FITNESS ACTIVITIES

We promote our employees' health and fitness with a large number of measures at all our production sites. Some examples: our sites continuously offer training programs on working ergonomically in production, or sitting correctly at a desk. In Upper Austria we have put together a joint fitness and health promotion program which was awarded the BGF Seal of Quality for the years 2021 to 2023. Miba Sinter Slovakia also received a prize for its health program, when it was honored as one of the three best major companies of the year ("Zdravá firma roka 2023"). Miba Frictec has bought new, height-adjustable measuring tables for production, so that employees can adopt a gentle body posture while working.

MPCC in Suzhou, China, has bought defibrillators and trained its employees on using them. Our plant in Texas organizes an annual blood donor campaign. We have organized regular health trainings and check-ups at the sites in India. And with the slogan "Miba in Motion" we continuously offer leisure-time fitness activities in Upper Austria. The "Miba Gleitradler" cyclists from the Laakirchen plant site have shown that such activities can also be of benefit to our Laakirchen production site: in one year they covered 43,000 kilometers on their way to and from work – equivalent to circumnavigating the Earth. And the team from Miba Sinter Slovakia covered 17,000 kilometers on their route to and from work.



"Miba in Motion" during the Business Run in Gmund, Austria



Safety training at Cataguases in Brazil



Blood donor campaign at our production site in Houston, Texas

COMPATIBILITY OF FAMILY AND CAREER

AN IMPORTANT PREREQUISITE FOR
EQUAL OPPORTUNITIES



THE MIBA CRECHE TURNS TEN: 127 CHILDREN CARED FOR SINCE 2014

Especially as a family-owned company, for Miba reconciling family life and work is very important. Ten years ago, in January 2014, we opened the Miba creche for our employees' children in the Margarethe-Mitterbauer-Haus in Laakirchen. A needs analysis had shown that the greatest need was for childcare before children started at kindergarten.

127 children have already been cared for since the creche was founded. Since the beginning it has been run by Hilfswerk Oberösterreich. The patron is Johanna Mitterbauer. At the creche's tenth birthday party the Mitterbauer family fulfilled a special wish for the children and carers: a large new climbing frame is being built in the garden.



THREE-WEEK SUMMER VACATION CHILDCARE PROGRAM



At nine weeks, the summer vacation in Austria is very long. To support our employees with their childcare during this time, in summer 2023 Miba organized a three-week children's vacation program for the ninth time in succes-

sion. 80 children aged between four and 14 took part. Once again the vacation program took place directly on Miba's premises in Laakirchen.

CELEBRATIONS AND LEISURE ACTIVITIES

At Miba we not only work together, we also celebrate festivals together worldwide and organize leisure events. So in Upper Austria for example we have encouraged the

team spirit through cinema evenings, visiting basketball games, wakeboard events for apprentices, and sports events such as volleyball tournaments.



Dussehra festival at Miba Drivetec India in Pune



Family party at Miba Sinter Slovakia

WE TAKE RESPONSIBILITY FOR SOCIETY



Photo: Teach for Austria, David Blacher

EDUCATION SPONSORSHIP AND SOCIAL ENGAGEMENT

SUPPORTING EQUAL OPPORTUNITIES, TALENTS AND
CHARITABLE INITIATIVES

MINTality FOUNDATION

Jobs in technology and the natural sciences offer excellent career prospects and above-average income opportunities. Yet there are still far too few women working in the STEM (in German: MINT) professions. The MINTality Foundation aims to change this. Eleven Austrian companies and advocacy groups joined together to form the Foundation on the initiative of Therese Niss, Managing Director of Mitterbauer Beteiligungs-GmbH. The aim is to enthuse girls and young women for technology and natural science, and encourage them to enter the STEM professions.

One of many measures for this was the awarding in 2023 of a position as a "superintern". 18-year-old Miriam Gahr was selected from among 80 applicants and was able to get insights into of technical professions and career prospects for women by spending four weeks in nine companies. The payment for the internship was the average salary in technology, EUR 5,324 gross.

"THE EARLIER GIRLS COME INTO
CONTACT WITH TECHNOLOGY,
THE MORE LIKELY THEY ARE TO DEVELOP
AN INTEREST IN IT."

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



MINTality initiator Therese Niss and superintern Miriam Gahr

MIBA FUTURELABS CONVEY DIGITAL COMPETENCE



Digitization is everywhere and is influencing all areas of life and work. The earlier in life we become involved with it, the more naturally we will help to shape the digital future. With the Miba FutureLabs, since February 2024 we are offering children, teens and adults a very special kind of digital playground. Due to the huge interest from schools and the population in the region, from fall 2024 the Miba FutureLabs will have a permanent site in Laa-Kirchen.



... visited the Miba FutureLabs
just in the first month

SUPPORT FOR OTHER EDUCATION AND SOCIAL INITIATIVES



SCHOLARSHIPS FOR COMMITTED SCHOOL STUDENTS WITH A MIGRATION BACKGROUND

The integration of committed young people with a migration background – and especially a refugee background – is very important to Miba. For this reason we support the START initiative, which awards scholarships primarily for language courses and further education programs.



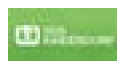
RED CROSS READING COACHES

Under this initiative, volunteer reading coaches accompany and support children with reading disorders to supplement their school education. We support the project for the districts of Gmunden and Vöcklabruck, and once a year we welcome the reading coaches to the Miba Forum.



SCIENCE HANDS-ON

The KinderUni Upper Austria offers exciting workshops and excursions for five to 15-year-olds during the summer vacation. The children acquire new insights into science, technology, art and culture. We support the program as a main sponsor.



CHILDREN'S VILLAGE ALTMÜNSTER

We support residents of the Children's Village Altmünster by taking over their school costs for a year, covering both their school materials and their participation in school projects.



FOR GREATER EQUALITY OF OPPORTUNITIES

Equal opportunities in the education system – that is the goal of "Teach for Austria". The initiative's focus is directed towards schools in disadvantaged areas. University graduates become temporary teachers there, and thus offer additional support for the pupils.



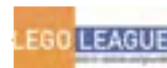
MECHATRONICS APPRENTICESHIP ALONGSIDE UPPER SECONDARY SCHOOL

The CAP initiative enables school students to complete a fully-fledged mechatronics apprenticeship in parallel to their upper secondary schooling. The training takes place every 14 days and finishes with an apprenticeship certificate shortly after the secondary school leaving exam. In addition, a holiday work placement and management courses are mandatory.



KAKIHE – RUNNING FOR WATER WELL CONSTRUCTION IN CAMBODIA

Miba is a partner of the KAKIHE Association founded by two employees. Every year, it organizes the Five Bridges Run along the Traun river. The start fees are used to provide better drinking water access.



LEGO LEAGUE

The aim of the Lego League project is to foster enjoyment of IT and robotics at secondary schools. Teams have to solve tricky tasks with their Lego robots. Miba provides support by sponsoring the secondary school in Ohlsdorf.



TALENT PROGRAM OF VIENNA UNIVERSITY OF TECHNOLOGY

The talent program of Vienna University of Technology offers students a platform for getting to know successful companies, contacting them, and in this way developing a professional network. Students receive support for this from the university's Career Center.



HIGH-QUALITY ADDITIONAL TRAINING FOR STUDENTS

The Delta Akademie at Montanuniversität Leoben is an additional program for selected students. The central idea is to support their career prospects and determine their potential for companies as responsible young managers.



AEROSPACE TEAM GRAZ

With the Aerospace Team Graz, Miba supports an interdisciplinary team of students at Graz University of Technology. Together they are working on developing a space rocket to participate in international competitions such as the European Rocketry Challenge.



ELIJAH – SUPPORT FOR ROMA FAMILIES IN ROMANIA

For many years we have supported the projects of Father Georg Sporschill SJ, including the ELIJAH Association. This supports Roma families and their children in Romania.

SPONSORSHIP OF ART AND CULTURE

CULTURE SPURS CREATIVITY – CREATIVITY SPURS INNOVATION – INNOVATION SPURS SUSTAINABILITY

Art and culture not only enhance our daily lives. They inspire and thus encourage creativity and new ideas. All of these are important bases for our innovative strength,

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



SALZKAMMERGUT FESTWOCHEEN GMUNDEN

Miba was founded in the Salzkammergut almost 100 years ago, and our company is still closely connected with the region and the people living there. We employ around 2,600 people here. Especially as a family-owned business with such strong regional roots, we consider it important to support and promote special cultural initiatives such as these festival weeks. As part of the partnership, our employees are also given the opportunity of attending events during the festival weeks at discounted prices.



SALZBURGER FESTIVAL



Miba supports the Salzburg Festival, which looks back on a history spanning over 100 years and is today regarded as one of the world's most important festivals of classical music and the performing arts. With opera, theatre and concerts it offers a wide artistic program, for which renowned artists from all over the world are invited to Salzburg.



WIENER KONZERTHAUS

VIENNA CONCERT HOUSE

In addition to its range of classical offerings, the traditional Vienna Konzerthaus is also a venue for festivals and contemporary music, and a stage for international jazz. In this way it offers an extensive program for all tastes. It also places great emphasis on supporting young musicians.



THE CLEVELAND ORCHESTRA

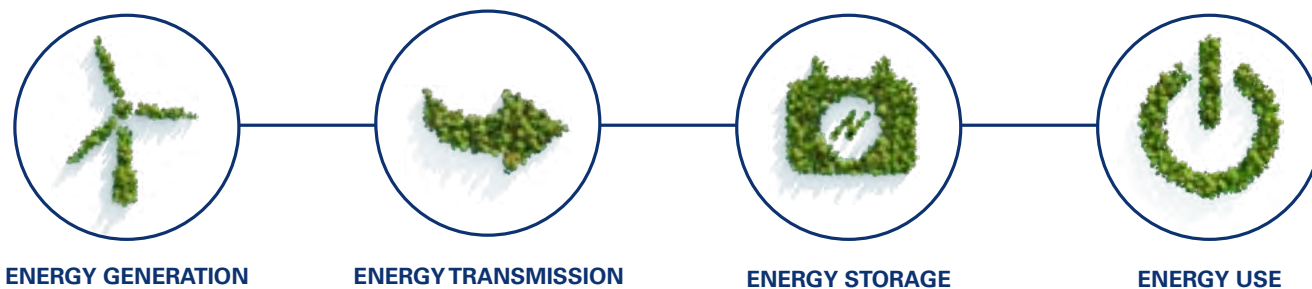
CLEVELAND ORCHESTRA

The Cleveland Orchestra is one of the five largest and most important symphony orchestras in the USA – a country in which Miba is already represented with seven production sites and employs more than 900 people. This is the best possible reason for us to actively support the traditional orchestra.

WE TAKE RESPONSIBILITY FOR THE ENVIRONMENT

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

NO POWER WITHOUT MIBA TECHNOLOGY



- 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.
- The Miba industrial bearings plant in Brazil is one of the world's three largest suppliers of bearing technology for hydropower plants.
- 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.
- Our technologies optimize speed and power in clutches and brakes.



OUR CLIMATE GOALS

We aim to **achieve climate-neutral production by 2040.**

CO₂zero
OUR AMBITION: CO₂-Neutrality by 2040

- 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 the users 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.

As the first milestone along this path, by 2030 we already want to halve the CO₂ emissions from our own production – in other words from our machinery and equipment – and from the energy we use. Furthermore we aim to reduce the CO₂ footprint of our supplier network.

We are working on implementing these goals with a variety of projects at our sites worldwide (a selection of projects can be found on page 89).

Find out more at:
<https://www.miba.com/en/co2>



RESOURCES SAVED IN THE LAST FISCAL YEAR

ENERGY, WATER, WASTE



130.000 electric cars

could be charged with the energy we saved in just the last fiscal year.

Efficient and economical energy use is one of our most important goals. In the last fiscal year, we were able to save 9,192 megawatt hours of energy. This could be used to charge 130,000 electric cars with a capacity of 70 kilowatt hours. What's more, the saving the previous year was 3,600 megawatt hours, so we have taken a big step forwards.

62.000 BATHTUBS

could be filled with the water we saved.

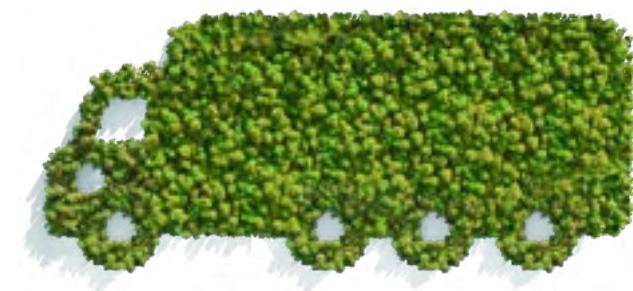
Within one year we were able to achieve more than a sevenfold increase our saving of water consumption. In the fiscal year 2022/23 we saved 1.5 million liters of water, while in the last fiscal year 2023/24 the figure was already 11.2 million liters. This could be used to fill 62,000 bathtubs with a capacity of 180 liters.



18 OF THE LARGEST SEMITRAILER TRUCKS

weighing 40 tons would be needed for the quantity of waste we prevented last year.

Preventing waste is a major contribution to protecting the environment. In the last fiscal year we were able to save 438 tons of waste. With this quantity you could load 18 large 40-ton semitrailer trucks with a carrying capacity of 25 tons each.



WORLDWIDE PROJECTS FOR REDUCING CO₂



AUSTRIA

- **Miba Sinter Austria:** Flame curtain firing in furnaces switched from gas to electricity
- **Miba Sinter Austria:** Introduction of an automatic start-stop in sintering furnaces
- **Miba Gleitlager Austria:** Automatic standby on production machines and switch to LED lighting, overhaul of compressed air systems
- **High Tech Coatings:** Heat recovery from the compressed air production
- **Miba Resistors Austria (EBG):** Green energy from solar panels on the new production facility

SLOVAKIA

- **Miba Sinter Slovakia:** Development of a new firing technology for sintering furnaces (in collaboration with Miba Sinter Austria)
- **Miba Steeltec:** Two industrial furnaces switched from gas to electric operation
- **Miba Steeltec:** Reduction of the temperature in rooms that are seldom used

GERMANY

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

CHINA

- **MPCC Sinter:** More efficient positioning of products in the sintering furnace via new automation process
- **MPCC Bearing/Coating/Friction:** Optimization of the energy requirement for cooling
- **MPCC Sinter:** Reuse of waste heat from compressors for hot water production
- **EBG China:** Green energy from solar panels on the roof
- **MPCC Sinter:** Modernization (retrofit) of machines (in collaboration with Miba Sinter Austria)

INDIA

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

USA

- **ABM:** Increased efficiency in the foundry process, acquisition of a new machine

BRAZIL

- **Miba Sinter Brasil:** Acquisition of new air compressors, process optimization for sintering furnaces to save gas

CZECH REPUBLIC

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

04 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.

Being a solution provider for our customers is part of our



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



DNA. In the future too we want to work closely together with our customers to proactively develop and produce solutions for their technological challenges.

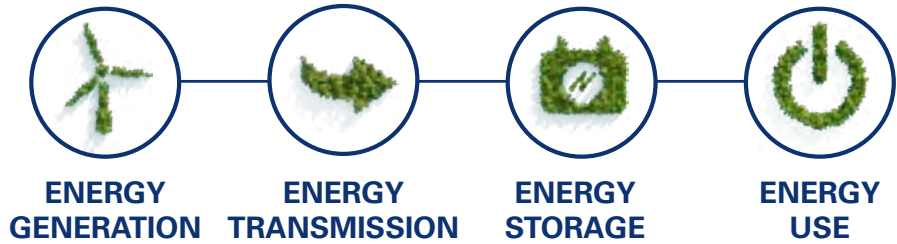
ORGANIC GROWTH AND ACQUISITIONS

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, techno-

logically 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

Since February 1, 2024

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

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, Strategic Unit Coating, Communications, Human Capital, Strategy, Innovation and Technology, Internal Audit

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

Also responsible for: Miba Friction Group, Strategic Unit eMobility, Strategic Unit 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

* CFO until January 31, 2024:
Markus Hofer

PRESENT WORLDWIDE

29 PRODUCTION SITES AND
7,600 EMPLOYEES

As at: January 31, 2024, employee numbers rounded

AMERICAS
1,300 employees
9 production sites

EUROPE
4,900 employees
14 production sites

ASIA
1,400 employees
6 production sites

Miba Sinter Group

Miba Sinter Austria
Vorchdorf, Austria
Miba Sinter Slovakia
Dolný Kubín, Slovakia
Miba Sinter USA
McConnellsville, OH, USA
Miba Sinter Brasil
Indaiatuba, Brazil
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

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
Osterode, Germany
Miba Industrial Bearings Brasil
Cataguases, Brazil

Miba Friction Group

Miba Frictec
Roitham, Austria
Miba Steeltec
Vráble, Slovakia
Miba Fibertec
Štětí, Czech Republic
Miba HydraMechanica
Sterling Heights, MI, USA
Miba Precision Components (China) – Friction Branch
Suzhou, China
Miba Drivetec India
Pune, India

Miba Power Electronics Group

Miba Resistors Austria
(EBG Elektronische Bauelemente)
Kirchbach, Austria
St. Stefan, Austria
Miba Cooling Austria
(DAU)
Ligist, Austria
Miba Electronics Slovenia
Šentjernej, Slovenia
Miba Resistors US
(EBG Resistors)
Middletown, PA, USA
EBG China**
Qingxi/Shenzhen region, China

Miba Strategic Units

STRATEGIC UNIT COATING
HighTech Coatings
Vorchdorf, Austria
Miba Precision Components (China)
– Coating Branch
Suzhou, China

STRATEGIC UNIT AUTOMATION SYSTEMS
Miba Automation Systems
Aurachkirchen, Austria

STRATEGIC UNIT eMOBILITY
Miba eMobility
Laakirchen, Austria
Miba Battery Systems
Bad Leonfelden, Austria

* Miba holds 74.9% of the shares and has the industrial leadership
** Companies in which Miba has shareholdings

PRODUCT PORTFOLIO

OUR TECHNOLOGIES FOR A CLEANER PLANET

POWDER METAL PARTS

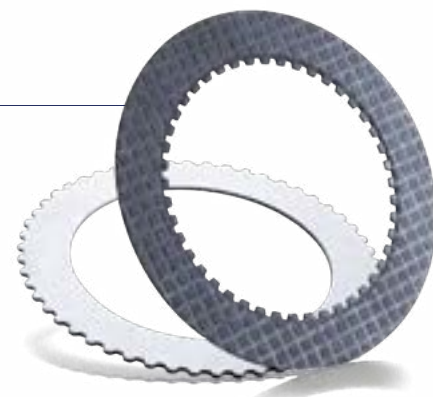
Miba's powder metal parts are characterized by complex design that integrates several functions in one component, high precision, strength, and low weight. Our components are used in engines, transmissions and the electric steering systems of cars, where they make an important contribution to increasing 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, medical 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.

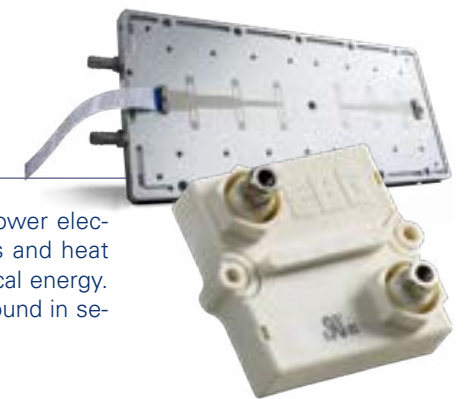


FRICTION MATERIALS

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.

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.



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.



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.



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.

OUR MISSION:

TECHNOLOGIES FOR A CLEANER PLANET



ENERGY GENERATION



ENERGY TRANSMISSION



ENERGY STORAGE



ENERGY USE

