Innovation in Motion

Miba

Annual Report 2016-2017

# TECHNOLOGIES FOR A CLEANER PLANET

# HIGH-LIGHTS

FEBRUARY 11, 2016

US Ambassador to Austria Alexa Wesner visits the apprentice workshop in Laakirchen. Miba plans to establish a vocational training program in the US as well.

FEBRUARY 2016

New coating equipment is commissioned at High Tech Coatings: The innovative GRIPCOAT Direct® coating meets a wide range of requirements in functional areas designed to enhance friction. This procedure makes it possible to deposit hard particles (industrial diamonds) directly to parts of components in a highly efficient manner.

APRIL 27, 2016

At Girls' Day, schoolgirls from the 7th and 8th grades are introduced to Miba and have a chance to dive into the world of technology.

APRIL 22, 2016

Miba receives 300 guests in Laakirchen on the occasion of the Long Night of Research.

JUNE 22, 2016

Stefan Fraunberger, Production Technician at Miba Gleitlager Austria, takes second place in the industry category of the Upper Austrian apprentice competition, extending Miba's series of successes at this competition.

JUNE 20, 2016

CEO F. Peter Mitterbauer meets the President of the United States of America, Barack Obama, at the 2016 SelectUSA Investment Summit.


JULY 2016

Miba makes a donation for victims of the storms which caused devastating damage in the area around Laakirchen. The Company contributes EUR 20,000 to the campaign "Laakirchen hilft."


SEPTEMBER 27, 2016

The Miba Engineering Center India in Pune is officially opened. Global support teams in the fields of construction and IT work at this facility.

SEPTEMBER 12, 2016

The Miba intranet "Sun" goes live. This marks the first time that the Miba sites around the world have shared a common communication platform.

OCTOBER 2016

Miba's Global Graduate Program enters its second round. Five young academics from Austria, Slovakia, the US, Brazil and China begin their 18-month training program with Miba.

OCTOBER 24, 2016

Christian Dumanski, Georg Simeth and Martin Viechtbauer from Miba Sinter Austria receive the third Franz Mitterbauer Award for developing an innovative gear drive system that significantly reduces dynamic torque, noise and vibration.

OCTOBER 24, 2016

In Berlin, Miba receives the EUREM award for an environmental project by Miba Sinter Austria aimed at ecological and economical optimization of thermal afterburning.

NOVEMBER 16, 2016

Miba is honored with the Best Recruiters seal in gold, receiving the award for the second year in a row in the automotive and motor vehicle production category.

MARCH 7, 2017

Miba receives the Upper Austrian industry bronze Corona award in the site category in recognition of corporate social responsibility. This award recognizes businesses in Upper Austria which over the past three years have made special investments and created jobs in the region.


FEBRUARY 1, 2017

Miba's new website www.miba.com goes live.

JANUARY 2017

The Miba AG E-Mobility Innovation Lab commences work. From now on, a separate team will be tasked with identifying and implementing business opportunities for Miba in the field of electromobility.

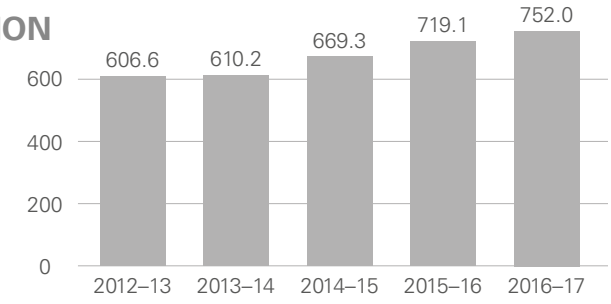
## 2016 AWARDS

**In 2016, Miba's efforts and activities related to a strong partnership with all stakeholders were once again recognized on multiple occasions.**

**Golden Best Recruiter** quality seal from 2016 & 2017 Best Recruiter study, Miba AG | **Corona (bronze award in the site development category)** from the Federation of Upper Austrian Industries, Miba AG | **ineo award "Model Training Company 2016–2019"** the Upper Austrian Economic Chamber, Miba AG | **EUREM award** (second place in the category for medium-sized companies) from EUREM, Miba Sinter Austria GmbH | Named **A-Class Supplier** by Shanghai Automobile Gear Works, Miba Sinter Slovakia s.r.o. | Named **A-Class Supplier** by Shanghai Automobile Gear Works, Miba Precision Components (China) Co. Ltd. – Sinter Branch | Named **Supplier of the Year 2015** by Schaeffler Greater China, Miba Precision Components (China) Co. Ltd. – Sinter Branch | Named **Best Quality Supplier of the Year 2016** by Shanghai Automobile Gear Works, Miba Precision Components (China) Co. Ltd. – Sinter Branch | Named **Outstanding member of R&D Community** by Weichai Power, Miba Precision Components (China) Co. Ltd. – Bearing Branch | Named **Supplier of the Year 2016** by Weichai Power, Miba Precision Components (China) Co. Ltd. – Bearing Branch | Named **Supplier of the Year 2016** by China National Heavy Duty Truck Group, Miba Precision Components (China) Co. Ltd. – Bearing Branch | Named **Key Supplier from 2017 to 2021** by First Automotive Works Diesel Engine Company, Miba Precision Components (China) Co. Ltd. – Bearing Branch | Named **Supplier of the Year 2017** by Schaeffler Greater China, Miba Precision Components (China) Co. Ltd. – Bearing Branch | **MA² Maintenance Award Austria (3. Platz)** by ÖVIA – „Österreichische technisch-wissenschaftliche Vereinigung für Instandhaltung und Anlagenwirtschaft," Miba Frictec GmbH | **Award for Cost Improvement, Highest Value Implementation from 2015 to 2017** by John Deere, Miba Drivetec India Pvt. Ltd. | **Good quality of the Year 2015** by Mettler-Toledo, EBG Shenzhen Ltd.

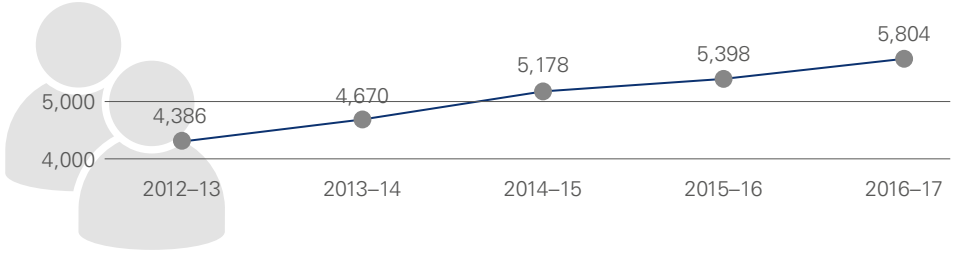
# KEY PERFORMANCE INDICATORS

## REVENUE IN EUR MILLION

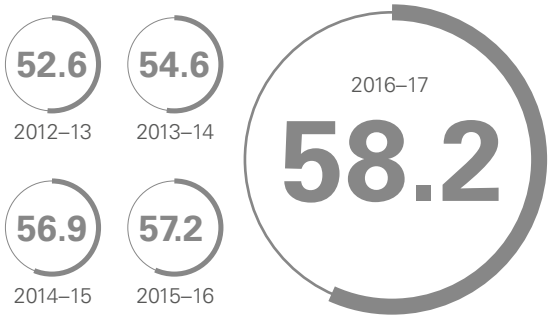



## EMPLOYEES

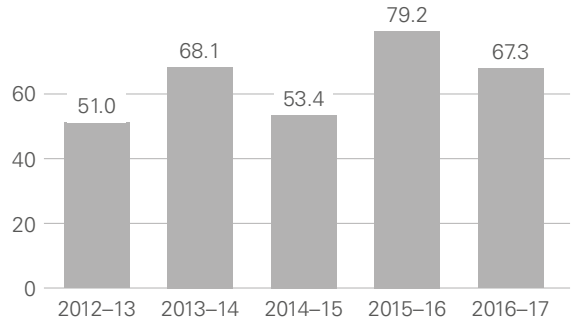
as of January 31
(including agency staff)




## EQUITY RATIO IN %




## INVESTMENTS IN EUR MILLION




## R&D EXPENSES IN EUR MILLION

| | |
|---|---|
| 28.2 | 2012–13 |
| 26.7 | 2013–14 |
| 27.4 | 2014–15 |
| 31.8 | 2015–16 |

2016–17

**35.2**

## RESEARCH RATIO

Ratio of research expenditure to revenue

| | |
|---|---|
| 4.7 | 2012–13 |
| 4.3 | 2013–14 |
| 4.1 | 2014–15 |
| 4.4 | 2015–16 |

2016–17

**4.7**

10
PREFACE

52
ECONOMIC PERFORMANCE

68
EMPLOYEES

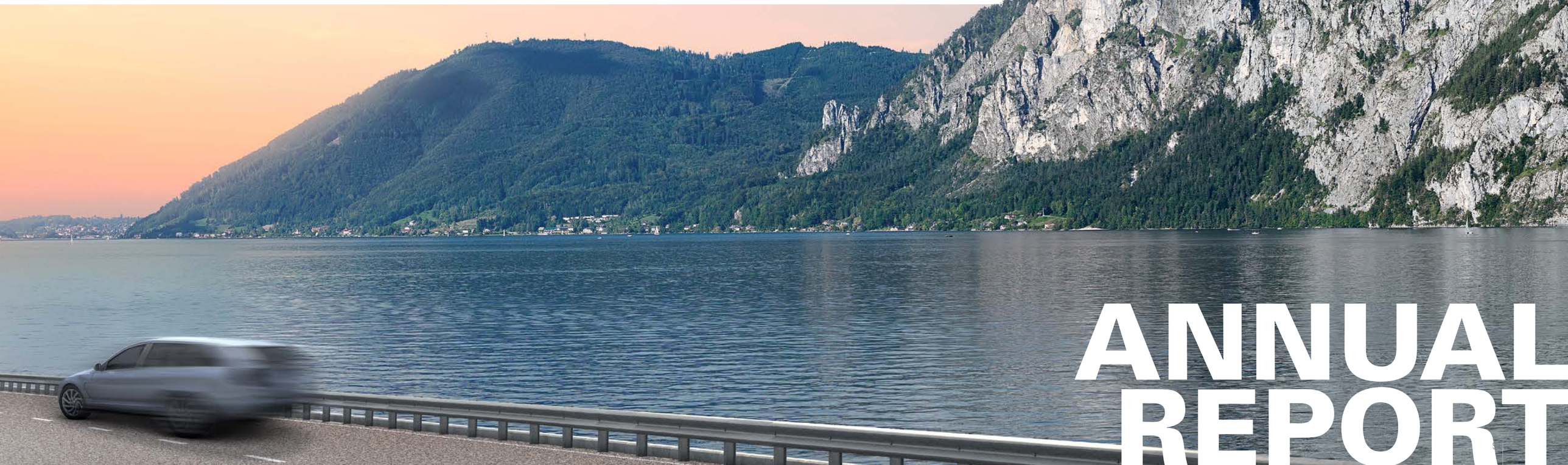
78
ENVIRONMENT

84
CORPORATE RESPONSIBILITY

Honesty and openness in communication with all stakeholders were and still are firmly anchored in Miba's core values. This annual report documents Miba's performance in fiscal year 2016–2017 in a challenging, dynamic market environment. We take a comprehensive approach in this presentation, one which also expresses our understanding of our role as a sustainable business.

This report is neither an image brochure nor a traditional financial report, and it is also not intended to represent a sustainability report written according to formal criteria. However, in our selection of topics, we used the Global Reporting Initiative (GRI) guidelines for orientation.

Ultimately, we intend for this report to provide all stakeholders with insight into the beliefs and actions of our business. We provide an overview of our strategic goals, describe our successes as well as the challenges we had to meet in 2016–2017 and those that we will face in the new fiscal year.



# ANNUAL REPORT

# FACE TO FACE

## BY THE CHIEF EXECUTIVE OFFICER

*Ladies and gentlemen, dear employees,*

The Miba Group is heading in a new direction with our 2016–2017 Annual Report. For this important benchmarking exercise, we have traditionally viewed data and facts in the rearview mirror. This will no longer be the case. Rather we have resolved to place the focus on the things that make us Miba. Our proximity to our customers and our global presence. Our spirit of innovation and our constant striving to find even better solutions. Our employees and their commitment to the Company but also to society. First and foremost is our clear mission: In each one of our divisions, working day in and day out to make our planet a little bit cleaner. With Miba technologies, we are making our contribution to the reduction of $CO_2$ emissions, increased efficiency of existing drive concepts and innovations related to new, alternative mobility concepts and energy sources.

In terms of communication, we are determined to take this new path in a focused and sustained manner. Since delisting from the stock exchange, our Company is once again entirely family owned, so we are now able to redefine our main focal points.

**Success is the mission and the incentive for the future**

We achieved a major target in the past fiscal year. In 2008 under the Miba 2015 strategy, we set a goal of generating annual revenue of EUR 750 million. We never deviated from our growth course even during and after the crisis years of 2008 and 2009 and have now reached that important goal. We are proud of this achievement, and I would like to extend my sincere thanks to our customers and employees.

Two years ago, we defined new and again very ambitious goals as part of the Miba 2020 – Dynamic Evolution strategy. I look forward to working with our employees at all of the sites toward reaching these goals.

Ninety years ago, my grandfather founded Miba as a metalworking shop in Laakirchen. Over the course of three decades, my father worked hard to expand the Company internationally. Today, we have around 5,700 employees at 22 sites around the world. We have become a globally leading partner to our customers in the development and production of highly efficient components for better energy efficiency, more environmental friendliness, greater precision and improved performance. Yet we cannot rest on our successes in the past or consider these to be a safety buffer. Rather, in the interest of our customers and employees, these should serve as an incentive and an obligation to work intensively on the future of the Miba Group, especially in 2017, its anniversary year.

**Electrification and digitalization as opportunities**

Since the beginning of the decade, we have invested around EUR 400 million in our sites in addition to some EUR 200 million in research and development. We are continuing to pursue this approach in times of major changes in particular. Some may consider these changes to be a threat, and yet we see them as opportunities. We are already devoting a great deal of attention to new types of drives such as hybrid technology and electrification. To this end, we have established a central E-Mobility Innovation Lab, and we are also developing solutions for hybrid and purely electric drive technologies in the individual divisions. The first successful projects in cooperation with our customers show that we are heading in the right direction. Of course we continue to invest heavily in new solutions for the conventional power train. It will keep making an important contribution to mobility and still offers a great deal of development potential in terms of efficiency, cleanliness and noise reduction. In addition, we are taking advantage of the opportunities from the digitalization of processes, products and in production.

Each and every one of our employees contributes to the expertise and the wealth of new ideas that we need to succeed in reaching future milestones. Especially in times of turbulent change, it is crucial that we share new ideas and approaches with each other, engage in discussion and, in this way, enrich our Company. This calls for new forms of collaboration, internal communication and team building. Here, too, we are taking a new approach. In the new Miba Forum set to open in May, we will have the ideal environment to foster this in an open office design unique in the Austrian industry.

I extend my most sincere thanks to you – our customers and all of our partners – not only for your interest, but, above all, for the trust you have placed in Miba.
Accompany us on our journey to the future of mobility and energy efficiency. Support us in our mission to make our world a cleaner place through innovation and technology – true to Miba's mission: Innovation in Motion – Technologies for a Cleaner Planet.

Sincerely,

**F. Peter Mitterbauer**

# GLOBAL PRESENCE

## MIBA SINTER GROUP

**Miba Sinter Austria GmbH**
Vorchdorf, Austria

**Miba Sinter Slovakia s.r.o.**
Dolný Kubín, Slovakia

**Miba Sinter USA LLC**
McConnelsville, OH USA

**Miba Precision Components (China) Co. Ltd. – Sinter Branch**
Suzhou, China

**Mahle Metal Leve Miba Sinterizados Ltda.***
São Paulo, Brazil

**Sintercom India Pvt. Ltd.***
Pune, India

## MIBA BEARING GROUP

**Miba Gleitlager Austria GmbH**
Laakirchen, Austria

**Miba Bearings US LLC**
McConnelsville, OH USA

**Miba Precision Components (China) Co. Ltd. – Bearing Branch**
Suzhou, China

**Miba Bearings Materials GmbH**
Aurachkirchen, Austria

**ABM Advanced Bearing Materials LLC***
Greensburg, IN USA

**Miba Far East PTE Ltd.•**
Singapore

## MIBA FRICTION GROUP

**Miba Frictec GmbH**
Roitham, Austria

**Miba Steeltec s.r.o.**
Vráble, Slovakia

**Miba HydraMechanica Corp.**
Sterling Heights, MI USA

**Miba Drivetec India Pvt. Ltd.**
Pune, India

**Miba Precision Components (China) Co. Ltd. – Friction Branch**
Suzhou, China

**Fibertec Štětí s.r.o.**
Štětí, Czech Republic

## MIBA POWER ELECTRONICS GROUP

**EBG Elektronische Bauelemente GmbH**
Kirchbach, Austria,
St. Stefan, Austria

**DAU GmbH & Co KG**
Ligist, Austria

**DAU Thermal Solutions North America Inc.**
Macedon, NY USA

**EBG Shenzhen Ltd.***
Shenzhen, China

**EBG Resistors LLC*•**
Middletown, PA USA

**EDMS d.o.o.***
Šentjernej, Slovenia

## MIBA COATING GROUP

**High Tech Coatings GmbH**
Vorchdorf, Austria

**Miba Precision Components (China) Co. Ltd. – Coating Branch**
Suzhou, China

**Teer Coatings Ltd.**
Droitwich, United Kingdom

**Miba Automation Systems GmbH**
Aurachkirchen, Austria

**Miba Engineering Center India Pvt. Ltd.•**
Pune, India

* Miba affiliated companies
• Miba sales/engineering offices

## AMERICA
753 EMPLOYEES
6 SITES

## EUROPE
4,192 EMPLOYEES
12 SITES

## ASIA
859 EMPLOYEES
4 SITES

## TOTAL
5,804 EMPLOYEES
22 SITES

- Miba Sinter Group
- Miba Bearing Group
- Miba Friction Group
- Miba Coating Group
- Miba Power Electronics Group
- Miba Automation Systems

# EMPLOYEES WORLDWIDE

# PRODUCT PORTFOLIO

## SINTERED COMPONENTS

Miba sintered components are used in passenger vehicle engines, transmissions and steering systems. Their sophisticated design, which integrates several functions into one component, as well as their high precision, durability and lightweight structure, set them apart from the competition. Thus, Miba technology is contributing to greater efficiency and helping save on fuel consumption.

## ENGINE BEARINGS

Engine bearings are crucial components playing a significant role in engine function and service life. They help position crank- and camshafts, minimize friction during operation and protect the engine from damage and breakdown. They are used in diesel and gas engines in ships, heavy-duty vehicles, locomotives and power plants. The bearings produced by the Miba Bearing Group withstand higher ignition pressures, thus increasing engine efficiency.

## FRICTION MATERIALS

Friction materials are the decisive performance elements in vehicle clutches and brakes, optimizing speed and power. Miba Friction Group components reduce weight and the size of transmissions and axles. They are used in construction machinery, tractors, passenger vehicles, trucks, high-speed trains, motorcycles, aircraft and wind power plants.

## POWER ELECTRONICS COMPONENTS

Resistors are among the Miba power electronics components. Miba resistors can be found, for instance, in the power electronics of frequency converters in wind turbines or in high-speed trains. Heat sinks and heat pipes are other examples of power electronics components. They protect electronic components from overheating and are used, for instance, in drive train control units, converters for electric motors and wind power plants.

## COATINGS

Miba develops customized coating solutions for refining functional surfaces. Among its core technologies are polymer and low-friction coatings, electroplated overlays and PVD coatings. These coatings ensure maximum service life and optimum functionality. Miba coatings are used in components for engines and transmissions of passenger vehicles, trucks and Formula 1 race cars, as well as in other high-performance applications.

## SPECIAL MACHINERY

Miba's special machinery is used for high-precision and efficient machining of small to very large components. Miba Automation Systems is a leader in engine bearing technology, robotics and automation, as well as stationary and mobile special machinery which is mainly used in the construction of power plants.

# MANAGEMENT BOARD

**F. PETER MITTERBAUER**
"For me, our Innovation in Motion – Technologies for a Cleaner Planet mission is both a purpose and a responsibility. Using our technologies to make our planet cleaner is a cause close to my heart. Only if we make the right decisions and take the right actions will the generations to follow be able to experience the same beautiful world."

**WOLFGANG LITZLBAUER**
"Our customers expect us to deliver the highest quality at a competitive cost. Our clear focus on technologies for the future that contribute to greater efficiency while consuming a minimal amount of raw materials is the key prerequisite to meeting these requirements."

**HARALD NEUBERT**
"Our environment is changing at a rapid speed. That makes it even more important that we choose the right focal points and deal thoroughly with topics like electromobility and digitalization. Miba has enormous potential in both of these areas – if we seize the opportunities now."

**MARKUS HOFER**
"Besides a sound financial foundation and lean structures, the employees are the only thing that will secure Miba's success in the long term. We must therefore prepare them for the demands of the future, provide them with intensive support during these times of change, and make Miba even more attractive for future generations of employees."

**F. PETER MITTERBAUER**
**Chairman of the Management Board of Miba AG**
also responsible for
Miba Power Electronics Group, Communications, Management Accounting, Human Capital, Strategy, Innovation & Technology and Internal Audit

**WOLFGANG LITZLBAUER**
**Vice Chairman of the Management Board of Miba AG**
also responsible for the Miba Bearing Group, the Miba Friction Group, the Miba Coating Group and Purchasing

**MARKUS HOFER**
**CFO of Miba AG**
also responsible for Corporate Finance, IT and Business Excellence

**HARALD NEUBERT**
**Member of the Management Board of Miba AG**
also responsible for the Miba Sinter Group, Miba Automation Systems and Quality


## ELECTED MEMBERS

**Dkfm. Dr. Wolfgang C. Berndt (Chairman of the Supervisory Board),**
former president and CEO of Global Fabric and Home Care, The Procter & Gamble Company; first elected on June 27, 2008; Chairman of the Supervisory Board of Miba AG since 2013, with term ending at the 2019 Annual General Meeting; member of the Remuneration Committee

Positions on other supervisory boards: GfK AG (until May 2016), OMV AG, BAST AG, Mitterbauer Beteiligungs-AG (Chair since June 28, 2013)

**Dipl.-Bw. Alfred Heinzel (Vice Chairman),**
independent; Chairman of the Supervisory Board of Heinzel Holding GmbH; first elected on July 4, 2003; Vice Chairman of the Supervisory Board of Miba AG since 2005, with term ending at the 2019 Annual General Meeting; member of the Audit Committee

Positions on other supervisory boards: Mitterbauer Beteiligungs-AG, Wilfried Heinzel AG (Chair), Zellstoff Pöls AG (Chair), Europapier AG (Chair), Europapier International AG (Chair), Laakirchen Papier AG (Chair), Estonian Cell AS, Vao Agro AS and Diner AS (Chair) (all Estonia)

**DI DDr. h. c. Peter Mitterbauer,**
independent; former Chairman of the Management Board of Miba AG; member of the Management Board of Mitterbauer Beteiligungs-AG, first elected on June 28, 2013; member of the Supervisory Board of Miba AG, with term ending at the 2018 Annual General Meeting; member of the Remuneration Committee; member of the Audit Committee

Positions on other supervisory boards: Oberbank AG, DIE ERSTE Österreichische Spar-Casse Privatstiftung, Prinzhorn Holding GmbH, Rheinmetall AG (until May 2016), ROI Management Consulting AG

**Prof. KR Ing. Siegfried Wolf,**
independent; Chairman of the Board of Directors of Russian Machines LLC; first elected on June 25, 2015; member of the Supervisory Board of Miba AG, with term ending at the 2019 Annual General Meeting

Positions on other supervisory boards: Mitterbauer Beteiligungs-AG, Banque Eric Sturdza SA, GAZ Group (Chair), Russian Machines LLC (Chair), Sberbank Europe AG (Chair), Schaeffler AG, Continental AG, UC Rusal Plc. (since June 2016)

## DELEGATED MEMBERS

**Elfriede Schober**
Member of the Supervisory Board of Miba AG since 2016; member of the Audit Committee

**Johann Forstner**
Member of the Supervisory Board of Miba AG since 2009

# MIBA

## DYNAMIC EVOLUTION

As a technology leader and global company, we are making an active contribution to technical progress and global economic growth. Global population growth, climate change and the scarcity of resources call for innovative solutions. We are preparing for these tasks and have defined our priorities for the next few years. Change always means new possibilities and opportunities to be exploited. With Miba 2020, we are heading into the future with confidence, a clear vision, strategy and ambitious targets.

## OUR MISSION

Innovation in Motion –
Technologies for a Cleaner Planet

## OUR VISION

No power train without Miba technology

## OUR GOALS

- Profitable growth to over EUR 1 billion
- Increase in revenue from core business and through M&A
- Global number 1 in our market segments

## OUR STRATEGY

Strive for technology leadership in demanding, financially attractive market segments
Dynamic Evolution as the overarching guiding concept supported by three main pillars: Global Growth, Innovation and Technology, People

## OUR VALUES

- Technology Leadership
- Lifelong Learning
- Entrepreneurship
- Passion for Success

2020

# TECHNOLOGIES FOR A CLEANER PLANET

Whether it is reducing $CO_2$ emissions, increasing the efficiency of existing drive concepts or keeping pace with the trend toward new alternative energy sources: Miba supports its customers every day with pioneering technologies. Our mission: Innovation in Motion – Technologies for a Cleaner Planet. With their commitment and motivation, our employees work to improve the performance of motor vehicles, trains, ships, aircraft and power plants across the world and make them more efficient and environmentally friendly.

We are aware that mobility and power generation are changing – and therefore we place our trust in the people who are driving this change forward with their knowledge and enthusiasm, securing the foundation for the further development of existing technologies as well as new drive concepts. So that we will all be able to live on a clean planet, even in the future.

# MIBA EMPLOYEES UP CLOSE AND PERSONAL

Taking responsibility for a cleaner planet, championing environmental protection and sustainability: Five Miba employees from Austria, China, Slovakia and the US explain how they personally translate Technologies for a Cleaner Planet into practice in their day-to-day life, both at home and at work.

## BODY AND MIND IN HARMONY

Breathing, concentration, relaxation. When immersed in his tai chi exercises, Karol Janás is not only in harmony with himself but also with his surroundings. The 37-year-old from Jarok, a small community near Nitra in Slovakia, has been practicing tai chi for 17 years. He dedicates around thirty minutes every day, mostly in the early morning hours, to his practice – focuses on breathing calmly, moving fluidly and stretching individual parts of the body. Tai chi is also referred to as "meditation in movement." For Karol Janás, it is the ideal counterbalance to his work as Lean Senior at Miba. "It helps me to stay fit and healthy, both physically and mentally." Change processes that go hand in hand with his responsibilities in lean management often trigger conflicts and challenging situations. To counter this, it is helpful to approach problem solving within the team in a balanced and relaxed manner, so that the best possible solution for all sides can be found.


In harmony with nature – with movement sequences from the Far East, Karol Janás finds the balance between his work and personal life.

# KAROL JANÁS


LEAN MANAGEMENT

# TOP QUALITY – AS EFFICIENTLY AS POSSIBLE

Karol Janás actually began his career with Miba in 2008 as Product Engineer for Miba Steeltec in the Slovakian city of Vráble. Today, nine years later, he is Lean Senior for Miba AG, specifically for the Miba Friction Group. To handle the responsibilities of his job, he commutes regularly between Austria and Slovakia. Within the Company, he now deals with lean processes and the optimization of existing processes – a new challenge in which he is able to make ideal use of the diverse experiences gathered throughout his career at Miba.

The goals of lean management are defined as eliminating loss and waste, and designing processes as efficiently as possible. Existing processes are questioned and examined closely, potential for improvement is identified and improvement suggestions are developed during workshops and regular meetings. Karol Janás is aware that his work is entirely synchronized with Miba's Technologies for a Cleaner Planet standard – and this is one of the reasons why he puts his heart into his job. Lean management contributes to a cleaner planet because more efficient production processes use less time, energy and materials and, in general, consume fewer resources. All activities are always focused on the customer – regardless of whether this is an external partner or internal departments. But the employees also benefit from lean processes – there are fewer complex work operations, less energy is needed to produce the same results, many processes become more ergonomic and thus safer. At the same time, the capacities that have been freed up give employees the opportunity to devote themselves to new projects or to take more time to investigate and question how existing processes are defined and executed. Karol Janás says with confidence, "In this way, we can advance Miba even further."

For Karol Janás, it is understandable that many people respond to change – which accompanies lean management – with uncertainty. His top priority is therefore "listening." Problems and improvement suggestions always have to be developed in cooperation with the colleagues. "When all of the opinions are heard and taken seriously, identification with the steps developed is much stronger than if I simply present ready-made instructions to implement. Because ultimately, the measures themselves are intended to be sustainable, which means that they will be permanently integrated into the work process," emphasizes the 37-year-old, who learned the key elements of leadership in the Miba Management Academy.

Whether in production, administration or supporting processes, lean topics can be identified in every area of the Company and help Miba as a whole to continue to improve. Even small things like projects to standardize pricelists in sales simplify internal processes and help to save time. "Basically, it is very simple. If you can achieve the same results with fewer process steps and less material, consumption will drop. In this way, we can not only stay competitive in the future, but we can also make a valuable contribution to sustainability," says Karol Janás.

If we want everything to stay the way that it is, everything has to change – keeping nature intact requires people who are able to use their ideas to bring about change in perspectives and familiar processes. People like Karol Janás, who find inner peace not only within themselves but also in their surroundings.

"Lean management only works in a team. We work together to define the improvements that make sense – and that are actually possible. We don't just want change for the sake of change."

Feeling freedom in nature –
Lisa Neuhuber proves her talent for the
versatile sport of eventing with Querida Z.

## STEADY IN THE SADDLE

Dressage, show jumping, cross country. Eventing is still considered to be the most prestigious and versatile of the riding disciplines, calling for an enormous amount of training and commitment. For the 23-year-old Lisa Neuhuber from Vorchdorf, the combination of sports and nature, in this case handling an animal, was the perfect choice right from the beginning. She has been riding since she was ten years old, and she trains four times a week with Querida Z in order to give her best performance at tournaments. Even falls and injuries have done nothing to slow her down. When she has set her mind to something, there will be no compromises. "I always want to get the most out of myself" – that applies both to riding and for her volunteer work with her club, for her training and her job at Miba, where she has held her own in a man's world as Process Engineer for degreasing equipment.


# LISA NEUHUBER

PROCESS OPTIMIZATION

# THE BEST IS JUST GOOD ENOUGH

Lisa Neuhuber is a great sport, in the truest sense of the word. Among her colleagues, the cheerful 23-year-old is considered to be extremely helpful, always optimistic and quite ready to stand up for her opinions and ideas. She has been able to demonstrate this a number of times during her tenure at Miba. Encouraged by her brother, she started her apprenticeship as Production Technician in the Miba Sinter Group in 2009. Over the course of her specialization, she moved to High Tech Coatings, where she chose process engineering. She quickly became the main contact on degreasing equipment.

Her responsibilities include the maintenance of machinery as well as process optimization and trial runs for improving existing processes. Through her work, she contributes in many ways to the Miba standard Technologies for a Cleaner Planet. Degreasing components is necessary to make the coatings more durable, and these coatings in turn contribute to lightweight construction in the automotive industry, where they reduce $CO_2$ emissions. The coatings can also extend the service life and increase the reliability of the components, and the performance and efficiency of the drives can be increased. With her analyses and improvements, Lisa Neuhuber also helps to make the processes within Miba even more sustainable and efficient. Her goal is to achieve the best cleaning results with the most efficient use of supplies possible. That means saving time, energy, water and solvents wherever possible, yet without sacrificing the quality of the results.

“Finding the balance between potential savings and a high-quality product is definitely a challenge at times. Particularly when it comes to complex contaminants and sensitive components, numerous tests and trials are sometimes necessary before I am satisfied with the result,” Lisa Neuhuber says, showing her ambitious nature. Even during her apprenticeship, she felt it was important to demonstrate her motivation and commitment. She was graded “excellent” in every subject, easily winning a bet with her apprentice trainer. In her job, she was thrown in at the deep end right from the start. Even today she is proud that she managed to handle that situation. “Of course I was unsure if I would manage to fulfill every expectation of me. But it made me so very happy that my colleagues and superiors put that trust in me. They just assumed that I would handle everything. That really made me feel even more motivated to complete my tasks, because I didn’t want to let anyone down.”

She also showed her nerves of steel during the many trips to China in recent months, where her approaches for sustainable processes were also in demand. To date she has made five trips, each one several weeks long, to work at the Miba site in Suzhou. She provided support to the colleagues in commissioning new equipment and trained them in how to handle the degreasing machine. Besides her technical expertise, these international assignments mainly allowed her to prove her social streak. As an interface between the colleagues in China and those in Austria, she endeavored to clear up any misunderstandings right from the start. It was important to her to understand the often very different work processes and then in turn to be able to explain these to the respective opposite side.

For Lisa Neuhuber, versatility is a quality necessary even beyond riding Querida Z. At Miba, too, her yearning for new challenges and her enjoyment of ongoing improvements are in high demand. Because ultimately, this is the only way that the world can actually become a cleaner place in the future.

“It suits me perfectly that Miba always faces new challenges, and continually improves its products and technologies – this way, my job will never become boring.”

# RICK WALKER

## ENTHUSIASM FROM AN EARLY AGE

Set up, install, repair. Any time a computer technician is needed at the elementary school in Hopewell, Ohio, he is on the spot right away. Rick Walker has taken to helping out at his hometown school in his free time. He offers technical support, arranges for new devices and promotes projects to spark the kids' interest in science and technology. He is convinced that "stunning results can be achieved with the simplest of means." Students with a bit of background knowledge no longer take smartphones, tablets and MP3 players for granted, but instead see these as technological accomplishments that can only be achieved with considerable expertise and commitment. The 48-year-old, as Site TEC Manager at Miba Bearings US LLC in McConnelsville, also brings dedication and 25 years of experience to the table. Through all these years, he has been witness to a number of changes, and yet he is still convinced that Miba, with its constant improvements, will always stay a step ahead of the competition. This is in line with the mission of Innovation in Motion – Technologies for a Cleaner Planet.

At the elementary school where his wife works as a teacher, Rick is the expert in all aspects of computers. He tries to convey his passion for technology to the students as well.



PERFORMANCE SIMULATION

# ALWAYS A STEP AHEAD

Back in the early 2000s, when the first emissions regulations were introduced on the American market, Rick had already gained some experience in his career. Immediately after earning his college degree, he began working as a production engineer at the Glacier Clevite engine bearing plant in McConnelsville. When Miba acquired the company in 2001, his responsibilities and areas of operation grew. As TEC Manager, he now deals with damage analyses and performance simulations and also provides production support for material tests. Together with his team, Rick works on developing new engines, new materials and new production techniques. Nearly all of the simulations carried out within the scope of his job are based on the specifications of customers whose products have to comply with more up-to-date and usually stricter emissions guidelines. “At Miba, we have to ensure that our engine bearings hold up to the new requirements. Especially in recent years, we have been faced with a few challenges, but with our intensive research and development activities, we have been able to successfully respond to them.”

In the course of globalization, strict legal requirements in the EU have also had an impact on those American producers who want to remain competitive on the European market. For this reason, Miba also closely adheres to the RoHS (Restriction of Hazardous Substances) guidelines in the US, which seek to ban problematic components of electrical parts. One banned substance that was previously used as a component in lubricants is lead. “With the Company’s intense commitment to sustainability, Miba’s products and processes are usually a step ahead of the regulations within the market. So far, we have always done a good job predicting trends and preparing for them ahead of time,” emphasizes Rick. Americans also value environmentally responsible behavior when it comes to production processes. Consumables are cut back as much as possible and waste prevention plays as much a role as the protection of water resources and the reduction of energy consumption in general. “The next issue that we would like to pursue in more detail is the reduction of residual materials in production. These include cast material, which requires a great deal of energy to be produced. There is certainly some potential for savings here,” reflects Rick.

It is important for the 48-year-old to work for a company that places a great deal of emphasis on environmental protection and sustainability and promotes the use of innovative technologies. This is the only way to maintain a high standard of quality and to always stay one step ahead of the competition. “Regulations and standards will continue to become more stringent in the next few years. This may pose challenges for us as a company, but in the end will benefit everyone around the world.” It is this realization that Rick also hopes to convey to his wife’s students – that with a passion for technology, every single one of them can do their part for society. And contribute to a cleaner planet.

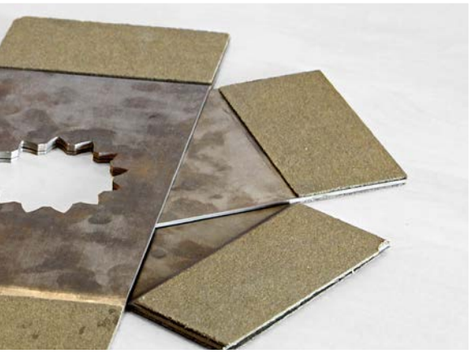
“Environmental protection plays an important role at Miba in the US. We want to show that the commitment is paying off – not just within the Company itself, but also among local residents.”

# MATEO PRIMORAC

Mateo Primorac's original plan was to provide a new solution for the supply of drinking water in Africa. The result was a better water filter. The 27-year-old keeps on trying to find ways of making the world a little bit better.

## GLOBETROTTER WITH A VISION

Question the status quo, tap into sources of inspiration, create something new. What started as a child's fascination with Lego Technic today allows Mateo Primorac to improve water filtration systems or create prototypes on a 3D printer. The 27-year-old native of Lower Austria is a passionate tinkerer and inventor. In his free time, he often takes on technical challenges and figures out the best way to solve them. He was born with an interest in the natural sciences. His father is a mechanical engineer, his mother a mathematician, while his brother and sister have degrees in mathematics and pharmacy, respectively. "I get inspiration from almost everything happening around me. The global megatrends will shape our society in the future, and I love the thought that perhaps my ideas can make a positive contribution for people and for the environment." At Miba, Mateo Primorac is able to live out this commitment to a sustainable future: As a Globalite – also known as a Global Graduate – he got to know Company sites in China, Slovakia and the US over a period of 18 months. Now he will begin working in the E-Mobility Innovation Lab in Laakirchen. There is likely no place better for innovative ideas.



E-MOBILITY

# DIAMONDS ARE FORMED UNDER PRESSURE

After completing his degree in materials science at Montanuniversität Leoben, Mateo Primorac actually first worked as a management consultant in the automotive industry. “After some time, I noticed that I was missing something. I wanted to be actively engaged with technical components – with Miba’s Global Graduate Program, I was also able to see the world.” No sooner said than done – the Austrian took part in round one of the program, started at the Miba Coating Group in China, moved to the Miba Friction Group in Slovakia and then to the Miba Sinter Group in the US. Technically speaking, he was able to use this experience to gain a great deal of knowledge. He worked in production as well as in sales, conducted market analyses and devoted himself to product development. But mainly, he was also able to benefit from the program in an intercultural sense; he met a wide variety of people and repeatedly had to adapt quickly to new environments and situations. “Of course it is a challenge to have to prove yourself time and time again. But I think that the working world will become more and more global in the future, and in that scenario, it is helpful to be open and to be able to approach new people.

Mateo Primorac is particularly happy about the fact that, effective immediately, he will be able to use his experience to make a contribution in the E-Mobility Innovation Lab, as he has already been thinking for quite some time about buying himself an electric car. The combination of global issues and technical challenges is what both interests and motivates him. He is aware that the role of sustainable mobility will continue to grow in the future. Lowering emissions, the efficient use of resources or the use of environmentally friendly materials – the applications Miba is already dedicated to pursuing are widely varied and have the potential not only to protect the environment but also to further improve the performance and quality of products and processes.

With his imagination, the native of Lower Austria has already made a valuable contribution to a Miba patent – steel strips are a new way to manufacture the carrier materials for friction linings. The solution is innovative, yet simple and can subsequently lead to new brakes and clutch parts – and also to noise reduction. “Just what direction this will take still remains to be seen. We find ourselves in the early phase of development, but the results are highly promising,” says Mateo Primorac with emphasis.

Always working on further improvements, never standing still – the things that hold true for Miba’s projects are also the goals the 27-year-old has set for himself: “A great deal can be achieved through hard work and pressure from the outside. That is just as important for my work as for the initiatives in my free time. I grow in response to the demands placed on me and am then able to live up to my full potential.” The best qualification for helping to further drive Miba forward in the field of Technologies for a Cleaner Planet.

“New perspectives lead to new ideas. With their variety of experiences and approaches, international teams serve to advance not only Miba as a company but also each individual employee.”

## COMMITMENT TO THE NEXT GENERATION

Fresh air, clean water, green landscapes. The things many people take for granted are a complex challenge in China. All the more so when a mother wants an environment in which her children are able to live a long and, above all, healthy life. Forty-year-old Snow Yu takes environmental protection seriously. For this reason, she is trying to show her daughter and son simple, fun ways to dispose of garbage without just throwing it away or to use water without senseless spillage. While traveling in Europe, she saw how rewarding shared experiences in nature can be for families, whereas in China, on days when the air pollution is high, her children do not have the option of playing outside even for just a short amount of time. Snow is convinced of one thing: "Anyone can do their part and change the world." Every day, she puts this approach to the test as Deputy General Manager Coatings at Miba Precision Components in Suzhou, China.

Snow's children know that unspoiled nature is not a given. They are also aware of what they themselves can do to protect the environment.

# SNOW YU




# FOR A CLEANER PLANET

Switching between meetings and discussions, following up coordination meetings with regular meetings, planning discussions and telephone conferences. Snow's day-to-day work can easily be summed up in one word: communication. As Deputy General Manager of MPCC's coating business, the 40-year-old ensures that high-quality products are delivered to the individual customers on time. As part of her responsibility for the coatings business, she deals with all aspects on site, from production planning, budgeting and arrangements for machine installation to the management and monitoring of the targets set.

Snow has been with Miba since 2006. She has been involved with developments in Suzhou from the start, and as the company has grown, so have her responsibilities. After working as Human Capital Operations Manager, she became Deputy General Manager. "Without a structured work method, I'd be lost today. I have so many things on my plate that my actions are heavily geared toward KPIs. The defined key figures allow me to determine in which areas we as a team are doing well and where we might be able to improve a bit." She is proud to have found a job at Miba that promotes technologies for a cleaner planet. The coatings produced in Suzhou play a crucial role in improving the efficient use of fuels in the automotive industry and heavily cutting back on emissions. Miba's products and solutions set standards on the Chinese market. The company also plays a valuable role in protecting the environment, something the employees value considerably.

With a clear focus on sustainability, the company set itself apart from the competition right from the beginning, not only in terms of its products but also when it comes to how it treats its employees. "It's important to me to give young people a chance. We offer a comprehensive training program and considerable development potential. Of course, this takes time and a good amount of training, but in the end ensures our long-term success with loyal, satisfied employees," Snow emphasizes. She herself completed the Miba Leadership Academy and, as a result, knows just how important leading people is.

Doing so also requires keeping an eye on the future. Whether industry 4.0 or e-mobility: Miba is constantly using its technology to go a step further in recognizing future trends with the aim of being a pioneer in environmental protection within the industry. To continue doing so, it is important for Snow Yu to have regular discussions with her employees and motivate them to work hard on coming up with new concepts and ideas. "Every single person can make a valuable contribution. My duty is to discover my employees' strengths and to facilitate them. This is how we develop innovative, sustainable ideas that could possibly make the crucial difference in the future."

The next generation is the one relying on environmentally friendly solutions and products, so that Snow Yu's children will perhaps be able to play outdoors with their children.

"We should not rely on politics when it comes to environmental protection. Each and every one of us has to do our part."

Less is more, quality over quantity – when it comes to buying local food, Stefan Buchmayr holds himself to high standards. Out of respect for nature and for his family's health.

## LIVING WHERE OTHERS SPEND THEIR VACATION

Milk from the farm, bread from the bakery, eggs from the parent's henhouse. When buying food, Stefan Buchmayr values two things above all – quality and local produce. The 35-year-old does most of his shopping on foot or by bicycle, and the fact that he frequently has great distances to cover while doing so is fine with the sporty native of Bad Ischl. He enjoys being outdoors in nature, and prefers to spend his free time hiking or mountaineering, mountain biking or rock climbing. Ski touring is added to his schedule during the winter months. "After all, I live in a region where others spend their vacation. When I am out in the mountains or in the forest, I can disconnect and have enough time to reflect on all of the things that occupy my mind on a day-to-day basis." Because of Stefan Buchmayr's professional role, these are often topics related to preserving the environment and technologies for a green planet. He is EHS Manager at Miba Sinter Austria in Vorchdorf, a position in which he is responsible for all environmental and safety aspects at the site.

# STEFAN BUCHMAYR



CERTIFICATION

# IDENTIFYING POTENTIAL, IMPLEMENTING IMPROVEMENTS

Stefan Buchmayr's day begins with a cup of tea. At 6:30 a.m., he reads his first e-mails and handles responses; he values taking the time to calmly plan his schedule and projects. No wonder, as he is responsible for a number of different areas as EHS Manager – in addition to the further development of the environment and energy management system, his sphere also includes the matters of plant safety and concierge services along with emergency and crisis management and serving as liaison with authorities. "I've never gotten bored in my job," the 35-year-old says with a laugh. After completing his biological and environmental technology degree at a university of applied sciences and collecting a few years of professional experience in plant engineering, he joined Miba as Environmental Manager in 2009 and has worked continuously to advance himself since then.

Today, "his" sintering site in Vorchdorf is certified under ISO 14001 (environmental management), under ISO 50001 (energy management) and also under BS OHSAS 18001 (occupational health and safety management) – unique at Miba, something of which Stefan Buchmayr is particularly proud. "The annual audits are always a highlight for me. Improvement is always possible in practically every area, though at times we need to be pointed in the right direction. Therefore, I think we should consider an auditor as an external consultant to help us identify potential." As a support department, the EHS area (environment, health, safety) ensures the framework within which products can be produced unhindered – making it possible for Miba to be successful. There are plenty of examples of how the department successfully implements the Miba standard Technologies for a Cleaner Planet at the site – measures that range from adding an electric vehicle to the fleet, through reusing residual material like iron powder and sintering scrap in the production cycle, to lowering consumption of electricity, water, natural gas and propane. "For example, we also made the preparation of rolling oil more efficient. Now, we no longer dispose of the oil after use, but clean and reuse it. That results in savings and also protects the environment. An absolute win-win situation," points out Stefan Buchmayr. An employee provided the idea for the project; improvement processes often originate from among those involved. "Internal communication is therefore also an issue very close to my heart. Employees need to know what is happening at the site and how changes can directly impact their work environment. That is the only way for them to make their own contributions." Examples of best practices are also discussed in an exchange of information with other sites. Working as a team allows us to make things happen much more easily.

As EHS Manager, Stefan Buchmayr has taken on the task of leading by example – both at work among his employees and at home for his twin sons. After all, simply riding his bike down to the next farm for shopping is something he would like to be able to do in the future, too. In an intact environment that to him is more than just a vacation setting.

"The annual certification audits are an essential part of the ongoing improvements we make at the site – and as a business per se – and our efforts to achieve new and sustainable developments."

# ECONOMIC PERFORMANCE

## STRONGER FOUNDATION FOR THE FUTURE

Despite the challenging market environment, Miba achieved further growth in fiscal year 2016–2017 and was able to maintain or expand its market position. The Company's growth was driven to a significant extent by the high level of capital expenditure on research and development, which will ensure that it remains competitive over the long term, too. All activities are centered around Miba's mission: "Innovation in Motion – Technologies for a Cleaner Planet."

# Economic conditions

**Differentiated picture of global economic growth[1]**

In 2016, the development of the global economy slowed somewhat compared to the previous year. After global growth of 3.2 percent in 2015, the International Monetary Fund estimates a 2016 growth rate of 3.1 percent. The past year was characterized by stagnating global trade, weak investments and political uncertainty. Regional variations in economic performance could be seen in some cases. Growth was seen for instance in the US, where the second half of the year picked up momentum following a weak first half. In other industrial nations, particularly those in the eurozone, not all potential has been utilized. Overall, the figures of the IMF show a picture of rather sluggish growth. For 2016, the IMF anticipates growth of 1.6 percent for the industrial nations after growth of 2.1 percent in 2015. GDP growth in the eurozone was 1.7 percent (after 2.0 percent in 2015), while growth in the US was 1.6 percent (after 2.6 percent in 2015).

The emerging markets also showed regional disparities in performance. Growth slowed unexpectedly in some emerging countries, mainly those in Latin America and Turkey. In contrast, growth rates in China and Russia were higher than forecast. Overall, the emerging markets grew by 4.1 percent in 2016, equivalent to the rate of the previous year.

**Challenging market environment**

The performance in Miba's sales markets remained mixed in 2016. The broad positioning of the Company makes it possible to compensate for weaknesses in some sectors with satisfactory results in other areas.

The global automotive industry continued to grow in 2016, reaching a production volume of 93 million passenger vehicles.[2] In Europe, the number of passenger vehicles produced rose by 2.7 percent compared to 2015, and the number of registrations by 6.4 percent.[3] The North American market also grew, though at a slower pace. The number of passenger vehicles and light commercial vehicles (vans) produced rose by 2.1 percent to 18 million vehicles; however, new registrations increased by only 0.6 percent.[4] In contrast, the Brazilian automotive industry continued to contract. Production volumes here fell by 11.2 percent, while registrations actually decreased by 20.2 percent.[5] China produced 27 million passenger vehicles and light commercial vehicles (vans) in 2016. This corresponds to an increase of around 14 percent compared to the previous year and a significantly higher pace of growth.[6] The Indian automotive market recorded an encouraging increase of 10 percent in the number of passenger vehicles and light commercial vehicles (vans) produced in 2016.[7]

[1] cf. International Monetary Fund (IMF): World Economic Outlook Update, January 2017
[2] cf. IHS Markit Light Vehicle Production Forecast, January 2017, incl. LCV.
[3] cf. LMC Automotive, January 2017
[4] cf. Automotive News, January 17, 2017
[5] See www.anfavea.com.br/January2017, retrieval date: March 19, 2017
[6] cf. LMC Automotive, January 2017 and 2016
[7] cf. LMC Automotive, January 2017 and 2016

A differentiated picture was also seen in the global truck market, which showed widely varied development across regions in 2016. A total of 3.5 million heavy trucks were manufactured worldwide, an increase of 3.2 percent compared to the previous year.[8] In 2016, the positive trend continued in the market for heavy trucks (over 16 tons) in the European Union, where 12.3 percent more heavy trucks were registered than in the previous year.[9] In contrast, the market in North America contracted by 23 percent compared to 2015 concerning the number of class 8 trucks sold.[10] The market for heavy trucks in China showed massive growth. In 2016, 38 percent more vehicles were produced than in 2015.[11] This trend is mainly attributable to more stringent controls and severe consequences for failure to observe capacity limits. As a result, logistics companies were motivated to invest in new, higher-performance vehicles.

Following the years of downturn, the global markets for agricultural commercial vehicles, construction machinery and mining equipment seem to have recovered slightly in 2016, at least holding steady. Accordingly, a current survey conducted in the European agricultural machinery industry shows a significant improvement of the market situation for the first time since 2014. The reason for this is likely related to growth in exports but also to rising demand within the borders of the EU.[12]

The still rather subdued development in the industrial sector continued to be noticeable in the market for power electronics components in 2016. Yet the high-voltage direct current (HVDC) transmission segment once again demonstrated continued growth in 2016. The global wind power industry also performed positively. The global installed capacity is already close to 487 gigawatts – an increase of around 12.5 percent compared to the previous year.[13]

All in all, fiscal year 2016–2017 was once again characterized by a challenging market environment. Miba was able to use its strong market position to exploit opportunities and to continue generating growth.

[8] cf. OICA: World Motor Vehicle Production by Country and Type 2015–2016, Heavy Trucks: http://www.oica.net/wp-content/uploads//HCV-2016.pdf, retrieval date: March 20, 2017
[9] cf. ACEA, New Commercial Vehicle Registrations, January 2017
[10] cf. Wards Auto: Retail Truck Sales Report January 2017, heavy duty class 8
[11] cf. LMC Automotive, January 2017
[12] cf. CEMA Business Barometer, Public excerpt, March 2017: http://cema-agri.org/sites/default/files/publications/2017-03%20CEMA%20Business%20Barometer%20Report_0.pdf, retrieval date: March 21, 2017
[13] cf. Global Wind Energy Council: Global Wind Statistics 2016: http://www.gwec.net/wp-content/uploads/vip/GWEC_PRstats2016_EN_WEB.pdf, retrieval date: March 20, 2017

# Business development

## Increase in revenue and strong equity base

Despite market developments that remained challenging, Miba, as a strategic partner to the international engine manufacturing and automotive industries, was able to strengthen or maintain its market position in its core markets. That was also reflected in satisfactory growth in revenue.
The Company succeeded in consolidating its foundation even in an uncertain market environment and expanding its strong internal financing for growth investments.

In fiscal year 2016–2017, the Miba Group generated revenue of EUR 752.0 million. This equates to an increase of EUR 32.9 million, or 4.6 percent, compared to the previous year. Growth consisted of organic growth (5.4 percentage points) and a negative exchange rate effect (–0.8 percentage points).

Investments in intangible assets and property, plant and equipment amounted to EUR 67.3 million (previous year: EUR 79.2 million) and related mainly to capacity expansion at sites benefiting from the positive development of the global automotive industry. These investments also contribute to further reinforcing and expanding Miba's technology leadership.

In the past fiscal year, Miba continued to build its strong financial foundation. Group equity (including non-controlling interests) increased to EUR 486.2 million (previous year: EUR 462.0 million), corresponding to an equity ratio of 58.2 percent and representing a further sign of the Company's financial independence.

| in EUR million | 2016–17 | 2015–16 |
|---|---|---|
| Revenue | 752.0 | 719.1 |
| Equity | 486.2 | 462.0 |
| Equity ratio in % | 58.2 | 57.2 |

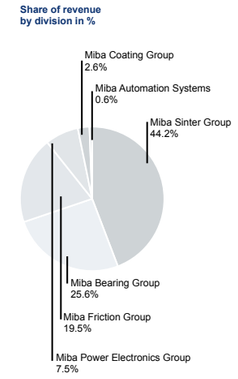
## Division performance

As a result of the disparity in sector performance in Miba's core areas, the individual divisions also exhibited diverse performances. Those divisions or subsections closely linked to the automotive industry in particular made the largest contribution to the growth of the Group in the past fiscal year.

**Miba Sinter Group**
Miba sintered components are high-precision, high-strength components that are mainly used in passenger vehicle engines and transmissions. High-volume manufacturing of sintered components is a very cost-effective technology. It also conserves resources, as materials are put to maximum use and little energy is consumed.

In the business with sintered components, growth was achieved once again in the past fiscal year 2016–2017. The main drivers were the strong growth of the automotive industry in Miba's most important sales markets, new projects in Europe, North America and Asia, as well as the use of additional new technological solutions that allow traditional steel parts to be substituted with sintered components. Accordingly, global external revenue increased by 13.3 percent to EUR 332.6 million.

This growth presented the Company with the challenge of adapting the organizational structures to these changes in a timely and sustainable manner. For this reason, the site in Austria was also expanded accordingly. In addition to the implementation of a new traffic pattern, the changes included the modernization of workplaces, like those in Research & Development and in Sales, and their adaptation to current working concepts.




| Miba Sinter Group | 2016–17 | 2015–16 |
|---|---|---|
| Revenue in EUR million | 334.1 | 294.9 |
| of which external revenue in EUR million | 332.6 | 293.6 |
| Employees as of the reporting date | 2,627 | 2,367 |

**Miba Bearing Group**
Miba engine bearings are crucial components that significantly affect combustion engine functionality and service life. They help position crank- and camshafts, minimize friction during operation and protect the engine from damage and breakdown. By constantly developing new types of bearings, the Miba Bearing Group ensures that modern engines are able to deliver maximum performance efficiently and in an environmentally friendly manner even under extreme conditions.

Last year as well, the core engine bearings markets were largely marked by sharp falls in demand. This development was reflected in the revenue of the division. Worldwide, Miba generated external revenue with engine bearings of EUR 192.8 million and thus 9.4 percent less than 2015–2016 at EUR 212.7 million.

| Miba Bearing Group | 2016–17 | 2015–16 |
|---|---|---|
| Revenue in EUR million | 193.5 | 213.4 |
| of which external revenue in EUR million | 192.8 | 212.7 |
| Employees as of the reporting date | 1,134 | 1,176 |

# ECONOMIC PERFORMANCE



**Miba Friction Group**
Miba friction materials are the element that determines performance in clutches and brakes. They make a significant contribution to efficiency improvements. Miba is a long-standing development partner and high-performance friction materials supplier to the international vehicle and machinery industry.

Miba's core markets exhibited no significant signs of recovery for friction materials. Strong demand from the automotive industry made it possible for the Miba Friction Group to offset the decreases in the other sales markets such as tractors or construction and mining machinery. For this reason, the share of revenue from the automotive sector is becoming more important for this division. Regarding the global sales of friction materials, Miba was able to report external revenue growth of 5.9 percent to EUR 146.4 million. In the previous year, external revenue amounted to EUR 138.3 million.

| **Miba Friction Group** | **2016–17** | **2015–16** |
|---|---|---|
| Revenue in EUR million | 148.4 | 139.8 |
| of which external revenue in EUR million | 146.4 | 138.3 |
| Employees as of the reporting date | 1,162 | 1,086 |

**Miba Power Electronics Group**
Miba develops and produces passive electronic components such as resistors and cooling systems for power electronics. Miba resistors regulate the voltage in modern medical equipment, for example, or in the power electronics of frequency converters like those used for wind power plants. Miba heat sinks and heat pipes cool electronic components in drive train control units, power supply units, power transmission systems and wind power plants; their efficient performance contributes to longer component service life.

In fiscal year 2016–2017, investment restraint in the industrial sector was once again perceptible in the market for power electronics. It is encouraging to note that initial positive signs are being seen in the high-voltage direct current transmission segment. Contrary to the market trend, the Miba Power Electronics Group succeeded in generating worldwide revenue of EUR 56.7 million which corresponds to an increase of 8.6 percent compared to the previous year's revenue of EUR 52.2 million.

| **Miba Power Electronics Group** | **2016–17** | **2015–16** |
|---|---|---|
| Revenue in EUR million | 56.7 | 52.2 |
| of which external revenue in EUR million | 56.7 | 52.2 |
| Employees as of the reporting date | 458 | 408 |

**Miba Coating Group**
Miba develops and produces innovative coating solutions such as polymer and low-friction coatings, electroplated overlays and PVD coatings. Components coated by Miba are incorporated into vehicle power trains and help, among other things, to free up build space and reduce weight and cost. In addition, they minimize power train friction and improve the efficiency of modern combustion engines.

The economic environment for the Miba Coating Group was satisfactory due to the positive trend in the automotive industry. Miba generated external revenue of EUR 19.2 million from coatings in 2016–2017, almost 9 percent over the level of EUR 17.6 million achieved in the previous year.

| **Miba Coating Group** | **2016–17** | **2015–16** |
|---|---|---|
| Revenue in EUR million | 23.9 | 20.4 |
| of which external revenue in EUR million | 19.2 | 17.6 |
| Employees as of the reporting date | 216 | 183 |

**Miba Automation Systems**
Miba develops and builds special machinery for high-precision and efficient machining of components ranging in size from small to very large. A special focus lies on the development of mobile CNC machining units. Ever-larger components, increasingly complex applications and stricter requirements for machining accuracy call for specifically designed equipment. Special machinery is used, for example, to build wind towers, for the overhaul of power station turbines or in engine bearing production.

The effects of the sustained investment restraint, primarily in Europe, are once again being felt on special machinery. This is also reflected in the revenue trend. Yet another slight decline was recorded in fiscal year 2016–2017. External revenue from special machinery amounted to EUR 4.4 million compared to EUR 4.7 million in the previous year. Noteworthy is a promising major order from the automotive industry which has already had a positive impact on revenue growth.

| **Miba Automation Systems** | **2016–17** | **2015–16** |
|---|---|---|
| Revenue in EUR million | 9.4 | 8.1 |
| of which external revenue in EUR million | 4.4 | 4.7 |
| Employees as of the reporting date | 39 | 37 |

### Lean 2020⁺: further growth potential through Group-wide lean management

In addition to the potential resulting from the performance in the various industries and new product launches, since fiscal year 2014–2015, Miba has been focusing more attention on implementing lean management throughout the Group in order to promote further growth. To support this, Miba launched the Lean 2020⁺ initiative. The goal is to make the Company as lean as possible by 2020. In the process, Miba is relying and building on its wide-ranging experience and success in production. The production-related and administrative areas have to work in an even more value-oriented manner along the entire value chain as well, with the aim of minimizing scrap and waste. By taking this approach and improving collaboration, Miba will further accelerate its processes and cut costs. All measures focus on the customer – whether external or internal. Miba has formed an in-house lean team serving to support departments both in Miba AG and in the divisions in realizing potential for growth by applying the five Miba lean principles: "focus on the customer and targets", "focus on added value", "standardization", "continuous workflow" and "visualization".

# Research & development

Cutting-edge technology through a focus on technologically sophisticated and pioneering products.

### Success through investments for a cleaner planet

Miba is developing technologies for a cleaner planet. Miba products include sintered components, engine bearings, friction materials, power electronics components and coatings, used around the world in motor vehicles, trains, ships, aircraft and power plants. Miba's technology makes them safer, more powerful and more environmentally friendly. Innovation and Technology are therefore among the Company's success factors. By developing technologies for the future, Miba is pursuing the goal of achieving product leadership in the respective divisions. Miba's innovations are focused on energy efficiency and increasing the precision and comfort of the customers' final products. Successful product development is based on a culture of innovation in practice, global technological collaboration and extensive sharing of knowledge within the Group.

By investing heavily in research and development, Miba also secures its competitiveness in the long term. In fiscal year 2016–2017, Miba invested EUR 35.2 million in R&D (previous year: EUR 31.8 million). This equates to 4.7 percent of total revenue. Throughout the Group, a total staff of 251 was employed in this area. The registration of 28 new patents last fiscal year served to safeguard the results of this development work. The Company currently holds 257 valid patents. Miba's R&D work is supplemented by cooperations with various universities and research institutions.

### Out of the heart of Europe for the entire world

The primary activities related to research and development currently take place mostly in Europe. Miba's research centers are located at the main plants in Austria, and the significance of Miba's Slovakian sites for development activities is increasing steadily.

Further adaptation of development outcomes to specific customer requirements then takes place in collaboration with the Application Engineering departments at the various sites across the world including in the plants located in the US and in China. Within the Company's various divisions, specific focal points are determined for development work based on the different requirements of the market and the customer.

### Miba Sinter Group: technology for the car of the future

The Miba Sinter Group is a development partner to the international automotive industry. The trend towards efficient power trains, pressure to lower costs and the global availability of all developed solutions were once again among the factors driving all development work in the past fiscal year.

Details on developments regarding electromobility are provided at the end of the chapter.

In fiscal year 2016–2017, the research activities of the Miba Sinter Group were concentrated on expanding the technology portfolio for gears with optimal NVH[14] properties. With the growing trend toward alternative drives, the Miba Sinter Group is also accelerating their activities in this area. For example, the R&D team is working with powder metallurgy applications in the hybrid area and for electric drive systems. In addition to further development of SMC technology (soft-magnetic composites), the division has also been able to expand its network in this area. Systematically integrating external skills will also allow the division to tap into future application areas.

### Miba Bearing Group: innovations leading into the digital age

Manufacturers of high-performance diesel and gas engines face increasing environmental requirements, the use of alternative fuels and more efficient combustion systems. In addition, increased pressure to lower costs in the engine segment not only necessitates new, cost-optimized production methods for existing bearing designs, but also requires completely new approaches to materials manufacturing and production. At the same time, the customers of the Miba Bearing Group require developments for the hybridization of drives for practically every engine size. In the area of digitalization and condition monitoring, solutions to prolong the service life of engines are needed.

In order to meet this wide range of requirements, there were many new developments in the past fiscal year. Among other things, the Miba Bearing Group developed new aluminum bearing types for use in truck engines contributing to a significantly better engine performance. In addition, the R&D team continued its research activities in the use of engine bearings in the wind power industry as well as in the field of intelligent components, mostly related to the use of sensors for condition monitoring. Series production also began for a new, lead-free polymer engine bearing and a highly resilient sputter bearing.

### Miba Friction Group: higher performance, lower consumption

The Miba Friction Group develops and produces technologically demanding clutch and brake components and systems. In doing so, the R&D team focuses on developing components that are increasingly smaller, lighter and capable of delivering even better performance in a highly efficient manner. Through its development work, the Miba Friction Group is responding to growing demands in relation to driving dynamics and safety, increasing comfort requirements for clutches and rising pressure to reduce $CO_2$ emissions in passenger vehicles and work machinery.

In the past fiscal year, the further minimization of losses and maximization of power density were a focal point of development. The loss test rig developed in-house for this purpose proved itself and was used to effectively support important projects aimed at reducing consumption. The test rig made it possible to reach data-driven design decisions in the customer's virtual project phase while optimally utilizing all available latitude. Another focal point was replacing the wet-running systems common today with dry-running friction systems for future use in automotive power trains. The basis for this is the development of new materials that meet the requirements for controllability and power density for certain systems. Vehicle systems based on this technology are significantly more efficient and less expensive than those in which the previously available technologies are used.

[14] NHV = noise, vibration, harshness: refers to vibrations which can be heard or felt.

# ECONOMIC PERFORMANCE

### Miba Power Electronics Group: onward thanks to resistors

Power electronics components play an important role in more efficient power trains and in the ever-increasing use of renewable energy sources. Passive electronic components of the Miba Power Electronics Group, such as high-power resistors and cooling components for power electronics, allow for greater performance and better operational reliability of these applications.

The development activities in the power electronics area are mainly focused on optimization of existing products, particularly the further performance enhancement of resistors. The performance of resistors based on thick film technology, for instance, was improved by a factor of 2.5. Further efforts were made in the area of thermal engineering. Optimization of the entire thermal path extending from the resistor through the thermal interface to the heat sink is the foundation for achieving the best performance value and service life. In the area of cooling components, the activities are focused on commissioning the new generation of a vacuum soldering furnace. This promises to represent significant progress in the manufacturing technology for these products. Vacuum-soldered heat sinks are used in converters for HVDC[15] power transmission systems and for traction and wind power applications, for example.

### Miba Coating Group: innovative coatings for maximum service life

The Miba Coating Group specializes in innovative coating solutions. The goal is to achieve maximum service life and optimum functionality of the coated parts while minimizing raw material consumption and conserving resources. Driving the Miba Coating Group's R&D activities are the continually growing customer demands within the automotive industry, primarily related to the reduction of $CO_2$, nitrogen oxide and noise emissions.

In the past fiscal year, the division developed a DLC[16] coating to reduce friction and wear for use in performance-enhanced, efficient combustion engines. A newly developed wear and corrosion resistant coating for compressor wheels of turbochargers contributes to the reduction of nitrogen oxide. At the same time, this coating allows combustion engines to be designed for greater efficiency and provides more options for engine downsizing.

The coating procedure Gripcoat Direct® newly developed in the previous year is worth particular mention. This is the first procedure making it possible to deposit hard particles like industrial diamonds directly to components in a highly efficient manner. This is an automated, flexible process specifically geared toward industrial specifications, and it does not require the use of wet chemical procedures.

In addition, the R&D team is continuing their development activities in the area of hydrogen economy. Coated fuel cells allow for better performance due to high electrical conductivity. In addition, coated fuel cells offer advantages in terms of cost and weight compared to current solutions using carbon plates.

[15] HVDC = High-voltage direct current
[16] DLC = Diamond-like carbon

### Miba Automation Systems: special machinery for highly specialized applications

In the past fiscal year, the division focused on the development of large machinery for applications in the area of renewable energy and machinery and equipment for the e-mobility area. These activities centered on the further development of equipment for manufacturing stators for 48V generators which are used in electric drives. In addition, equipment was developed for machining large rotors for the turbines of tidal power plants. For the wind power industry, Miba Automation Systems improved the Industry 4.0 properties of machinery for manufacturing wind towers. This is laser-controlled machinery that independently machines large wind tower segments and is operated using remote control.

### Electromobility: keeping pace with the future today

A focal point of the past fiscal year was on the area of electromobility. The Company aims to utilize the trend toward electromobility in order to develop new business areas in the field of electric drives and the charging infrastructure and to tap into new markets. The E-Mobility Innovation Lab was also established for this reason. This department is tasked with analyzing market trends related to the topic of e-mobility and assessing potential uses for Miba components. In this way, innovations related to electromobility from across divisions and functions can be pushed forward.

**Miba Sinter Group**
Miba sintered components contribute to freeing up build space and reducing the weight of combustion engines and hybrid systems. Development is also well advanced for a special technology for the construction of new electric motors using soft-magnetic components made of pressed SMC powder (soft-magnetic composite). The special feature of the SMC material is that the individual particles of powder are coated with an electrically insulating layer. Due to the materials used, these electric engines possess the ability to carry the magnetic flux in three dimensions, an important contributor to improving performance. The motors currently in advance development are now being tested and continually improved in prototypes of the Johammer (20 kW) electric motorcycle from Mühlviertel region, a cargo bike (0.6 kW) and a small electric van (40 kW).

**Miba Bearing Group**
In the hybrid drives of locomotives, Miba engine bearings contribute to lowering emissions. A diesel engine combined with a generator allows the brake energy to be used to charge batteries.
This reduces fuel consumption as well as costs and emissions.

**Miba Friction Group**
High-performance systems for torque transmission are required in the corresponding electric power trains. Ongoing development projects are centered on dry and wet friction systems for electric drives and for electric off-highway machinery like construction machinery and agricultural equipment.

**Miba Power Electronics Group**
Miba is already represented in hybrid and electric cars with the power electronics components of the Miba Power Electronics Group. Resistors, for instance, are used in the power train and in battery management. Power electronics components could also be installed in charging stations, and Miba is currently researching further areas of use in relation to this.

**Miba Coating Group**
High Tech Coatings coats metallic bipolar plates used in fuel cells. Using hydrogen, fuel cells generate electricity for an electric motor and emit only water vapor as exhaust. The highly effective coating of the metallic bipolar plates provides better efficiency and greater durability.

**Miba Automation Systems**
Among other things, Miba Automation Systems develops fully automated systems for manufacturing the components in electric motors and hybrid engines, allowing for cost-optimized production.

# Code of conduct

Miba is also affected by many changes arising among other things as a result of the different legislation of the countries where the Company operates. Compliance with increasingly diverse and extensive regulations is therefore an important part of Miba's day-to-day business. This is the only way to guarantee that legal frameworks will be implemented accordingly on a daily basis. Guidelines used by the Company are intended to ensure that there are standard parameters for the employees to use as orientation.

A Company-wide code of conduct establishes a catalog of values and behavior that all employees can use as orientation. In doing so, the Company voluntarily commits to adhering to strict standards for its business activities and day-to-day collaboration within the Company and cooperation with customers and partners. In addition, the Miba Compliance Guideline and the regulations and processes it defines serve to prevent bribery and corruption.

# Partnership with customers and suppliers

Customer satisfaction is the most important foundation for all of Miba's business activities. This satisfaction is achieved through joint efforts to find innovative solutions, which in turn require close cooperation and communication between Miba and the customer. Only then can we generate an essential contribution to the customer's innovativeness and competitiveness within the framework of the corporate mission "Innovation in Motion – Technologies for a Cleaner Planet." Products perfectly tailored to customer specifications are what guarantee that the Company will be a strong and reliable partner for its customers even in the long term.

The requirements of Miba's customers concerning the quality of the suppliers' products, services and systems have risen steadily in recent years. A comprehensive, standardized analysis guarantees even before entering into a supplier relationship that the prerequisites for a future business relationship with Miba have been met. Using questionnaires, corresponding data is gathered from all potential suppliers which will serve as a basis for further discussions.

With its suppliers, too, Miba also pays attention to ecological aspects in addition to quality. Further details on the Company's activities are described in the section on Environment.

In order to meet customer requirements in the long term as well, Miba must ensure that the suppliers to the Company also deliver the highest quality. This is ensured by means of an extensive quality agreement that all of Miba's suppliers sign. Elements of this agreement include guidelines for complaints, delivery requirements, environmental protection in connection with ISO 50 001 and ISO 14 001, quality assurance measures, the right to conduct audits and guidelines governing various testing procedures. These ensure that the standards required by Miba with regard to product quality, delivery, environmental protection and work safety are met.

Annual strategy meetings with suppliers are part of the Miba 2020 strategy and an integral part of supplier relationships. Recent new additions are the annual innovation meetings to discuss new technologies which have been conducted since 2016. As part of a Group-wide audit plan, Miba is also working towards implementing supplier audits and requalifications at all Miba sites and using the results to develop process and quality improvement measures. Miba makes sure that ecological and social aspects as well as quality aspects are included in the audit in order to request and check that the key suppliers adhere to them. All agreements include a ban on discrimination, a ban on child and forced labor and also compliance with working hours and compensation.

# EMPLOYEES

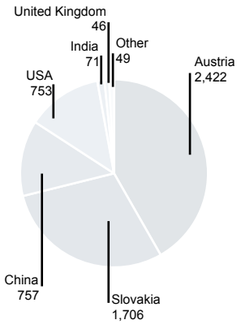
## RECIPE FOR SUCCESS "PICTURE YOUR CAREER WITH VISION"

More than 5,800 Miba employees contribute to the Company's performance every day. Miba is aware of its responsibility as a global employer and supports its employees not only in terms of their personal and professional development but also places great value on their safety and health. At the same time, Miba calls on its employees to be actively involved.

# Setting challenges and providing support

Miba is aware of its extensive responsibilities as a global employer. The ambitious corporate culture of Miba is best summed up as "A career with vision". Anyone working at Miba is challenged and supported, and Miba employees can and should use their freedom to explore autonomously, thus making their own personal contribution to the further development of the Company in keeping with the mission "Innovation in Motion – Technologies for a Cleaner Planet".

**Miba global headcount as of January 31, 2017: 5,804 employees**




## A global company

In fiscal year 2016–2017, the Miba Group employed an average of 5,626 people at more than 20 production sites worldwide (2015–2016: 5,280 employees). These included an average of 360 temporary staff (after 275 in fiscal year 2015–2016) working at the Company. A total of 5,804 people worked for the Group as of the reporting date, 7.5 percent more than the previous year's level of 5,398 employees.

Personnel expenses amounted to EUR 229.9 million in the past fiscal year. As a percentage of revenue, at 30.6 percent, expenses accounted for a share slightly below that of the previous year (31.3 percent).

Miba managed to increase the percentage of college and university graduates by around 4.5 percentage points from 11 percent in the previous year to 15.5 percent in 2016–2017. On average, Miba employees are 37.3 years old and have been employed by the Company for around 8 years.

## Entrepreneurial spirit as a shared motto

Miba knows that each individual employee contributes to the success of the Company. The expertise that is available to Miba through its employees forms a crucial basis for pursuing strategic goals in the long term. For that reason, Miba promotes a corporate culture in which employees are motivated to contribute their own ideas, to think and act entrepreneurially, and to always actively utilize the creative options within the leeway provided. In order to make this possible, Miba supports Entrepreneurship as well as Lifelong Learning for all employees and at all sites around the world. Employees should have the opportunity to further develop themselves within the Company and to secure Miba's competitiveness through their abilities and experience. The motivation of the employees rooted in this is ultimately the guarantee that the Company will always be able to expand its Technology Leadership on a global level.

The priorities of human resources in fiscal year 2016–2017 included implementation of a global career management process and the corresponding tools. With regard to its growth plans, early career planning is intended also to help Miba have the resources to meet its needs for young specialists and executives from among internal candidates.

## Top training for Miba's next generation

Based on the principle of Lifelong Learning, every employee is provided a wide range of options for training and continuing education regardless of his or her position within the Company or level of education. Throughout Miba, the expenses related to this totaled EUR 1.6 million in fiscal year 2016–2017. A total of 216 in-house training sessions offered by Miba under a customized training program were held in the past fiscal year. In addition, Miba employees also took advantage of the opportunity to participate in external training courses in the past year.

Miba's goal is to fill skilled personnel positions mainly with internal candidates. With growing numbers of apprentices in Europe, Miba also prevents shortages of skilled personnel and secures the pool of internal candidates for positions. This is an efficient way to ensure a secure future in an increasingly challenging labor market.

The in-house apprenticeship training program is being further expanded. A total of 239 apprentices were in training in the past fiscal year 2016–2017, marking a new record after the previous high of 229 in fiscal year 2015–2016.

Alongside the Austrian sites, Miba's Slovakian sites also train their own apprentices. Over 90 young people are currently undergoing training there. In both countries, the training material is constantly being adapted to the needs of the Company and the requirements arising from the industrial environment.

Training material tailored perfectly to the requirements and a wide range of additional qualifications create a solid foundation for training the next generation of specialists. Training at Miba therefore extends beyond the workbench. Apprenticeships also include international internships, outdoor training courses and many opportunities to apply technical talents. In addition to the specific training, we continue to promote the higher qualification of employees. Miba also supports high-achieving apprentices – for example by offering them the opportunity to combine their apprenticeship with a technical college degree, to study at a university of applied sciences or by offering them scholarships and educational leave. Another option in the scope of global employee development is an apprenticeship program tailored to mature students in which current employees in production or in production-related areas have the opportunity to complete an apprenticeship.

## Clearly defined leadership and support

Miba considers leadership to be an entrepreneurial responsibility which helps create and retain skilled jobs and reinforces the individual responsibility of each employee.

For several years, the Miba Leadership Principles have served to uphold our employees' right to development and professional management. These principles provide managers with insight and orientation regarding corporate values. These principles are:

- Commitment
- Delegation of responsibility
- Integrity
- Ability to execute
- Respect
- Courage
- The Miba Spirit

**Prepared for the future**
Anchoring the Miba leadership culture firmly with the management team is one goal of the **Miba Leadership Academy** (MLA), Miba's tailored executive development program. The MLA offers select employees the opportunity to learn and experience leadership skills. The individual modules focus on Leading Business, Leading People and Leading Oneself. Accompanied by in-house and external experts, participants are familiarized with current management trends and developments, learn the latest methods and management tools and analyze their own leadership style. Through the MLA, the Company has reinforced the skills of executives and contributed to the development of Miba's shared understanding of leadership for over ten years. The first class of a modified MLA program graduated in fiscal year 2016–2017. Two of a total of five modules took place in the US and in China, showing that Miba has also adapted this personnel development program to the challenges presented by an increasingly international work environment.

Another option is the **Miba Management Academy** (MMA). The MMA focuses on developing Entrepreneurship. In a business simulation lasting several days, employees learn how to better recognize business correlations and thus how to actively manage Miba's operating result. The basis is a sound understanding of key performance indicators and management accounting. In addition, participants are trained in the essential tools of leadership. The goal of the MMA is to link the course content with day-to-day practice in order to develop an individual contribution to Miba's overall result. Just as for the MLA, the Management Board directly nominates employees for the MMA.

As a third set point in the development of future executives, Miba also created the new **Miba Global Graduate Program** (GGP). It is aimed at ambitious young graduates of college or university with the goal of preparing them for an international career in the Miba Group. By participating in several projects from different areas and on different continents, candidates have the opportunity to put their skills to work and to hone them in training sessions. In fiscal year 2016–2017, Miba accepted five Globalites from Austria, Slovakia, the US, Brazil and China into the second round of the program, thus expanding the program even further after just one year.

## Achieving more together

Active involvement of employees in shaping the Company and improving internal processes is a key added value for Miba. Employees from all areas of the Company are encouraged to become engaged in a number of ways through their ideas representing added value for the Company and its stakeholders.

**Powerful Ideas for Miba! competition**
Innovation and technology leadership are considered to be the Company's most important success drivers. Under the title "Intelligent Components", the in-house idea competition Powerful Ideas for Miba! generated a total of 55 innovative ideas in 2016–2017. The brainstorming revolved around intelligent products that use sensors to collect data and thus generate added value for customers or that open up new business lines for the Company. Going forward, the jury members serve as mentors to support all winners. They advise those submitting ideas, assisting them in ways to further develop their ideas and ultimately to realize them in the Company.

**Franz Mitterbauer Award**
The Franz Mitterbauer Award was presented for the third time at the annual Miba Convention in 2016. The goal of this award is to promote innovative thinking in the Company and to recognize corresponding contributions. The in-house prize for innovation is named after the Company's founder and pioneer, Franz Mitterbauer. Christian Dumanski, Georg Simeth and Martin Viechtbauer from Miba Sinter Austria received the award in the past fiscal year. The team developed an innovative gear drive system that significantly reduces dynamic torque, noise and vibration. To achieve this, the gear wheel was decoupled and rubber elements were inserted in order to balance out the smallest movements.

## Actively shaping changes

With an overall participation rate of 74 percent, more Miba employees than ever before took part in the employee survey in fiscal year 2016–2017. This represents yet another increase from the already high participation level of 71 percent in 2014. Of particular importance for Miba is the loyalty index which represents the loyalty and retention of employees in the Company. From 2014 to 2016, the loyalty index fell from 70.65 to 67.66. This drop in the average for the Miba Group is not equally distributed across all sites, however. Several sites have shown a steady level of satisfaction or continual increases in satisfaction, while employees at other locations were much more critical. Overall, a loyalty index of greater than 60 points should be seen as validation of a motivated team committed to the Company. In order to improve employee satisfaction, Miba is working intensively on taking open and honest critique seriously and introducing appropriate improvement measures in all sites.

| Employee survey response rate and loyalty index | 2016 | 2014 |
|---|---|---|
| Survey response rate (in %) | 74 | 71 |
| Loyalty index (in points) | 68 | 71 |

### The common path is the goal

Long-term employee retention is a matter of great concern for Miba. The turnover rate is an essential key figure to measure this. The turnover rate at the international sites varies greatly and reflects the employee growth phases as well as the age structures and cultures of the individual countries. For the Company, it is important to put the information gained from the employee survey to the best use in order to keep the turnover rate as low as possible. In 2016–2017, the turnover rate of 13.2 percent was slightly above the level of the previous year of 12.9 percent. For instance, the growing Miba HydraMechanica site in Sterling Heights, Michigan, USA, showed an encouraging trend.

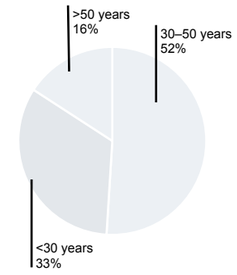
| **Turnover (in %)** | **2016–17** | **2015–16** |
|---|---|---|
| Miba Sinter Group | 12.6 | 10.8 |
| Miba Bearing Group | 12.5 | 11.7 |
| Miba Friction Group | 10.1 | 13.8 |
| Miba Power Electronics Group | 21.6 | 18.8 |
| Miba Coating Group | 16.7 | 26.8 |
| Miba Automation Systems | 27.8 | 27.4 |
| Miba Shared Services | 13.2 | 8.8 |
| **Miba total** | **13.2** | **12.9** |

### Diversity as a basis for future success

In terms of age structure, the Company also endeavors to create a balanced picture. Employees of each age group make an essential contribution to the Company's further improvement. In keeping with promoting Lifelong Learning, Miba employees benefit from each other – whether that benefit is through new ideas or years of experience. Therefore, the topic of diversity is one of the focal points of fiscal year 2017–2018. In Company-wide teams, for instance, one emphasis will be the corresponding organization of the internal teams and another promoting an exchange between the different divisions. The Global Graduate Program will additionally reinforce the Company's diversity with regard to nationality, gender, age and specialization.

The cultural diversity of employees is an important factor that contributes to the Company's success. Miba is therefore committed to the values of diversity and equality. In fiscal year 2016–2017, a total of 25.04 percent of all employees at Miba were women.

**Employees by age group as of January 31, 2017**



# Safe and healthy

As a responsible employer, the Company not only supports its employees in developing their professional and personal skills, it also provides a pleasant and healthy working environment. Numerous measures were taken in the past fiscal year to promote health in the workplace and for a better balance of family and career.

### Health will not be compromised

The health program's main components relate to stress management, exercise and nutrition. Each year, plant physicians, managers, employees, employee representatives and Human Capital collaborate closely to define and jointly coordinate measures. Miba makes no compromises when it comes to workplace safety and consistently pursues a zero-accident strategy by employing optimal prevention.

### Fit and healthy, even off the clock

The health of its employees is an essential matter for Miba. The Company therefore established an in-house health program at its Upper Austrian sites in 2008. Since that time, the program has been supplemented by a number of other measures and projects, whether throughout the Company or specific to one site. These range from check-ups through free vaccinations, smoking cessation seminars and balanced nutrition in the plant cafeterias to workshops, presentations, fitness classes and sports events.

At all sites, joint sport activities are organized to promote health and team spirit. For example, many Miba employees took part in a number of races in the past fiscal year 2016–2017. These included the KAKIHE-Fünf-Brücken-Lauf (Five Bridges Run), Wings for Life Run and the various "business runs", geared toward participation by company teams.

The activities are also being noticed by others outside the Company. At the Healthy Company 2016 competition in Slovakia, Miba Steeltec enjoyed a fourth place win in the production company category.

In particular, employees from Slovakia at Miba Sinter Slovakia in Dolný Kubín distinguished themselves in the past fiscal year. The team took part in the nationwide Take your Bike to Work competition again this year. This year, 40 employees participated in 10 teams. For a month, employees rode their bikes to work at the Miba site in Dolný Kubín. This made the site the undisputed first-place finisher in the entire competition. In just one month, the employees covered a total of 4,682 kilometers. Participants in this competition, which was held this year for the third time, covered an impressive 782,621 kilometers on two wheels throughout Slovakia. By leaving their cars at home, they were able to improve their fitness levels while reducing $CO_2$ emissions by up to 204,202 kilograms.

### More security through prevention

Investments in modern, safe systems, optimal use of machinery, ergonomic workstations and clean, tidy workplaces are the basis for improving safety standards. Activities aimed at raising awareness educate Miba employees in how to prevent potential risks. Recognizing and eliminating sources of danger and risks is important in ensuring the health of employees and preventing accidents for the long term. In order to bring further reductions to occupational and health hazard, 83 courses on the topic of occupational safety and first aid were held in Austria alone. Furthermore, Miba Sinter Austria's globally recognized occupational health and safety management certification BS OHSAS 18001 serves to ensure that the minimum standards for internal occupational safety are met.

Step by step, Miba is getting closer to becoming an accident-free company. Compared to the metalworking industry in Austria and Germany, the Company is well below average figures.
The number of reportable workplace accidents at Austrian sites was significantly reduced in fiscal year 2016–2017. Compared to the previous year, 25 accidents amounted to three fewer than in 2015–2016, and compared to 2014–2015, even 14 fewer.

### Making room for families

Miba is a family-owned company. Family-friendliness is a question of corporate culture and, for Miba, a demonstration of appreciation for its employees. A healthy balance of family and career is an essential need for employees. Miba endeavors to make this as easy as possible through a range of different offers. Among these, flexible working time models for mothers and fathers and the option of working from home are frequently utilized. Miba is very active in this area and has made it a goal to serve as an example for other companies. Among other things, the Company is involved by partnering with the initiative "Unternehmen für Familien" (Companies for Families). In this way, Miba is committed to making an active contribution for greater family-friendliness within their own area of responsibility and serving as both an example and an inspiration for others. The network serves as a platform for connecting, consulting and services related to the topic of family-friendliness with the goal of achieving a shift in awareness toward a more family-friendly society.

For almost three years now the Company has included an in-house day care center in Laakirchen where employees' children between the ages of one and three are looked after. The facility is operated by Oberösterreichisches Hilfswerk. Similar care options are currently being planned for Miba Sinter Slovakia in Dolný Kubín.

To support working parents, a vacation program for Miba employees' children between the ages of five and ten was held for the second time from August 22 to September 2, 2016. The overarching program was designed in cooperation with Otelo, the open technology laboratory. The theme of the week allows the children to playfully explore natural science phenomena and technical applications through workshops and experimenting stations. The program will be expanded in 2017 following many positive reviews and strong interest in participation.

# ACHIEVING PRODUCT LEADERSHIP WITH TECHNOLOGIES FOR THE FUTURE

Miba's environmental awareness is evident in the corporate mission and thus in the focus of development work aimed at greater efficiency and lower raw material consumption in drive concepts. It can also be seen in the constant optimization of production processes, consumption of energy and materials or the carbon footprint of transporting goods. Measures to become even more environmentally friendly are being implemented at all production sites around the world.

# Active environmental policy

Miba's mission "Innovation in Motion – Technologies for a Cleaner Planet" is evident in the overall thinking, in key strategic decisions and in individual decisions made in day-to-day operations. By developing pioneering technologies, the Company succeeds in being a part of important global changes related to mobility and power generation. Miba embraces the goals of accelerating the reduction of $CO_2$ emissions, increasing the efficiency of drive concepts and promoting alternative energy sources. The consequence of this is an active environmental policy at all levels.

Miba is continually optimizing its production and makes an important contribution to improving the use of resources along the value chain. This begins with the purchasing policy. Suppliers are chosen among other things according to the aspect of responsible use of resources and are obligated to comply with the corresponding norms and certifications. Concerning the Company's own production, the focus is on optimizing the use of energy and materials, reducing emissions and using environmentally friendly materials. Accrued residual material is fed back into the production process whenever possible or passed on to collection centers for recyclable materials.

Since Miba mainly manufactures products made of metal components, a high recycling rate is possible. As a Company that operates globally with the corresponding transport volume, Miba also values continual optimization of its carbon footprint in goods transport as part of its logistics concept.

The Company's active environmental policy is also reflected in research and development. Miba components are continually being further developed so that they, too, will contribute to global emissions targets. Miba strives to take a pioneering role based on technology and innovation leadership.

For the customers, using Miba technology represents a competitive advantage because it allows them to contribute to conserving resources. Furthermore, the trend toward environmentally friendliness boosts demand for Miba products and thus positively impacts the economic performance of the Group. Adequate profitability is in turn a prerequisite for developing new, innovative and environmentally friendly products. Two of those launched on the market or tested as prototypes in fiscal year 2016–2017 are engine bearings for wind power plants and soft-magnetic sintered components for electric motors.

**Optimal safety and serviceability for wind power plants**

Every second wind power plant around the world already has installed Miba Friction Group brake linings, components crucial to the safety of the wind turbines, each of which weighs up to approximately 300 tons. Moreover, resistors produced by EBG (Miba Power Electronics Group) are used for the power conversion and transmission of wind power plants along with Miba heat sinks and heat pipes.

After around six years of development work and a testing phase of several years, a new generation of engine bearings for wind power plants that can be used in place of rolling bearings was launched on the market in fiscal year 2016–2017. Traditional rolling bearings are widely used for wind power plants and yet costly. Rolling bearings have a limited service life of approximately nine years and cranes are needed to replace the bearings. The use of cranes for replacing bearings in on-shore wind parks cost approximately EUR 100,000. Cranes for use in off-shore wind parks (at sea) cost many times that. In addition, maintenance is only possible seasonally in periods of low wind conditions. This can result in extended downtime for turbines.

In contrast, the service life of Miba engine bearings is up to 20 years. Miba engine bearing solutions allow for smaller gearbox sizes and less noise. If they do need to be replaced, some designs allow that to be done at the tower and without requiring the use of a crane.

**Even more environmentally friendly package delivery**

Under the Austrian research project EMILIA[17], Miba Sinter Austria uses soft-magnetic powder pressed parts for optimizing the energy requirements of certain electric vehicle power trains. A corresponding testing phase with a logistics company began in 2016. This project involves developing a low-carbon method of delivering goods in urban, short-distance traffic. In addition, this specific technology is currently also being tested in a prototype engine for the Johammer electric motorcycle.

Our website at www.miba.com/en/innovation/smc-motor provides more information on SMC technology.

## Increased energy consumption for more environmentally friendly products

In fiscal year 2016–2017, the Miba Group's production volume increased compared to the previous year; production in the energy-intensive Sinter division increased output disproportionately.[18] Despite ongoing countermeasures, this resulted in an increase of the Group-wide energy consumption in fiscal year 2016–2017 by approximately 10 percent to around 264 million kWH. Of this amount, electricity accounts for a share of 77 percent (previous year: 78 percent). Two-thirds of the electricity used by Miba in Austria is generated from environmentally friendly hydropower, around 15 percent from "eco-energy" (wind and bio-energy), and the remainder consists of coal-based generation. No nuclear electricity was sourced in Austria in 2016–2017.

Natural gas accounts for a share of approximately 19 percent (previous year: 18 percent) of Miba's total energy consumption; the share of renewable energy sources was unchanged at 3 percent. In fiscal year 2016–2017, water consumption in the Miba Group fell to around 1.4 million $m^3$ from the last reported level of approximately 1.6 million $m^3$. Parallel to the increase of the production volume, raw material consumption increased by around 7.8 percent compared to the previous year.

| **Total energy consumption (in MWh)** | **2016–17** | **2015–16** |
|---|---|---|
| Electricity | 203,458 | 185,846 |
| Natural gas | 51,339 | 43,127 |
| Fuel oil | 1,135 | 912 |
| District heating | 6,689 | 6,156 |
| Renewable energy | 1,226 | 1,128 |
| **Total energy consumption** | **263,848** | **237,169** |

[17] EMILIA = Electric Mobility for Innovative Freight Logistics in Austria

[18] Although sintering is an energy-intensive process, products manufactured using this technique contribute to significant energy savings throughout their life cycle. From a comprehensive perspective, this explains why increased use of sintered parts is reasonable from an environmental point of view.

### Into a better future with fewer resources

Despite steadily rising production volumes, Miba strives to optimize the consumption of energy and resources through appropriate measures in the production process. In doing so, economic and ecological factors are given equal weighting.

| Use of raw materials (in tons)[19] | 2016–17 | 2015–2016 |
|---|---|---|
| Raw materials | 64,804 | 59,651 |

Energy and environmental projects are being consistently implemented at all Miba sites in order to optimize the environmental impact of production and to reduce electricity usage and overall energy expenses. Operational measures based on intra-Group benchmarking are being developed, some of which will be effective immediately and others in subsequent years. These measures range from consistently shutting down machines that are not currently in use through operational scheduling of equipment aimed at saving energy to making investments in new low-energy lighting systems and air conditioning. At the same time, the share of electric cars in the site fleets is increasing.

One important environmental and energy project was the recent optimization of thermal afterburning for 20 sintering furnaces at Miba Sinter Austria. This project will eliminate around 700 tons of greenhouse gases and achieve a natural gas savings of around EUR 125,000 each year. In October 2016, Miba Sinter Austria Energy Manager Stefan Buchmayr was honored with the EUREM award for developing and implementing this project.

Under this project, a variety of measures have brought about an improvement of the environmental situation at Miba Sinter Austria. The renovation of the powder mixture center resulted in a significant reduction in dust pollution, and new rolling oil preparation equipment has made it possible to reuse the contaminated rolling oil from the production process. Investments in better insulation in the energy-intensive units resulted in a further reduction in natural gas consumption. By making corresponding investments, it is now also possible to use the backwash water from the cooling circuit for the service water area, reducing the amount of fresh water required.

At Miba Sinter Austria, these measures generated a reduction of around 7 percent in the GWP[20] carbon footprint to around 5.47 kg $CO_2$e/kg in fiscal year 2016–2017 compared to the previous year.

Efforts to reduce resource consumption were also undertaken in other divisions. At Miba Bearing US, a new waste water processing procedure was introduced in 2016, resulting in a significant improvement to the treatment process. At the Slovakian subsidiary Miba Steeltec, a significant reduction in waste water pollution was achieved by commissioning a new neutralization facility.

In the logistics area, Miba is working with its logistics partners wherever possible to continually reduce the greenhouse gas emissions released in the transportation of Miba products. This occurs primarily by shifting long-distance air transport to transport by ship.

[19] All production sites with a significant amount of raw material consumption are included in this comparison.

[20] GWP = Global warming potential

### More recycling, less waste for the good of the environment

Waste occurs in every industrial production operation. By making improvements to the production processes, Miba constantly strives to keep the amount of waste to a minimum and to reuse as much of the production waste as possible within the production process through recycling. Because most of the primary materials for Miba products are made up of metals, this is possible to a relatively great extent. In fiscal year 2016–2017, it was also possible to achieve a further increase in the percentage of recyclable production waste. Non-recyclable waste is disposed of in an environmentally responsible way in accordance with the respective legal requirements.

| Total waste (in tons) | 2016–17 | 2015–16 |
|---|---|---|
| Hazardous waste | 4,685 | 2,886 |
| Non-hazardous waste | 2,345 | 1,545 |
| Recyclable | 18,421 | 15,148 |

### Environmental management certification

In keeping with sustainable management, Miba also needs to include environmental aspects early in their decision-making process. As the globally recognized foundation for certification of environmental management systems, the ISO 14001 standard provides the ideal basis for this. Eight Miba sites are therefore already certified under ISO 14001 and further sites are also preparing to introduce this standard.

| ISO 14001 certified sites: |
|---|
| Miba Sinter Austria |
| Miba Sinter Slovakia |
| Miba Precision Components (China) – Sinter Branch |
| Miba Sinter USA |
| Miba Gleitlager Austria |
| Miba Bearings US |
| Miba Frictec |
| Miba Steeltec |

# SOCIETY

## TAKING A FORWARD-LOOKING APPROACH

The responsibility Miba assumes for its environment is multifaceted. In addition to sound cooperation based on mutual trust with communities and authorities, the Company places a high value on constructive dialogue with its neighbors at all sites. Apart from that, Miba focuses its activities primarily on children, youth and disadvantaged people. Supporting education initiatives is considered to be the most significant and valuable investment in the future – the future of our society and the Company.

# Values in action

Social responsibility at Miba starts with high-quality, environment-friendly products and extends well beyond that. In line with the corporate mission "Innovation in Motion – Technologies for a Cleaner Planet", the goal of the Company is to make an active contribution to technical advances through technologically highly demanding products, thus also contributing to a cleaner planet. Therefore, Miba primarily supports organizations and projects with a focus on education and technology by way of sponsoring and donations. In addition, Miba engages in a constructive dialog with its neighbors at all sites and supports a strong cooperation with municipalities and authorities based on mutual trust between all parties. The Company is aware of and accepts its responsibility for the people in the surrounding area.

Miba stands for Lifelong Learning, Technology Leadership, Passion for Success and Entrepreneurship. Supporting education initiatives and consistently promoting technology including the international environment are important matters for the Company. Both the education of the next generation of Miba employees and supporting research and development in areas relevant for Miba are further focal points in these activities. There is a special focus on the educational institutions with which the Company is associated on a regional or professional level. The sponsoring guidelines applicable to all sites serve to ensure that every project supported bears the corporate values.

# Education for the future

The basis for the professional and effective in-house continuing education of the employees was established with the Miba Academy. The Company's range of training and continuing education includes not only courses and training sessions for all employees worldwide but in particular also the apprentice training programs at the Austrian and Slovakian sites. Furthermore, Miba considers itself to be a partner in education with the goal of supporting potential employees at an early stage. For instance, the Company supports students during their master's theses or dissertations and offers internship opportunities for interested college and university students or graduates. The number of apprentices at Miba is steadily increasing. In 2016, the Company trained 239 apprentices and, in the previous year, 229.

Detailed information about Miba employees is provided in the section on Employees.

**Children experience technology**
There has been a partnership with Otelo, the open technology laboratory, for several years. Under the program entitled "Kinder erleben Technik" (KET – Children experience technology), preschool children have the opportunity to discover natural science and technology in a playful and age-appropriate way. The long-term goal of this cooperation is to pass on knowledge in the fields of natural sciences, technology and digitalization to children and youth between the ages of 4 and 15. In this way, the Company helps to teach even the youngest children about pioneering technologies.

**"Teach for Austria"**
Miba also recently began supporting the Teach for Austria project, which actively assists children and young people from low-income and educationally underprivileged backgrounds along their education paths. Together, the aim is to ensure that perspectives are not determined by the parents' level of education and income. In cooperation with university graduates working as full-fledged teachers at target schools, the aim is to provide these children with an equal chance to get an education.

**"Kindergarten meets science"**
The project "Kindergarten meets science" allows children to come into contact with natural sciences and technology at a very early age. In this project, a dedicated chemistry teacher holds workshops to conduct experiments in the Gmunden Ort preschool. As the region's first partner company, Miba supported the showcase project by purchasing an experiment kit of the Austrian Association of Chemistry Teachers, which will serve as the basis of the work with the children.

**Upper Austrian industry children's day**
On the third Upper Austrian industry children's day held in October 2016, the Company was represented with its idea workshop entitled "The wonderful world of vehicles and their components". Working in cooperation with Otelo, the open technology laboratory, Miba apprentice trainers provided the children with playful and exciting insights into the world of Miba and technology.

The Company also supports further activities in the area of education. For instance, in cooperation with the Frank Stronach Institute of the Graz University of Technology, internship positions are provided and classes taught by Miba employees are held. The area's polytechnic courses and schools use Miba's facilities to conduct practical training sessions in metalworking once a week with Miba apprentice trainers.

# Social and cultural activities

An open dialog with neighbors and authorities is essential for the Company's success. Only in this way can conflicts of interest be resolved constructively and goals pursued together. Through a variety of activities, Miba provides its support for the integration of local employees and management in the public structures of all sites.

**Places for people**
As part of their commitment to refugees in 2016, Miba provided financial support for the Austrian submission to the 15th Architecture Biennial in Venice. The submission is part of the "Places for people" initiative, which combines architecture with social involvement. The objective of this initiative is to adapt the intake stations for those in search of a home in Austria in such a way that they provide people with dignified accommodations and support. The places for people displayed in Venice are three locations in Vienna which were redesigned by the teams from Caramel Architekten, tnE Architects and Eoos.

**Commitment to integrating refugees**
Since 2015, Miba has supported the association Laafit in integrating refugees and asylum seekers who are currently housed in Laakirchen. In addition to funding German classes, the "Cafe der Begegnung" (meeting place cafe) was held regularly as a place where refugees and Miba employees could meet and talk. This served as a means of improving the integration of refugees into the community.

**Donation for flood victims**
Following the storms on July 2 and 23, 2016, causing devastating damage in the area around Laakirchen, Miba contributed EUR 20,000 to the campaign "Laakirchen hilft". In addition, employees at the Roitham site held their own fundraising campaign for colleagues who had lost their homes in the storm. In only a few days, they raised almost EUR 10,000 for their colleagues in need. Miba matched these funds.

**The KAKIHE-Fünf-Brücken-Lauf for charity**
For many years, Miba has supported the Cambodian association for clean drinking water (KAKIHE) that was founded by two Laakirchen employees. Every year, the association holds the Five Bridges Run along the Traun river and, in 2016, 90 Miba employees participated. The entry fees to the Five Bridges Run are used to finance the construction of wells and in this way to provide better access to drinking water. Just how important this issue is to Miba employees is evident from their commitment even beyond sponsoring. On their own initiative, funds are also raised for the association at a variety of employee events. In this way, 13 wells have already been financed and thus access to clean drinking water has been provided to thousands of people in Cambodia.

**ELIJAH – support in Transylvania, Romania**
Miba has also supported the projects of Fr. Georg Sporschill SJ for many years. In past years, the donations have supported the ELIJAH Foundation. A wide array of projects helps families and children of Roma living in Romania to cope with their difficult situation and to build a future through their own efforts.

**Christmas charity**
In lieu of Christmas gifts to customers and partners, each year Miba supports a social project in one of the nations where it has business operations. In 2016, Miba donated EUR 10,000 to the Slovakian aid organization Dobrý Anjel, which helps families in financial distress due to illness in covering the cost of treatment.

**Festwochen Gmunden**
Because of the proximity of the Company's headquarters in Austria and the regional significance of this festival, Miba has sponsored the Gmunden Festwochen for many years. For over 25 years, the Festwochen are considered a cultural high point of the summer in the Salzkammergut region. Complementary passes available to sponsors are distributed to the employees. Many employees take advantage of these in order to attend concerts, theater performances, readings, exhibits, recitals and films from the extensive cultural program.

**Lebenshilfe Gmunden**
Since 2001, Miba has cooperated with Lebenshilfe Gmunden, another important institution for the nearby area of Miba's Laakirchen site. Lebenshilfe provides support for those with mental or multiple handicaps, helping them build an integrated and independent life. The cooperation is with the art workshop where people with disabilities can engage in artistic activities. In return for the financial support, the works created in the workshop are displayed for one year in an exhibit held on Miba's premises. In addition, Lebenshilfe has been responsible for distributing the cleaned work clothes at the Laakirchen site for many years.

**Long Night of Research**
In 2016, Miba opened its doors once again in Laakirchen for those interested in research and fans of technology. As part of the Long Night of Research, the Company provided insight into its activities and provided an opportunity to get an impression of how research and development work in a large industrial company.

Beyond that, at all of its sites, Miba also supports regional activities that serve to promote cooperation within the region or that focus on education and technology.

# OUTLOOK

# Outlook

Overall Miba is expecting further growth in fiscal year 2017–2018. In keeping with the Miba 2020 strategy, the Company continues to focus on the three pillars of Global Growth, Innovation and Technology, and People.

In order to secure success in the medium and long term, Miba is already firmly committed to dealing with the challenges and opportunities of the two key strategic topics: firstly, developing the future technologies of the power train of the next decades (keyword: electromobility), and secondly, the changes to business models and production technologies resulting from an environment undergoing a digital revolution.

**New opportunities through modern drive concepts**
In fiscal year 2017–2018, Miba will further increase its activities related to modern drive concepts. The Company has comprehensive expertise to make an active contribution to the further development of the conventional combustion engine by improving established technologies. At the same time, the Company aims to increase the knowledge and skills related to all aspects of hybrid and electric drives and to accelerate developments in these areas in order to capture and expand market share.

**Focus on digitalization**
In the new fiscal year, Miba will once again emphasize the topic of digitalization. In this context, digitalization does not pertain only to production in the narrower sense but through various technologies impacts the different divisions, beginning with product development through manufacturing to logistics, marketing and customer support. All activities will center on the implementation of Miba's digitalization strategy throughout the entire Company. Miba summarized its areas of activity in the House of Digitalization. One main pillar will be new business models in which digitalization will be used to generate added value for the customers. The second main pillar is the internal value chain. Digitalization will support Miba's improvements to both production and administrative processes. Both pillars require a strong database and a robust organization promoting skills in the area of digitalization and a corresponding culture. In connection with this, the human resources area in particular is tasked both with gradually preparing the existing team for the demands of an increasingly digital working world and with recruiting new employees from this area. Just as essential are a robust infrastructure, adequate safety measures and data and IP protection – areas where Miba is investing more heavily.

**Experience a new kind of collaboration**
The opening of the Miba Forum represents yet another milestone in aligning Miba with the demands of the future – particularly those related to modern ways of working. In the summer of 2017, around 100 Miba employees will set off in a new world of work by moving into the Forum. New models of working and collaborating will be practiced in this customer, technology and learning center.

**Spotlight on people**
All improvement measures and progress are still centered on the Miba 2020 strategy – and thus on Miba's employees – among other things to show that Miba is aware of how important its employees are: They are the engine of the Company's success – now and in the future.

# Editorial details

**PUBLISHER**
Miba Aktiengesellschaft
Dr.-Mitterbauer-Straße 3
4663 Laakirchen, Austria
www.miba.com

**EDITOR**
Miba Aktiengesellschaft, Laakirchen, Austria

**IMAGE SOURCES**
Miba Aktiengesellschaft, Laakirchen, Austria
Frank Simmerl, Austria
Daniele Mattioli, Suzhou, China
Eric Wagner, Columbus, OH USA
Christian Hemmelmeir, Linz, Austria

**DESIGN & LAYOUT**
SPS MARKETING GmbH, Linz, Austria

**FINANCIAL REPORTING SYSTEM**
This annual report was produced in-house with FIRE.sys.

**TRANSLATION AND LANGUAGE SERVICES**
ASI GmbH, Vienna, Austria

**PRINTING**
Vorarlberger Verlagsanstalt GmbH, Dornbirn, Austria

**PLEASE NOTE:**
This annual report includes statements concerning the future that are based on Miba AG's current estimates and assumptions, made to the best of its knowledge. Disclosures using the words "shall," "may," "will," "expects," "assumes," "plans," "intends" or similar formulations are indicative of such statements concerning the future. Forecasts relating to Miba AG's future performance are estimates that have been arrived at based on the information available at the point in time when this annual report was printed. If the assumptions underlying the forecasts do not materialize or if risks occur at levels other than those calculated, then actual results may deviate from forecasts. Rounding differences may arise when adding rounded amounts and percentages.
The annual report has been prepared with the utmost care to ensure the accuracy and completeness of all disclosures. Rounding, typesetting and printing errors cannot, however, be entirely ruled out. To improve readability, we have chosen to dispense with dual gender references. The choice of a certain gender when making general comments is not intended to diminish the value we place on the equal treatment of both sexes.