



engineering a better life

Clear vision, sustainable mission.



Video of Dr. Klaus Geißdörfer's preface: mag.ebmpapst.com/sustainability-report-2023-2024



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Dear readers,

Together, sustainability and digitalization can achieve great things – this is something I truly believe. At ebm-papst, we strive every day to combine sustainable thinking and action with the use of advanced technology. Our products already stand for efficiency and sustainability. Now, we want to tap into their full potential. However, we can't do this alone. We must collaborate with our customers, suppliers, and network partners to develop and implement new business models. The era of smart, needs-based use of our solutions has only just begun. The next stage in our value-creation process will be to produce smart, networked solutions that reduce CO₂e consumption while in use. As with all the challenges we face, achieving this goal will require more than just our decades of expertise and dedication to ongoing economic and ecological improvement. Our success will also involve intensive consultation, productive

discussions, and our employees, whose commitment, enthusiasm, and humanity all help to support these trends for the future. I am proud of how far we have already come as a company and as a society, and I look forward to what we will achieve together. Join us on the path to a future fit for our grandchildren. In the following pages, you will find an overview of how we tackle the issue of sustainability at ebm-papst. I hope you enjoy reading this issue and come away from it filled with inspiration for the future!

Yours sincerely,

Dr. Klaus Geißdörfer
Chief Executive Officer (CEO)
ebm-papst Group



About this report

The ebm-papst Group's first sustainability report covers the 2023/24 financial year. The period taken into account runs from April 1, 2023, to March 31, 2024.

Our reporting is based on the international standards defined in the Global Reporting Initiative (GRI), a breakdown of which can be found on page 38. In addition, our sustainability activities contribute to ten of the United Nations' 17 Sustainable Development Goals (SDGs). These can be found as markers on the corresponding pages of the report.



For more information on the basis of our sustainability reporting, visit: mag.ebmpapst.com/report

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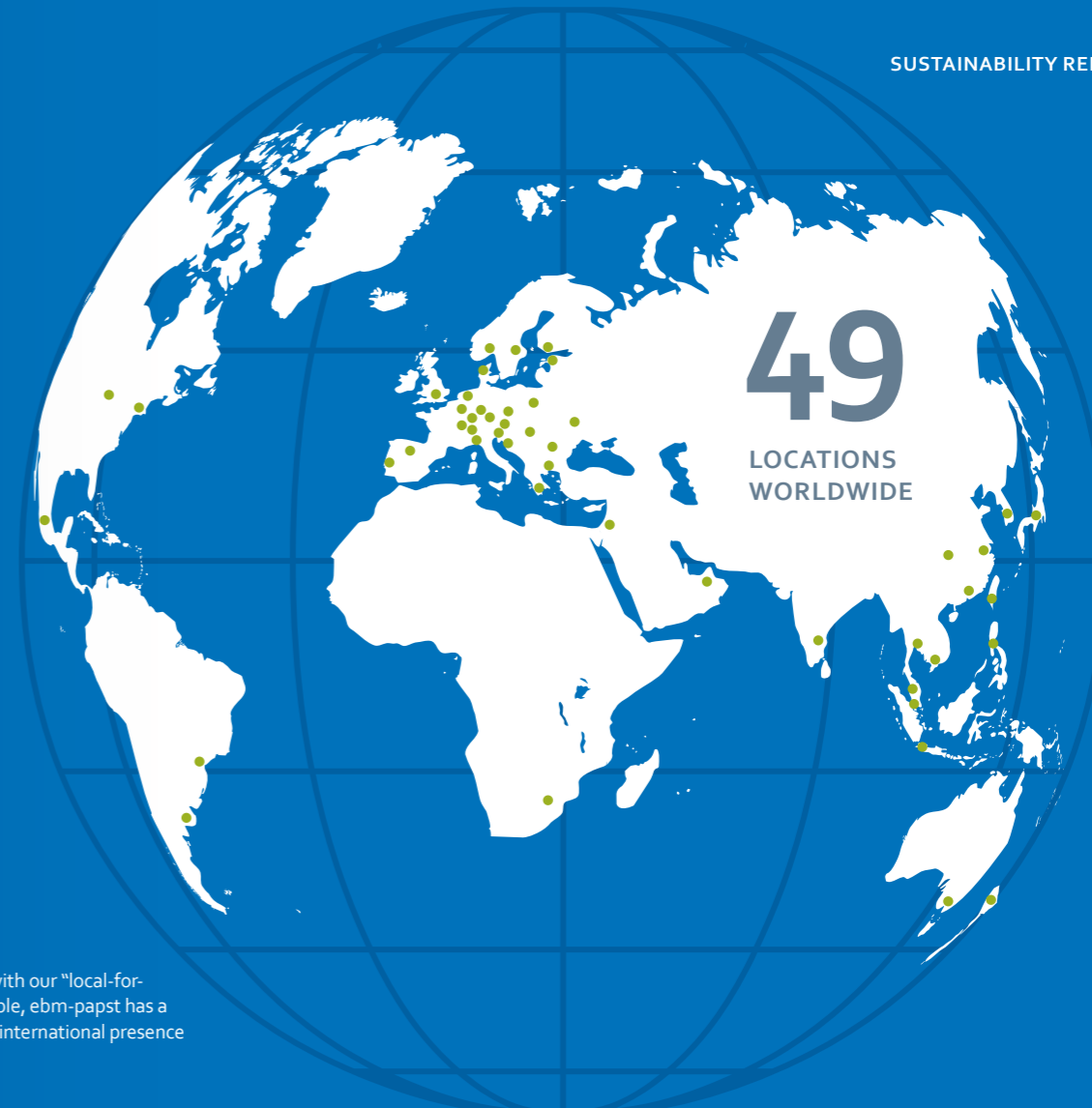
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In keeping with our "local-for-local" principle, ebm-papst has a widespread international presence

ebm-papst at a glance

ebm-papst stands for sustainable and intelligent solutions in air and drive technology. Our goal is to create a better climate – for both people and the environment. We develop innovative systems and solutions that move air efficiently and contribute to the circular economy.

»Every new product must outperform its predecessor economically and ecologically.«

Gerhard Sturm
Company founder, ebm-papst



2.408 billion

EUROS IN SALES IN THE
2023/24 FINANCIAL YEAR



13,800

EMPLOYEES
WORLDWIDE

Last updated: June, 2024



33,000

PRODUCTS

The company was founded jointly by Gerhard Sturm, Heinz Ziehl, and Günther Ziehl in 1963 and has its headquarters in Mulfingen, Germany.

Positioned as a technological leader with motor technology, electronics, digitalization, and aerodynamics as its key areas of expertise, ebm-papst specializes in products that save on both energy and resources. We offer intelligent and tailor-made solutions for almost any need imaginable in the field of air and drive technology. Our diverse portfolio includes state-of-the-art fans, motors, and control technology that are designed for maximum efficiency and sustainability. Our

products are used in almost every industry, including ventilation, air conditioning and refrigeration technology, heating technology, information technology, mechanical engineering, intralogistics, and medical technology.

The Group generated sales of 2.408 billion euros in the 2023/24 financial year, and employed 13,800 people at 27 production facilities and 49 locations worldwide. With expenditures of 137 million euros on our research and development, we have once again succeeded in further increasing the resource efficiency of our entire product portfolio.



Find out more about the ebm-papst group:
www.ebmpapst.com/aboutus



Our sustainability mission statement

When it comes to sustainability, we think holistically. That is why we have defined in our mission statement that we operate sustainably, ethically, and lawfully. These different aspects fit together like matching pieces of a puzzle and form the basis of our daily activities.

As part of our materiality analysis prepared in 2023, we identified the most important sustainability topics for ebm-papst with the help of a comprehensive stakeholder survey. In addition to economic performance, we found particular relevance with environmental issues such as energy and emissions. Additional focal points relate to our portfolio and deal with issues such as the energy efficiency and recyclability of our products, as well as the education, training, and well-being of our employees. This analysis was used to define our sustainability mission statement, which is based on the four cornerstones of climate and environment, partnerships and responsibility, people and corporate culture, and systems and solutions. It guides us in our day-to-day business, and helps us to define concrete targets and prior-

itize measures. This is why we visualize our mission statement as a puzzle with interlocking pieces for each of the aforementioned areas. No one piece of the puzzle can work without its counterpart – just as climate and environmental protection measures can only be initiated by a motivated team that enjoys working at the company. Only by correctly assembling the pieces of our sustainability strategy will we be able to see the big picture and achieve our goals. We have used the same structure for our sustainability report: Each of the four sections in the report represents one of the “puzzle pieces” in our sustainability mission statement, examining the associated measures and content in detail.



Our materiality matrix in detail: mag.ebmpapst.com/mission-statement



SUSTAINABLE, ETHICAL, AND LEGAL BUSINESS PRACTICES



CLIMATE & ENVIRONMENT

We are implementing a clear roadmap for greenhouse gas reduction and are fully committed to protecting nature and our planet's habitat.

- Greenhouse Gas Reduction
- Ecosystem Protection



PEOPLE & CORPORATE CULTURE

We create a healthy and safe environment within the ebm-papst family so everyone is able and eager to contribute in the best possible way. Each individual – and the group as a whole – is constantly learning and developing. We demand and promote diversity and inclusion.

- Health
- Lifelong Learning & Development
- Diversity & Inclusion



SYSTEMS & SOLUTIONS

We add value for our customers with our systems and solutions. With our innovations, we move air efficiently. Through material and resource efficiency, we are taking the path to a circular economy.

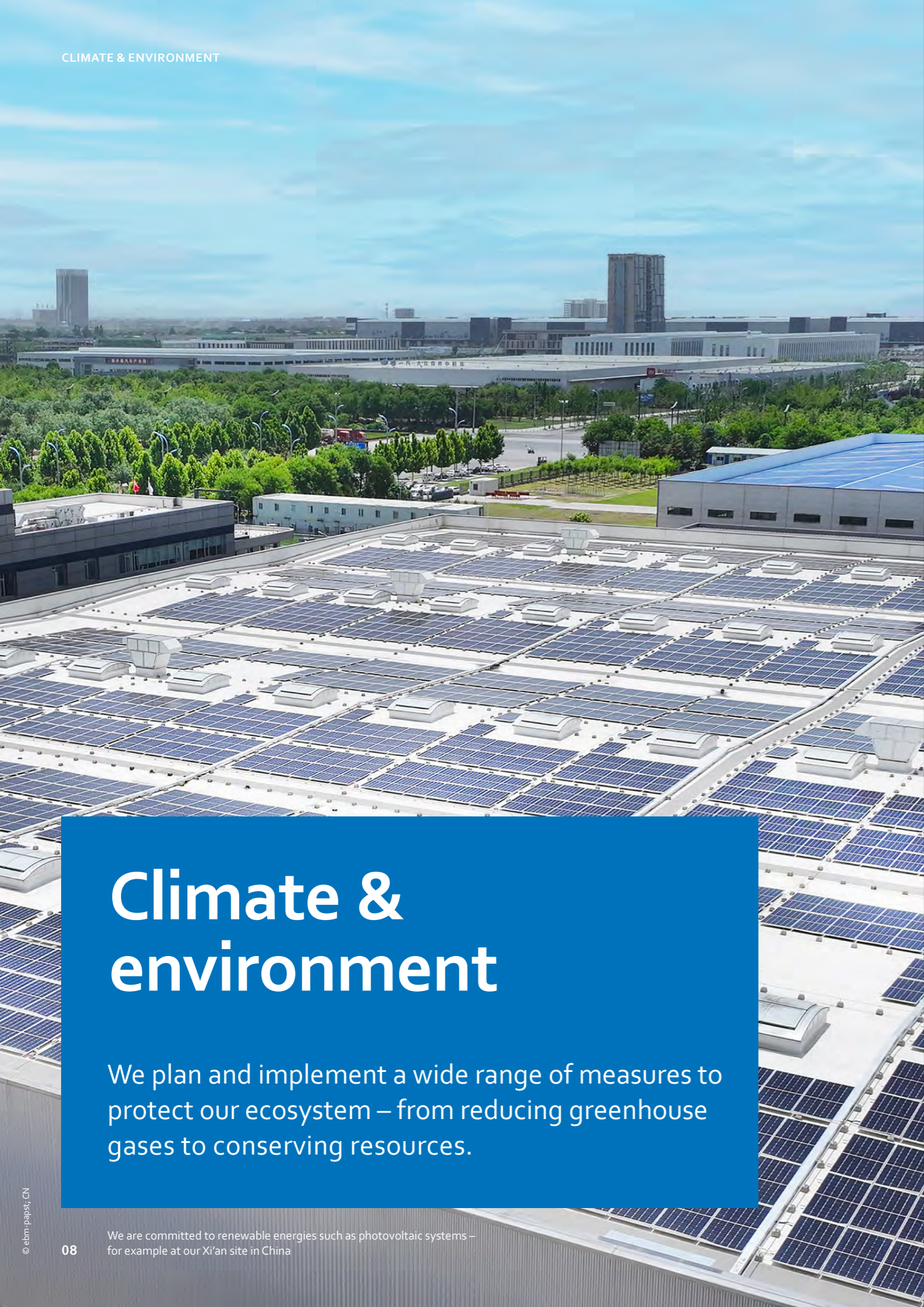
- Material & Resources
- Innovation



PARTNERSHIPS & RESPONSIBILITY

We take responsibility for our customers, suppliers, and the community. In doing so, we are committed to human rights and maintain long-term relationships within our value chain.

- Business Relations
- Social Engagement
- Value Chain



A clear commitment to greater sustainability

ebm-papst’s purpose, “Engineering a better life,” illustrates the importance we place on our goal of helping to make the future better. With our increasingly efficient and intelligent solutions, we are helping to make the world a more sustainable place. However, team spirit and joint action also play a key role in this – both within the company and in the collaborative and constructive way everyone involved works together.

Sustainable action never works when attempted as an isolated solution – it needs to include everyone who has a share in the value chain. Here at ebm-papst, this knowledge spurs us on every day as we strive to find new and intelligent solutions in networks and partnerships with our customers, suppliers, and service providers. Our aim is always to make our processes and products even more sustainable and efficient.

Just last August, in 2023, ebm-papst joined the Science Based Targets Initiative (SBTi), a climate protection organization that evaluates and verifies the sustainability targets of participating companies. The submitted climate protection measures are only validated if these targets are in line with the Paris Climate Agreement – the initiative to cap global warming at just 1.5°C higher than pre-industrial levels. For Klaus Wittmann, Director ESG, this is a forward-looking step: “We decided to make this commitment because the Initiative works on a scientific basis. This makes it a very good fit for us and our interests.” In accordance with the commitment required by the SBTi, ebm-papst formulated clear targets at the beginning of 2024 that must now be validated by the Initiative. Klaus Wittmann explains, “Now it’s a matter of implementing the objectives on a schedule – defining the next steps precisely and including our suppliers and customers in this process.”

Further expanding sustainability expertise
 Additionally, ebm-papst participates in the EcoVadis sustainability rating and the Carbon Disclosure Project (CDP). The CDP’s assessment of CO₂e emissions, climate risks, and reduction targets and strategies has proven particularly useful due to its wide reach and good comparability. Many companies now see this assessment as an important barometer for the effectiveness of measures they have implemented. Annemarie Hillenbrand, Sustainability Manager at ebm-papst, is following this development closely: “Many of our customers subject their companies to CDP assessments, and also require us to disclose our environmental and climate targets in accordance with these standards. We are happy to comply with this request, as it matches our own interests exactly.” Irrespective of this, the company’s long-standing participation with EcoVadis will continue to be of great importance, Annemarie Hillenbrand stresses. “Even though CDP focuses more strongly on climate and environmental issues, EcoVadis is still an important and indispensable rating program for us due to its clear emphasis on environmental, social, and governance issues, which helps us to strengthen our sustainability expertise further.” A commitment that is clearly bearing fruit, as the EcoVadis Silver Medal from 2023 shows. Thanks to a significant increase in the company’s score compared to the previous year, ebm-papst is now among the top 20 percent in its industry.

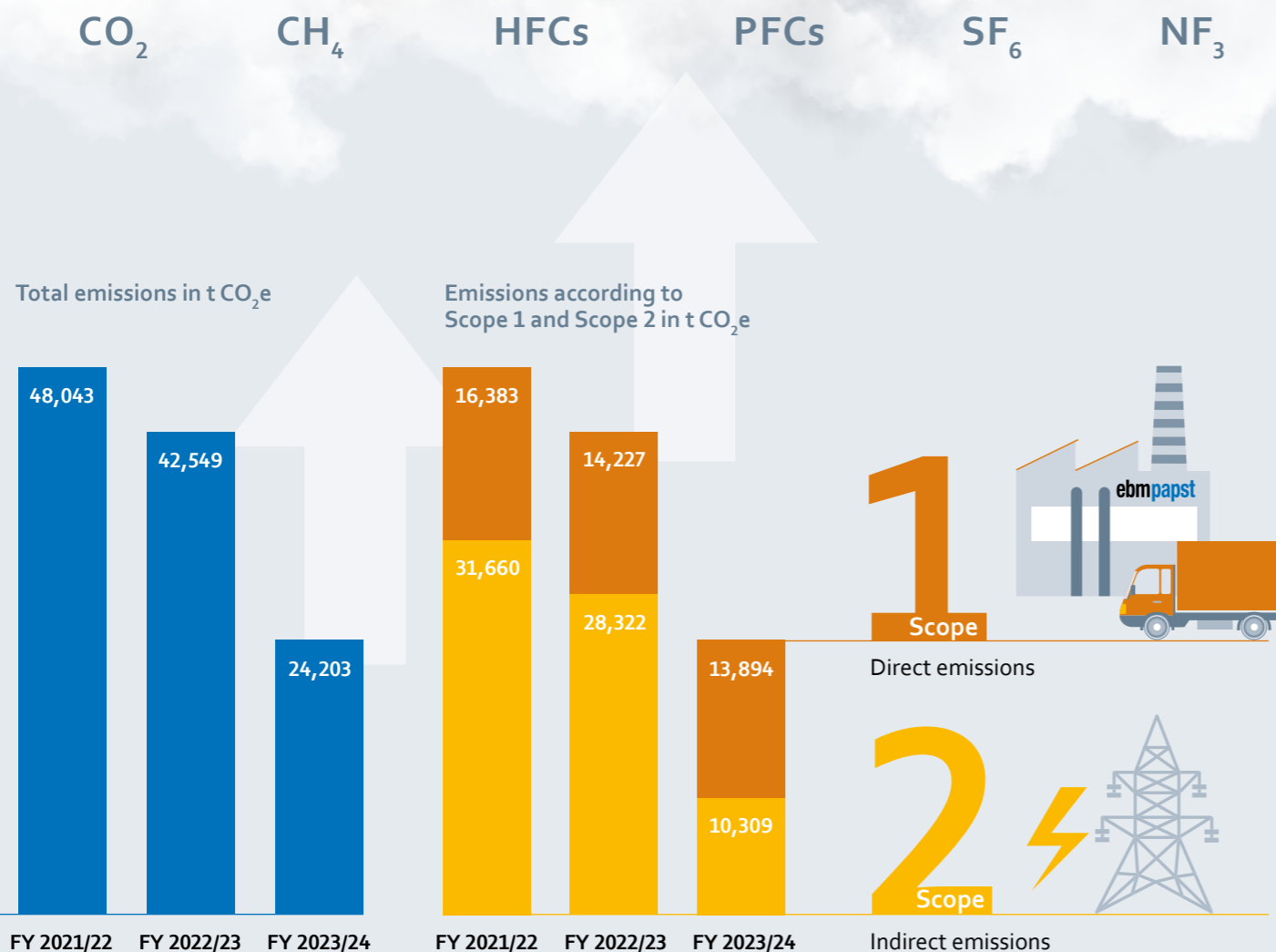


For more information on our sustainability initiatives and ratings, please visit: www.ebmpapst.com/sustainability

Climate & environment

We plan and implement a wide range of measures to protect our ecosystem – from reducing greenhouse gases to conserving resources.

We are committed to renewable energies such as photovoltaic systems – for example at our Xi’an site in China



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Last updated: May 16, 2024

Avoidance before reduction

Our goal is to achieve climate-neutral production in the 2025/26 financial year. This means reaching climate neutrality in terms of both Scope 1 (emissions caused directly within the company) and Scope 2 (emissions caused indirectly through energy procurement). We have significantly intensified our sustainability efforts in recent years in pursuit of this goal.

We adopted the key points of a sustainability strategy back at the end of 2021, and subsequently documented them in our CO₂e roadmap. According to Klaus Wittmann, Director ESG at ebm-papst, the company is pursuing a clear guideline to achieve the global climate targets set out in the roadmap within the specified time frame: "Our top priority is to avoid CO₂e emissions. Where this is not entirely possible, we use other mechanisms we have identified as part of our strategic development: optimizing energy efficiency in the production process, which can be done by increasing our use of waste heat and optimizing energy and shutdown management, installing photovoltaic systems, and purchasing green electricity. Offsetting the remaining emissions that are technically unavoidable or irreducible is another tool available to us, albeit one that we only use as a last resort." This approach is al-

ready showing the first signs of success: having achieved a reduction of 11.4 percent in the Scope 1 and 2 emissions areas in the 2022/23 financial year, we achieved a further reduction of 43.1 percent in 2023/24.

Primary objective: Avoiding emissions

One of the key mechanisms that will help us implement our roadmap is the use of renewable energy sources. "To this end, we invest more than three million euros a year in generating our own renewable energy through initiatives such as the global expansion of our photovoltaic systems and the electrification of our fossil energy sources," says Klaus Wittmann, naming two of the most important measures we are using to put this strategy into practice.

49.6

percent saved on emissions thanks to green electricity

Photovoltaics in particular is becoming a hot topic: Our Hollenbach plant will connect its third photovoltaic system to the grid in 2024, and preparations are currently underway for the commissioning of further installations in Slovenia and Hungary. While the final contractual details still need to be agreed upon in Slovenia, construction work has already begun at our Hungarian sites. Our aim is to get four new installations up and running by the end of 2024. Another aspect of our strategy in this area is the complete transition to green electricity, which we aim to complete by 2025. Our locations in Germany, China, and the USA have been running exclusively on green electricity since spring 2023, with other countries to follow in the course of the year. The success of this initiative is already quantifiable in figures: purchasing green electricity enabled us to avoid around 49.6 percent of all Scope 1 and 2 emissions in 2023.

Internal retrofit project contributes to reduction in emissions

A closer look at Scopes 1 and 2 reveals that more than 60 percent of the emissions we produce are generated in areas covered by Scope 2, i.e. indirectly through the purchase of energy. "That's why we are constantly and carefully monitoring ways of optimizing our internal processes to make them more energy efficient," says Annemarie

Hillenbrand, Sustainability Manager at ebm-papst. A good example of the effectiveness of this work is our internal "Retrofit" project. Since the beginning of 2023, this measure has seen a total of 261 ventilation systems at ebm-papst's German sites undergo testing to determine their energy efficiency. In cases where it makes sense to replace fans, control systems, or individual elements based on previous data collection or measurement, this is done as quickly as possible. Even though the project will not be completed until the third quarter of 2024, this measure has already been a clear success. "The potential savings vary from one case to the next, of course, but our retrofitting measures have a direct impact on both energy consumption and emissions," reports Yvonne Riehle, Marketing Manager at ebm-papst.

Keeping an eye on the value chain

In addition to direct and indirect emissions, ebm-papst also takes into account the emissions that occur within a company's value chain, i.e. upstream or downstream of the actual production process (Scope 3). This includes the procurement of raw materials and supplies, as well as logistics and transportation processes. "Even though over 98 percent of our Scope 3 emissions are generated during product use, we are keeping an eye on the issue and implementing measures of our own in areas where we can have a direct impact. In addition to this, in 2023 we also presented a detailed summary of the individual sub-categories in our own Scope 3 footprint. This demonstrates once again just how important this issue is to us," says Klaus Wittmann. For example, we now use an electric shuttle truck to reduce traffic-related CO₂e emissions on trips between our Hollenbach, Mulfingen, and Niederstetten plants. The exclusive company bus routes we have installed for employees at several locations also contribute toward the same goal. In the Hohenlohe district, 18 buses pick up around 1,200 ebm-papst employees from within a radius of 25 kilometers around Mulfingen and take them safely to and from their workplace. This model is also in use at our Chinese sites, where factory buses now run on seven different routes. These small yet valuable steps help us to further reduce ebm-papst's ecological footprint.



For more information on the legal framework for these measures, please visit: mag.ebmpapst.com/avoidance



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The plus energy building in Hollenbach is just one example of the ongoing optimization of our sites

Percentage of energy generated within the company continues to rise

The use of regenerative energy sources and the responsible use of energy are of great importance for a company's sustainability status. For this reason, ebm-papst has been focusing on the use of renewable energies and improving its energy balance for years.

Markus Mettler, Director of Technical Operations & Real Estate FM, has been involved in the development of this area since day one. He remembers our first, tentative steps well: "When we founded the 'Hohenlohe Model' regional initiative with a handful of fellow campaigners back in 1991, hardly anyone was talking about energy. It was only when we started implementing the energy efficiency tables in 2002 that the topic gained momentum." Today, energy consumption and energy efficiency are an integral part of every corporate strategy, just as they are at ebm-papst. To this end, the amount of energy required at the company – which is generated and provided using a mixture of gas, electricity, heating oil, and fuels – is largely documented using a modern data col-

lection system. "We are working on incorporating the ISO 50001 energy management standard into our integrated management system," says Markus Mettler.

Hollenbach sets the standard

Even aside from this initiative, we are already making very efficient use of the energy our company generates itself. One example of this is our plant in Hollenbach: Built in 2007, the plant is a plus energy building, which means that it produces more energy than the building itself requires. The site received an Energy Efficiency Award for its design in 2009. This effect is thanks largely to two photovoltaic systems and two combined heat and power plants,

which together generate around 3.5 million kWh/a. In the third quarter of 2024, a third photovoltaic plant with around 2.2 million kWh/a will be connected to the grid. "Once that is done, we will be producing around 5.7 million of the approx. 10 million kWh/a we need by ourselves. This will increase the percentage of our energy consumption that we cover ourselves. Other sustainability projects that we will be implementing include fitting the entire site with high-quality LED lights and, in the long term, replacing or electrifying our heating oil supply, a fossil fuel that we are still using currently." Using waste heat from our production facilities and data center to heat cooler areas such as warehouses and individual production areas also helps to increase our energy efficiency. Potential thermal energy that cannot be used straight away is stored for later use.

Efficient energy use also extends to China

Alongside Hollenbach, a great deal is also being done at ebm-papst's other locations to reduce energy consumption at the company to the bare minimum. It's a huge undertaking that is already paying off: Within just one year, our company's total energy consumption has fallen from around 156,000 MWh (FY 2022/23) to just under 141,000 MWh (FY 2023/24). And according to Markus Mettler, this positive development also includes another important component: "We are managing not only to reduce our energy consumption, but also to continuously improve our energy efficiency. We are doing this by checking exactly how much energy we actually need at each of our sites and for each of our projects worldwide, then deciding on the most efficient way possible to use it."

ebm-papst global energy consumption (in MWh)

	FY 2021/22	FY 2022/23	FY 2023/24
Electricity	95,415	91,154	87,741
Natural gas	49,486	45,164	37,807
Heating oil	8,066	7,627	5,723
Fuels	14,671	11,471	9,145
Miscellaneous	1,043	311	651
Total	168,680	155,727	141,066

Last updated: May 16, 2024

The best example of this is our plant in Xi'an, China, which was built in 2019. "There, a powerful photovoltaic system produces 1.45 million kWh/a and covers more than 25 percent of the plant's own energy requirements," reports Alice Sheng, Quality Project Manager at ebm-papst China. And this figure is likely to improve further, as a second system with the same output volume is scheduled for installation in the next few years. This in-house share of energy generation is supplemented by geothermal heat pumps with a cooling capacity in summer/heating capacity in winter of 2,792/2,876 kW. The LED lighting installed when the plant was built also helps to improve the site's energy efficiency. In 2021, the Xi'an plant became the first ebm-papst production facility to receive RESET certification, thanks to the excellent air quality in the buildings.

»It takes courage to be a pioneer. We want to break new ground, network and grow profitably while using digitalization and always striving for sustainability. With our innovative technology, we are making a decisive contribution to a sustainable future.«

Jan Philippiak
Shareholder, ebm-papst



© Jan Philippiak: Philipp Reinhard



Conserving resources with innovative solutions

In addition to our efficient use of energy and reduction of emissions, sustainable water management and recycling-focused waste management are also seen as key areas of sustainable action at ebm-papst. With the solutions we use, we strive to conserve natural resources and contribute to a clean environment.

To reduce packaging waste, we implement measures such as reusable paper or plastic packaging. For example, we use reusable plastic folding boxes both for shipping goods to our customers and for receiving materials from our suppliers. After use, the boxes are initially stored at the recipient's premises, before being returned empty for the next delivery. "This practice has already enabled us to save several tons of packaging materials," explains Ulf-Peter Klotz, Group Manager for Packaging Management & Quality Assurance at ebm-papst. Packaging is frequently underestimated, but it's a key part of a company's sustainability strategy. "It's often the small tweaks that have the biggest impact," says Ulf-Peter Klotz.

As part of a comprehensive analysis and with the help of a special calculation tool that compares carbon footprint and resource consumption, we examined the concept of "disposable versus reusable" more closely. "We took into account not just the return and reuse of the containers, but also their cleaning and repair, which affect the reusable system's carbon footprint. Although this individual approach is very time-consuming, it is ultimately relevant for our climate objectives," Ulf-Peter Klotz is keen to stress. "We want to act sensibly and reasonably, optimizing sustainability in all aspects of our business activities." The way one of our most precious resources – water – is used at ebm-papst sites all around the world

168

megaliters of total water use
(by region: Americas 9%, Europe 64%, APAC 27%)

17,521 tons of waste in the 2023/24 financial year, of which:

16,743t

non-hazardous waste

778t

hazardous waste



Waste types and quantities in tons in FY 2023/24

	AMERICAS	EUROPE	APAC
Paper/cardboard, paper products	279	3,113	1,127
Wood	314	1,056	558
Plastics	1	402	29
Household waste	185	780	663
Metals	4,911	2,907	271
Emulsions (oil/water)	–	486	5
Solvents	2	118	9
Styrofoam	–	59	1
Other types	–	213	–

Last updated: May 16, 2024



After pre-treatment of the components, further powder coating is carried out by spraying robots in our ultra-thin-film powder coating plant. One hundred percent of the excess spray is recovered and reprocessed using a negative pressure atmosphere.

also acts as a clear statement of the company's intentions. In addition to the three painting systems in Mulfingen and a combined cathodic dip coating/powder coating system at the company's Osterburken site, ebm-papst also operates a cathodic dip coating system in Tapolca, Hungary, a powder coating system in India, and a cathodic dip coating system in Italy, which is currently being replaced as a new building and painting system are installed at the site. At all our locations, we have reduced the volume of water we consume to the bare minimum. In Mulfingen, for example, water use has been significantly lowered thanks to continuous technical developments and our connection of a wastewater treatment plant.

To date, the volume of wastewater has been reduced from around 66 to just 22 cubic meters per week. Among other improvements, the water we use at the site is recycled and fed back into the water cycle via cascade and flushing systems. This process can sometimes be repeated several times to further increase the benefits. After treatment in the wastewater treatment plant, the purified water is discharged to the local sewage treatment facility. None of the inspections carried out by the district administration in Mulfingen over the past 20 years, which are always irregular and unannounced, have resulted in any complaints. This shows how seriously we take the issue of water use and treatment at ebm-papst.



Find out more about the development of water consumption: mag.ebmpapst.com/resources



Systems & solutions

We see ourselves as drivers of innovation. Thanks to our efficient use of materials and resources, our solutions offer significant benefits not only to our customers, but also to the environment.

The HighSpeed generation: Optimization as a principle

How can we optimize internal resource and material flows holistically? In this interview, Director of HighSpeed Products, Philipp Handschuh, describes the new product path of HighSpeed compressors and explains the exemplary way his department is structured in the context of sustainable product development.



Mr. Handschuh, resource efficiency has become a hugely important topic in recent years. Why do you think this is?

Developments in recent years have shown that we need to use the resources available to us today more responsibly. This includes keeping and processing them within a circular economy that is as CO₂e neutral and energy efficient as possible. ebm-papst recognized this change early on and positioned itself accordingly. Short transport routes, optimized use of space, low space consumption, and energy-efficient operation are all hugely important to us.

One result of this process is the development of high-speed drives – ebm-papst's HighSpeed products. What makes this conceptual approach so special?

The HighSpeed business field represents the perfect combination of our resource and material flows. This enables us to develop high-speed drives for a wide range of applications, with a whole host of sustainable quality features. These include durability, low weight and material-friendly production, as well as lower power consumption

and thus higher energy efficiency. The energy efficiency potential of our new HighSpeed refrigerant compressors, for example, is between 10 and 35 percent depending on the application. This progress not only benefits us, the customers, and end users; above all, it's better for our environment and climate.

Alongside smart fans, HighSpeed is going to be one of the cornerstones of ebm-papst's product portfolio as we look to the future. Does that surprise you?

No, not at all. HighSpeed was and is a strategic expansion of the ebm-papst product portfolio. We used our existing core areas of expertise in aerodynamics, motors, and electronics as a starting point. We then set up an interdisciplinary team to expand on this expertise, adding oil-free high-speed bearings and the associated manufacturing skills as new strings to our bow. With these future-proof products, we can offer highly efficient solutions whose components work in perfect harmony. This is exactly what our customers need, as their demand for resource and material-efficient products is constantly growing.

The interdisciplinary team is the key, then. How does that collaboration work?

Right from the outset, the HighSpeed product path was set up with a matrix organizational structure. The international team covers all the necessary disciplines, from market and application development to series process development. There are more than 60 employees on the team, all of whom are fully assigned to HighSpeed – even if some of them are still based in their

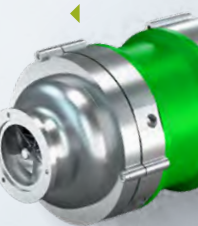
specific specialist departments in terms of discipline. What also helps us is that most of the team is based across two project houses at our Zaisenhausen development site. Since there are short distances between them, they can easily engage in constructive discussions and quickly make decisions. You can feel the drive for innovation the moment you set foot on the premises.

What do you see as the most important factors for our future when it comes to resource efficiency?

Take the materials, for example. One of our most important fields of innovation plays a major role in this product path: ceramic materials. These make PFAS-based coatings superfluous, conserving our resources and protecting our environment and health – all while increasing the longevity of our products. And while you can't measure things like team spirit and staff loyalty in the same way as power consumption, for example, they are both hugely important to our work. People are our most precious resource, and we need to both hold them to a high standard and treat them with the utmost care. It's important to me that everyone on my team treats each other with respect and appreciation. When you think about it, this is also a form of sustainability – creating an environment that's worth living in.



How HighSpeed works: Find out more about our turbocompressors at:
www.ebmpapst.com/highspeed





© ebm-papst with Midjourney (AI-generated)



Dr. Daniel Boese
Executive Vice President
Global Transition

Digital brilliance

We see digitalization as a driver of innovation. By using the latest technologies, such as IoT and AI, we are tapping into opportunities for even more efficient solutions. Our focus is always on creating added value for our customers and the environment.

At ebm-papst, digitalization is a central pillar of our corporate and sustainability strategy. It forms the foundation for both our future and the further development of our solutions. "Digitalization enables us to create added value on many different levels – for our products, in our interactions with our customers, and within our company," explains Dr. Daniel Boese, Executive Vice President Global Transition. "This strategic focus is crucial for the transformation of our company, as it increases efficiency and opens up new opportunities for innovation."

Intelligence = greater efficiency

True to our purpose, "Engineering a better life," we have continued to evolve our EC fans over many decades, thus optimizing the energy efficiency of the fan itself. With the possibilities presented by the Internet of Things (IoT) and artificial intelligence (AI), we are taking the next evolutionary leap toward the smart fan. "By influencing how and when a fan runs, we can drastically reduce energy consumption," Dr. Daniel Boese is keen to stress. The smart systems use cloud connectivity and AI to control the fan motors as required, in a way that suits their application. In a pilot project, the use of AI to test new operating profiles enabled us to reduce the fans' energy consumption by 60 percent.

Expertly prepared for the future

Digital solutions can help us significantly improve not only our products, but also our internal company processes. We are pushing the use of data and AI within the company through our IT competence center and investments in the field of product lifecycle management. This will enable us to speed up our decision-making processes and optimize our workflows. "One example of our work in this area is the initiative we have launched with other SMEs to develop industry standards for an efficient and uniform flow of information between manufacturers, customers, and suppliers," says Dr. Daniel Boese, underlining the added value digitalization offers along the entire value chain. "The digital twin plays an important role here, allowing us to bundle data and make all our product components traceable. This is also crucial for the circular economy – a hugely important issue in itself. After all, if we know the condition of the fan before we receive it, the refurbishing process becomes much easier." Martin Schulz, Director Strategy & Corporate Development at ebm-papst, is also confident as he looks to the future: "With the integration of smart systems, we are tapping into a complex new field of expertise that we can continue to extensively develop in the future. This will make ebm-papst more future-proof than ever – while keeping our focus on sustainability as the basis of our business activities."

Future-proof testing: Our test center

ebm-papst products are durable, energy-efficient, and environmentally friendly. We test these sustainable properties extensively and repeatedly, documenting the results accordingly. The majority of these methodical tests are carried out at our new test center in Hollenbach.

Since April 2022, we have been using the facility in Hollenbach to test fans, drive modules and other ebm-papst products in large climate chambers, salt-fog chambers, and other test environments to ensure that they meet all our environmental requirements. These include the effects of temperature, moisture, and corrosion on the products, as well as risk of penetration by foreign substances and wheel strength. In 2023 alone, over 430 tests were carried out at our Hollenbach site – which is now our fourth test center alongside Landshut, St. Georgen, and Shanghai.

Energy consumption significantly reduced in 2023

"With the new test center, we have finally united under one roof the laboratories that were previously spread across different areas of the Hollenbach plant. This decision was definitely the right move," says Markus Steinmann, Director Test Department at ebm-papst, on his initial impression of the change. "Firstly, it has allowed us to significantly improve the efficiency of our daily processes thanks to shorter distances between stations and leaner structures. Secondly, it means we are now making more sustainable use of our resources." One of the ways this is reflected is in the sites' energy consumption over time. In 2021, the total energy consumption across the different test locations came out at over 4,000 megawatt hours; this figure had halved to 2,160 MWh by the end of 2023. This progress is also thanks to our introduction of smarter test strategies, as Erich Kemmer, Team Lead Validation, explains: "We now carry out our tests under controlled conditions, at the right time, as early as

possible in the process, and in a way that requires as little effort and energy as possible. The resulting optimizations are directly reflected in the results. Take the service life test, for example: We used to run the fans and ventilators at ambient temperature until they failed (end-of-life test). Now, we test the devices at their maximum permissible ambient temperature and maximum load over a period of six months. This not only increases the accuracy of the results; it also reduces testing time, and thus energy consumption."

Reducing resource wastage even further

Our constant efforts to optimize our processes are reflected in almost all areas of work at the test center, albeit to varying degrees. "We have already fully exploited the optimization potential when it comes to water. We now feed almost all of the resources from our IP tests and irrigation chambers back into the water cycle. Unfortunately, the mixture prepared as an aerosol for the salt spray tests cannot be reused due to the corrosion residue and impurities that arise during the test. This wouldn't comply with the applicable standard, either." The situation is different when it comes to heat recovery and utilizing the resulting waste heat potential. For example, the site's heating system is connected to a cooling circuit that not only cools, but can also recycle the generated heat. This ambivalent and flexible solution shows how important the test center's work is for the entire company, explains Markus Steinmann: "In terms of sustainability, we want to minimize resource wastage of any kind. And we are getting one step closer to this goal every day."



Erich Kemmer pushes our fans to the limit at the Hollenbach test center

© ebm-papst; Lukas Zwiessele

430

product tests were successfully carried out at our Hollenbach plant in 2023



Fresh retrofit

Old AC fans out – new, energy-saving EC fans in. Without having to pause its operations, the leading Swiss milk processor Emmi was able to modernize the aging refrigeration system at its logistics center with the aid of energy-efficient solutions from ebm-papst.

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i

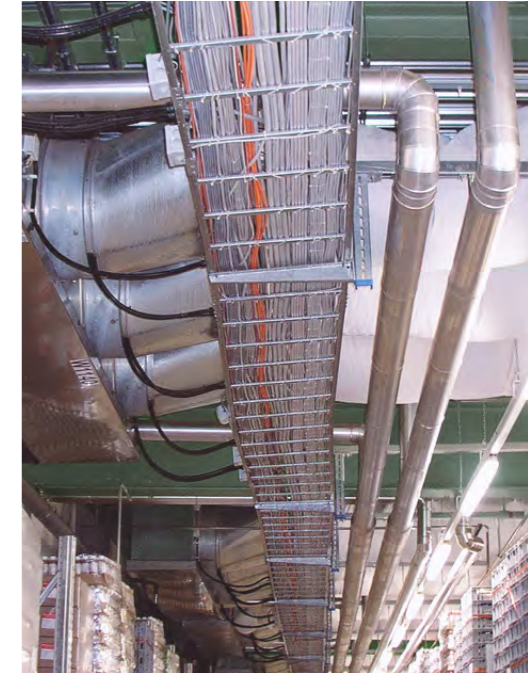


PROJECT INFORMATION

Project:
Energy-efficient modernization of the refrigeration system in the logistics center, with retrofitted solutions from ebm-papst

Customer:
Emmi Group

About the customer:
Emmi is the leading manufacturer of high-quality dairy products in Switzerland. Around 350 employees process dairy products such as milk, cream, and butter at the company's Suhr site.



Modern EC fans ensure optimum cooling performance

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Savings (per year) due to new EC fans in the cold storage area:

200t CO₂e

550,000 kWh

80% ENERGY

»For ebm-papst's employees, there was no such thing as ›no can do.««

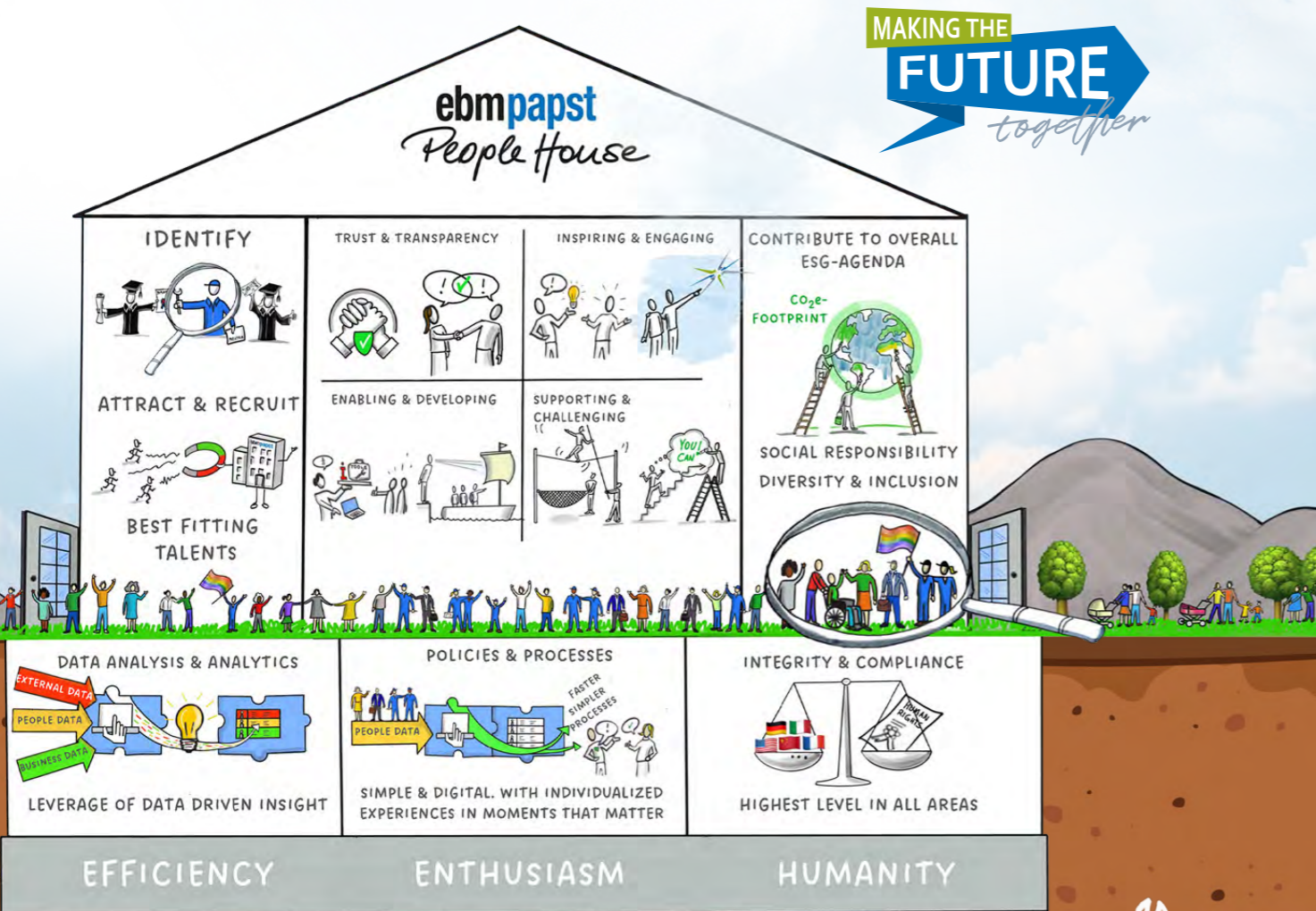
Matthias Künzli
Specialist in Automation
at Emmi

The Emmi site in Suhr has been expanded in recent years, becoming a competence center for milk and butter. In light of this, Matthias Künzli, Specialist in Automation, decided it was time to adapt the site's cooling capacity and make it more energy efficient: "The system had been in operation for over 20 years and was simply no longer up-to-date. The electrical input power was much too high, the speed could not be easily adjusted, and the efficiency was poor." Sustainability has always played a central role at Emmi and is firmly anchored in the company's corporate strategy. Based on its sustainability model, the company aims to reduce its own emissions (Scope 1 and 2) by 60 percent by 2027. Energy efficiency has an important role to play in this.

No can do? No such thing!
Matthias Künzli met ebm-papst at a seminar while looking for partners to help with the energy retrofit of the company's evaporators: "I was impressed not only by their modern EC fans, but also by the commitment and enthusiasm of the

employees at ebm-papst's Swiss branch. They supported my project right from the start. For them, there was no such thing as 'no can do.' In the end, picking their solution was an easy choice." The work began at the start of 2023. By the time it was completed in spring of 2024, three floors of the four-story logistics center were equipped with a total of 206 new HyBlade and AxiEco axial fans – all without any pause in operations. The two variants offer not just low energy consumption, but also the added advantages of a shallow installation depth, low noise level, and excellent efficiency.

Cool energy savings
Alongside the smoothness of the process, Matthias Künzli is particularly pleased with the tangible results the retrofit has delivered: "ebm-papst promised us an energy saving of around 50 percent. We've actually reached savings of over 80 percent for most of our fans. Fifty percent of that comes from the high efficiency of the fans themselves – the other 30 or so is down to the fact that we were able to reduce our output in line with demand." This saves Emmi around 550,000 kWh of electricity at its Suhr site, accounting for around 200 tons of CO₂e per year. ◀



Last updated: June, 2024
 13,800
 EMPLOYEES

People & corporate culture

A healthy and safe work environment, individual development opportunities, and the promotion of diversity and inclusion are the cornerstones of the ebm-papst family.

Welcome to the People House!

The concept of the ebm-papst “People House” is our shared mission statement for our professional home. Based on the values of efficiency, enthusiasm, and humanity, it supports our vision of actively helping to shape a sustainable future and a better climate in all areas.

“The People House is the vision from which we derive our special, future-oriented ebm-papst employee strategy,” explains Dr. Sonja Fleischer, Chief Human Resources Officer (CHRO) at ebm-papst. It’s not just a house; it’s a mission statement that reflects our values and the needs of our employees. We developed the concept by conducting countless interviews in all our regions around the world and across every function and hierarchical level within our Group. The results of a global employee survey conducted in 2022, which had an extremely high participation rate, were used to further refine and finalize the design. “The surveys revealed a lot of things. For example, they showed that ‘enthusiasm’ is a very important value for our employees, and that they also feel it is part of the working experience and lifestyle at all our sites around the world,” Dr. Fleischer recalls. “That’s why we have chosen to re-emphasize this point in our values.” Together with the values of efficiency and humanity, it forms the stable foundation on which our house is built.

This is the foundation of our excellence, which consists of three building blocks: data analysis and analytics, policies and processes, and integrity and compliance. This provides a high standard for our work, which is always efficient, first-class, and – of course – compliant with the law. But we never forget our humanity, either: We attach great importance to making special moments in

the lives of our employees personal and individual. We celebrate important milestones in their working lives together with them, from their first day at work, to graduation, apprenticeship and service anniversaries, right through to retirement. In order to maintain this good working relationship in the future, we take great care when selecting potential employees to ensure that they fit in well with our corporate culture.

Dismantling hurdles, creating opportunities
 The way we interact with one another is as inviting and open as the architecture of the People House. “By actively promoting diversity and inclusion, we create a pleasant and trusting working environment in which everyone can be who they are,” affirms Dr. Fleischer. “We strive to create an environment in which everyone is accepted, respected and valued, and can make the best use of their individual strengths to contribute to our success – regardless of their gender, (social) background, religion, age, sexual orientation, or physical and mental abilities.” We have launched a number of initiatives and programs to promote this sense of diversity. Some deal with work-life balance, an important priority for the modern employee. This is why we offer childcare support by cooperating with local kindergartens, for example. These valuable partnerships offer parents the security of safe childcare when (re)starting work at ebm-papst. It is also important to us that our employees can take a flexible approach ▶▶



Dr. Sonja Fleischer has been Chief Human Resources Officer (CHRO) at ebm-papst since 2021.



Key employee figures

	AMERICAS				EUROPE				APAC			
	M	F	Other	Total	M	F	Other	Total	M	F	Other	Total
Gender	329	179	1	509	6,139	4,647	0	10,786	1,251	988	0	2,239
Age distribution	Under 30		30 to 50		Over 50		Under 30		30 to 50		Over 50	
	21.1%		41.6%		37.4%		19.3%		51.6%		29.1%	
	16.2%		79.8%		4.0%							

Last updated: May 16, 2024

to organizing their working hours. This includes part-time and flextime models, as well as mobile work options. "What is easy to implement in terms of administration, for example, poses challenges when it comes to production," Dr. Fleischer says. "That is why we are developing a flexible working time and shift model for production, which – if necessary and desired – can be adapted to suit personal wishes and needs."

We are aware that the proportion of women at our company can be increased in several areas. This applies to specific departments such as Logistics, but also to management positions in general. With this in mind, we have launched several initiatives to promote women in our workplace. This involves providing targeted support to help shape individual career paths in the form of workshops, national and international networks, and mentoring and coaching services. Sarah Akhtar, our HR Expert for Diversity & Inclusion, can report on several pilot initiatives that are helping to improve diversity in all areas of our company. "With one campaign at our Landshut site, for example, we are hoping to get more women interested in working in logistics," she explains.

"By showing them the different options available, we take away the fear of switching to this area." Approaches that accommodate people with disabilities in our company's daily work routines are also being pursued worldwide. In Production at our Landshut site, for example, there are special inclusive workstations. But ebm-papst's strong commitment to inclusion and acceptance doesn't stop at the German border, as Sarah Worden, Senior Director Human Resources Americas, reports: "At our American branches, our employees regularly advocate for greater awareness of illnesses and disabilities." Campaign days such as World Down Syndrome Day provide an opportunity for such work. On this day, employees are encouraged to wear two different, colorful socks. This is our way of celebrating the uniqueness of every single person, regardless of the differences between us. It goes without saying that this philosophy is also practiced outside of the company, as illustrated by the open doors of the People House. By actively and financially

»We want everyone here to feel accepted, respected and valued.«

Dr. Sonja Fleischer
Chief Human Resources Officer (CHRO)
at ebm-papst



The basis for successful collaboration:
A trusting and transparent relationship with one another

supporting a wide range of projects in our sites' local areas, including children's hospitals and inclusive schools, we are helping to ensure that everyone has access to modern medical care and the ability to participate in life as part of the community. In 2023, for example, we helped to fund the purchase of a wheelchair-accessible seesaw for the playground at Andreas-Fröhlich-Schule in Krautheim.

Help in times of need

At ebm-papst, the idea of giving help to those in acute need is taken as read. One recent example of this social commitment is the emergency aid we provided in Slovenia following the floods in the summer of 2023. Sara Čučnik, Head of HR Department at ebm-papst Slovenija d.o.o., remembers exactly what happened: "ebm-papst didn't just provide financial help. We also started

a collection for urgent relief supplies the day the floods hit. "Since our local site in Cerknica was spared from the disaster, the almost 600 staff there were able to devote all their energy to supporting those affected. Employees who actively helped out were granted two days of special leave to do so. "These examples show that humanity is probably the strongest value in our corporate culture," says Dr. Sonja Fleischer. After all, international and cross-departmental collaboration can only be successful if there is also a culture of trusting and transparent cooperation. "Our employees know very well that they are in control of the atmosphere in their immediate working environment. And I look forward to working with them all to bring the vision of the People House to life." After all, the goal – trusting and transparent cooperation – is something we can all benefit from.

i We are changing the world. Together.

We are committed to creating a good atmosphere – both with others and among our fellow colleagues. To achieve this, we are constantly evolving in terms of ourselves, our working environment, and the way we work together. Here at ebm-papst, we call this: Better working. Better teams. Better future.



The safety of our employees is our top priority



A people-first approach

Our purpose, “Engineering a better life,” reflects our efforts to improve not only the lives of the people who use ebm-papst products, but also those of our employees.

As a company, we have a responsibility to protect both the environment and the well-being of our employees. Jonas Limmer, Director Environment, Health and Safety, is dedicated to this duty. “When it comes to environmental protection and occupational health and safety, the preventive approach is what counts,” he explains. “We focus on preventive measures to ensure that damage to the environment or people never occurs in the first place, rather than dealing with it after the fact.” This includes setting up safe workstations and introducing suitable protective equipment. However, Jonas Limmer knows the biggest factor in preventing incidents and controlling how often they occur is human behavior: “Nowadays, incorrect or negligent behavior is the most common cause of accidents at work.” With this in mind, ebm-papst’s main focus is on raising awareness. Regular training courses and discussion of case studies promote an understanding of safety and environmental protection among employees. Looking to the future, however, Jonas Limmer sees two further challenges to which employers like ebm-papst must adapt. “The big issues will be an aging workforce and maintaining mental

health.” ebm-papst is well prepared for this, having already optimized its workstations and set up a range of services relating to mental well-being to prevent future problems.

Physical and mental health

“Overall, ebm-papst offers many preventative, but also supportive, measures to promote the well-being of our employees – both physically and mentally,” stresses Markus Beringer, Vice President HR Heating Technology in Landshut. Just like with environmental protection and occupational health and safety, we attach great importance to behavioral prevention measures in the traditional areas of exercise, nutrition, stress, and addiction prevention, etc. These measures can be offered both in person and online – meaning they are accessible across all our locations worldwide. This year’s focus is on prevention programs to avoid musculoskeletal disorders – particularly back problems – and to promote mental health. “These offers are aimed at employees with office tasks as well as colleagues from our Logistics and Production areas. We also offer face-to-face counseling sessions and online



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A great success: Around 3,000 runners took part in the ebm-papst marathon in 2023

psychological counseling for all employees for crisis intervention purposes,” explains Ralf Stehle, Team Lead Health Management. The program also includes regular medical check-ups such as blood pressure and blood sugar tests, bowel cancer screening, and the usual occupational health examinations. The comprehensive program is rounded off by support for those on long-term sick leave and assistance with their return to work. The health-oriented 0-10-21 running program has also proved popular as a means of preparing for the ebm-papst marathon (see info box).

Working together for a good cause

Carina Hirschlein, Project Manager Exhibition & Events, is in charge of organizing the ebm-papst marathon, and has noticed an interesting devel-

opment in recent years: “The whole event is a highlight for the Hohenlohe region – and not just in sporting terms. That’s because we work hard with local companies and clubs to offer a wide range of activities for all the family.” It’s no surprise that the event attracts thousands of visitors every year. After all, ebm-papst employees also regularly travel from neighboring countries to participate in a number of the offered disciplines. However, we are always particularly delighted to see the large numbers of children taking part in the charity run. For every lap run, ebm-papst donates a sum of money to charitable organizations. The 2023 charity run raised the highest sum to date: 3,000 euros. We were able to present this money to the inclusive local school Andreas-Fröhlich-Schule shortly afterwards (more on page 25).

i On your mark, get set, go!

The complete program, registration options and much more information about the ebm-papst marathon can be found on our homepage.

www.ebmpapst-marathon.de/en



© ebm-papst, Philipp Reinhard

We offer trainees and interns a practical approach to learning, right from the start

Learning from (working) life

ebm-papst's innovative strength, productivity, and shared commitment are the result of the hard work of more than 13,800 people worldwide. In order to maintain our high standards, we make a point of constantly supporting and challenging our employees.

Employees today are looking for challenging work with good colleagues and a clear goal in mind, according to Irina Windsheimer, Specialist Global Employer Branding & Human Resources. "They long for meaningful tasks and want to play their part in creating a better future. At ebm-papst, we offer them this opportunity." That is why we have used our purpose, "Engineering a better life," to come up with three core messages: "Better working," "Better teams," and "Better future." With these promises, we want to inspire the right up-and-coming talent and specialists and convince them to work for us. This is why, when it comes to developing our positioning as

an employer, we place a lot of value on the experiences and needs of our existing employees. We even let them speak for themselves as part of our recruitment measures, telling job candidates about their work at ebm-papst. As Irina Windsheimer knows, "Nothing is more authentic and meaningful than real employees talking about their employer."

Enabling and developing, right from the word "go"

To ensure a first-class future, it is important to support and challenge young talent from the outset. During the "Energy Scouts" initiative

>100

teenagers and young adults start their training at ebm-papst every year



founded by Markus Mettler and Hauke Hannig, trainees are taught to identify energy-saving potential in the company and initiate sustainable measures to utilize it. "Since 2010, more than 1,000 companies in Germany have trained scouts using our model," he reports. The idea is even gaining a foothold internationally, with more and more chambers of commerce in both Europe and the USA now offering the Energy Scouts program. In another of our initiatives, "Future Heroes," ebm-papst trainees and students are tasked with implementing selected everyday work projects. Examples of this include our appearances at the HANNOVER MESSE 2023 and the Climate Protection Day 2024. The Future Heroes planned and organized the measures for these events all by themselves. "It's important for junior staff to take on responsibility at an early stage and prove themselves," says Timo Pflüger, Director People Development, Learning & Apprenticeship. We also regularly put students in Heilbronn to the test: At the Campus Founders' "Corporate Campus Challenge," the teams address some of the practical issues facing companies and work together to develop solutions. Participation in this event has proven a valuable experience for everyone involved, and provides an opportunity for us to discover the specialists of tomorrow.

Realizing ideas together

Of course, we also support further training for inquisitive colleagues who have long since completed their basic training. ebm-papst offers a wide

range of courses and programs for individual training and development. "Whether employees are interested in work-related topics or something completely different, like foreign language courses, we facilitate learning both for professional development purposes and for personal interest," explains Irina Windsheimer. One workshop in this portfolio is specifically dedicated to the topic of sustainability. "We want to foster a deep understanding of sustainability issues within our team and motivate employees to take responsibility for such matters," explains Sustainability Manager Annemarie Hillenbrand, who led the practical program for the first time in 2023, focusing on everyday issues. She relies on interdisciplinary discussions and creative methods, like using Lego Serious Play to visualize ideas. The ESG team is delighted with the positive feedback they have received with regard to this approach. After all, the path to greater sustainability requires not only technological innovation, but also education, commitment and the active engagement of our employees. Anyone looking for proof that the sustainable commitment of our colleagues goes beyond the theoretical can find it in the USA, among other places. Community campaigns such as the waste action days at the Farmington site are evidence of our employees' team spirit and drive when it comes to sustainability, says Sarah Worden, Senior Director Human Resources Americas: "It makes us proud to see how our employees are actively helping to keep our environment clean and make those around them aware of the importance of environmental protection."

»Sustainability also means supporting and challenging employees. Everyone should get the chance to realize their full potential. An important part of this is maintaining physical and emotional health. I am particularly keen to support women in the many roles they play at our company.«

Chloë McCracken
Shareholder, ebm-papst



© Chloë McCracken; Paul Weaver



Thomas Nürnberger and Jochen Frieß (left to right) firmly believe that sustainable paths can only be found through discussion between all stakeholders



Partnerships & responsibility

We assume long-term responsibility toward our customers, suppliers, and local regions at every stage of the value chain.

Growing together

In a rapidly changing world, ebm-papst relies on the power of cooperation to achieve sustainable success. Through close cooperation with our stakeholders and strategic partners, we aim not only to make sustainability an integral part of our own operations, but also to promote it along our entire supply chain.

4

companies founded the pioneering "Climate Protection Companies" initiative – ebm-papst is one of them

We are co-founders and members of:



External stakeholders play a key role in the sustainability strategy of ebm-papst. "Our customers come first. Sustainable action only makes sense if it creates added value for them," stresses Jochen Frieß, Executive Vice President Global Product Management. "There is more than one path to sustainability, with many different approaches and opinions. One challenge for us is to identify those stakeholders who share our values and goals, so we can work with them to jointly improve our respective market positions." Close cooperation with OEM customers, suppliers, and indirect partners such as associations and service providers enables us to find new and innovative ways to make our business even more sustainable. Successful examples of this approach include initiatives such as the "Climate Protection Companies" co-founded by ebm-papst and "Next Level Mittelstand," an SME group that is looking for ways to standardize and digitize carbon footprint measurements for products.

Creating expertise, sharing expertise

However, some of our customers and stakeholders remain unconvinced of the importance of sustainability, as Thomas Nürnberger, Chief Sales Officer (CSO) of the ebm-papst Group and Chief Executive Officer (CEO) Air Technology APAC, knows: "We are seeing that sustainable thinking

and action is much more widespread in Europe than in the USA or Asia." We are innovation leaders in this field in two senses of the word: Firstly, ebm-papst has established itself on the market as a provider of sustainable solutions, and is helping to shape technological progress. Secondly, we use our products ourselves at our locations around the world, so we can advise our customers and other stakeholders based on practical know-how attained through "self-experimentation." "At the same time, we are in constant contact with our customers, suppliers, service providers, and other companies in order to share expertise and develop new ideas together – across all sectors," Thomas Nürnberger adds. "Our aim is to shape sustainable management in such a way that it creates added economic value. This requires a rethink of the entire value chain – not just one link of it."

Opportunities at every stage of the value chain

ebm-papst has been implementing sustainable practices at every stage of the value chain for many years, whether through local-for-local production, reusable and recyclable packaging, or renewable energy sources at our sites. "We know that we can and must do much more – and we will," Jochen Frieß assures us. The first steps, such as the establishment of a Group-wide

Learning through play: In the workshop, the trainees and students implement their ideas using Lego Serious Play



© ebm-papst



© ebm-papst, Philipp Reinhard

»As a family business, we think in terms of not just profits, but generations, too. After all, it is the people and the culture at ebm-papst that make us the innovative global market leader we are. The cultural diversity of our employees around the world is the perfect facilitator as we look to transition successfully into a sustainable future.«

Ralf Sturm
Shareholder, ebm-papst

ESG team, the analysis of the most important mechanisms for sustainability, and the consistent collection and transparent communication of relevant KPIs, have already been taken.

In addition to this, we also see the circular economy and R-strategies as areas particularly rife with opportunity and a need for optimization. The same goes for reducing our carbon footprint, and we are already participating in some related initiatives and pilot projects. This is why we launched the strategic flagship initiative "Circular Economy" – to develop the requirements of the circular economy for our future products and assess new potential business models. Jochen Frieß is certain that ebm-papst will continue to set new standards for product development in the future: "We see great potential in utilizing connectivity and cloud connections to intelligently control our fans and thus massively reduce energy consumption."

A zeal for sustainability

At ebm-papst, sustainable action is an integral part of our corporate culture. "For us, sustainability is much more than a principle. It defines our heritage and will shape our future," explains Thomas Nürnberg. Our employees passionately demonstrate this every day. This culture of commitment and responsibility is particularly evident in initiatives such as the refugee aid we have provided for Ukraine, where ebm-papst employees have demonstrated impressive initiative and solidarity. "We are proud to create an environment in which our employees can get involved in social causes – be it in the form of larger campaigns, such as refugee aid, or the many smaller good deeds, such as supporting sports clubs," says

Jochen Frieß of the social commitment culture at ebm-papst. We also see it as our social responsibility to strengthen the local areas around our sites. Investments in educational facilities such as schools and universities play a special role in this. After all, these are the institutions that are nurturing the professional talents of tomorrow. All our measures, initiatives, and efforts make one thing clear: at ebm-papst, the com-

mitment to sustainability is not only passed down from generation to generation; it is also practiced and promoted actively in every part of the company. By fostering an awareness of social responsibility and integrating sustainability into all its business processes, ebm-papst provides new impetus for the industry and promotes a culture in which social commitment and sustainable business go hand in hand.

98%

of our products' carbon footprint is generated during operation. Intelligent solutions can make a big difference here.



Transparent, efficient, complete

In a brief interview, Pia Schreynemackers of the Fraunhofer Institute for Material Flow and Logistics explains how the institution's "Sustainalyze" project with ebm-papst facilitates the comparison and assessment of sustainability reports, and how they can be used for benchmarking.



© Fraunhofer IML

What is "Sustainalyze" all about?

With the introduction of the EU Corporate Sustainability Reporting Directive (CSRD), companies are faced with the challenge of documenting their sustainability performance transparently, correctly, and completely. The "Sustainalyze" project, which was developed in close collaboration between the Fraunhofer Institutes IML and ISST and ebm-papst, addresses precisely this issue. How can we make sustainability

reports suitable not just for comparison, but also for assessment? How can company data be used for benchmarking and in order to support the strategy? By using technologies such as natural language processing and machine learning, we can carry out in-depth analyses that include both quantitative data and free text passages. This approach makes it possible to fully document and optimize sustainability performance – an important step toward sustainable corporate management.

What was the reason for collaborating with ebm-papst?

As a leading company in the field of air and drive technology, ebm-papst shares our vision of a sustainable future. The partnership is a win-win situation for both sides: ebm-papst helps us with development by providing use case interviews so that we can initially test the software comprehensively. This gives us valuable insights on which functions we need to prioritize and overall

marketability. In turn, our work offers ebm-papst a simple way of obtaining the relevant data, a competitive comparison, and thus strategic support.

How can other companies benefit from the project results?

The software enables users to compare and understand sustainability reports more efficiently, without having to spend time reading them. This is a real milestone, especially in an age where the demands for transparency and sustainability in business are constantly increasing. By improving the comparability of their sustainability reports, companies can get a better idea of how their performance compares to other businesses, and identify areas with potential for optimization. Our partnership with ebm-papst also shows how valuable it can be to combine industrial know-how and scientific research when developing practical solutions that can help the industry as a whole to move forward.





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Find out more about our Compliance division and what it does: www.ebmpapst.com/compliance

Think fair, act fair

Compliance with human rights and environmental due diligence obligations is a top priority at ebm-papst. This applies both to our own business activities and to our entire supply and value chain.

"Here at ebm-papst, the issues of human rights, environmental protection, and sustainability are closely interlinked. Only by grounding our daily actions in respect for others and the environment can we truly live sustainability and live up to our overarching purpose, 'Engineering a better life.' As such, we will continue to dedicate more focus to these issues in the future," says Dennis Diefert, Human Rights Officer and Vice President Business Functions & Group Compliance, summarizing the important role of due diligence for ebm-papst.

In dialogue with our suppliers

The German Supply Chain Due Diligence Act (LkSG) requires companies to ensure social and environmental due diligence at every stage of

their global supply chains. A key component of the implementation involves raising awareness among our international suppliers, particularly in regions where these legal requirements are not yet widely known. "We make it clear that compliance with these standards, which are enshrined in our Supplier Code of Conduct, is not voluntary, but in fact a legal requirement," explains Calia Fredersdorf, Sustainability Purchasing Specialist. By continuously training our colleagues, we ensure that they all maintain the same, up-to-date standard of knowledge on this subject so they can analyze our global supplier pool and assist our suppliers when speaking to them in person. The dialogue with the suppliers is very important to us here at ebm-papst, as it enables us to promote shared values and sustainability goals. "We

21

national languages included in the ebm-papst Code of Conduct



Making sure our supply chain is transparent is of great importance to us

© ebm-papst

also see the LkSG as a great opportunity in this regard. It offers us the chance to set a good example, strengthen our relationships with our suppliers, and work together with them to improve their standards," Calia Fredersdorf explains. This enables us to exert a strong influence on the entirety of our supply chain and promote a risk-free value chain – and it also leads to better customer relationships.

Recognizing risks, finding solutions

Risk management at ebm-papst is an essential component of legally compliant and ethical corporate governance, as reflected by our internal compliance directives. These cover a number of areas, including environmental protection, human rights, the protection of fair competition principles, and the avoidance of corruption, bribery, and discrimination. "At ebm-papst, we take a cooperative approach to risk management. Together with our colleagues and suppliers, we focus on protecting people and the environment," explains Sylvia Meyer, Compliance Consultant. We use regular risk analyses and our whistleblower system (see info box) to proactively identify and evaluate potential risks, and always do our best to speak to our suppliers as we look to develop solutions. Michael Müller, Risk Officer Own Business Area, is keen to point out: "Terminating a business relationship should only ever be the last resort, after all other options for cooperation and improvement have been exhausted." The sup-

plier risk analysis, which is used to check the supply chain for environmental and human rights risks, is divided into two steps. First of all, the country- and sector-specific risks in particular are identified and assessed, so that we can then look in more detail at the suppliers that stand out. "This process allows us to closely analyze potential deviations. We can then use this information to initiate preventive or corrective measures – ideally by working together with our suppliers," says Calia Fredersdorf. "We also ensure a uniform understanding and consistent application of the Compliance Directives in our own business area," adds Sylvia Meyer, "be that by means of comprehensive risk analyses, audits at our various subsidiaries, regular training for various employee groups, or discussions within the Global Compliance Officer Network."

"Our commitment to fair and sustainable action is the foundation of our work at ebm-papst. By working together on our standards and processes with our internal and external stakeholders, we not only strengthen our supplier relationships, but also initiate positive changes right along the value chain. We are determined to continue actively developing and promoting sustainability issues in the future through transparent discussion and open communication," concludes Martin Wagener, Risk Officer Supply Chain & Vice President Purchasing, rounding things off with a positive outlook.



»We also use risk analyses, audits, and training programs to ensure a uniform understanding and consistent application of the Compliance Directives.«

Sylvia Meyer
Compliance Consultant

i

Your information helps: The ebm-papst whistleblower system

ebm-papst's BKMS® Incident Reporting System is a web-based, certified whistleblower system that enables all our employees, business partners, and external third parties to report compliance violations, either by name or anonymously. The BKMS, which is currently available in 13 languages, protects the identity of whistleblowers and enables important information to be passed on within business processes. It provides a platform for open communication and the continuous improvement of compliance standards at ebm-papst.



About the whistleblower system: www.bkms-system.com/ebmpapst

Focus on sustainability: Our interdisciplinary Sustainability team develops, analyzes, and implements company-wide measures to further advance ebm-papst as a sustainable company. Left to right: Hans-Jürgen Withopf, Klaus Wittmann, Annemarie Hillenbrand, and Jonas Limmer



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Find out more about ebm-papst's sustainability goals: mag.ebmpapst.com/future

Our path to the future

We're sure this sustainability report will provide you with comprehensive insight, and perhaps even inspire you to find your own way of improving sustainability. For us, it is an important step on the path to a future where our grandchildren can thrive.

We would like to take this opportunity to say "Thank you!" to all our employees at our international subsidiaries. They have supported us in putting together this report, and breathed life and passion into its subject matter every day.

In an environment of increasing volatility, uncertainty, complexity, and ambiguity, we firmly believe that responsible, entrepreneurial action is becoming more important every day – whether in an ecological, economic, or social context. That's why, here at ebm-papst, we take a proactive approach that goes far beyond the legal requirements and the projects presented in this report. The next few years promise to be exciting: ebm-papst will be investing in innovative technologies and creative

business models. By doing so, we are not only future-proofing our company, but also helping our customers to reduce their own carbon footprints. We will continue to focus more and more on the issues of digitalization and the circular economy, and align our innovative solutions accordingly. In doing so, we will continue to promote our employees and an appreciative corporate culture – based on our values of efficiency, enthusiasm, and humanity.

We are confident that these continuous efforts, both internally and in close cooperation with our partners, will bring about significant positive changes for the environment, all our stakeholders, and society as a whole. After all, that is our common purpose at ebm-papst: "Engineering a better life." ◀



Your opinion is important to us!

Do you have any suggestions or ideas on what we can do better? Have you already got some practical experience in the field of sustainability?

Then please send us an email: sustainability@de.ebmpapst.com



Glossary



The detailed glossary can be found at: www.ebmpapst.com/de/en/company/sustainability/glossar.html

Term	Explanation
AC fan	A fan operated with alternating current.
Carbon Disclosure Project (CDP)	An international non-profit organization that encourages companies and cities to publish their environmental data to promote transparency in climate protection.
Circular economy	A regenerative economic model that aims to reduce the use of resources to a minimum to keep the resources in circulation for as long as possible by applying R-strategies.
CO₂ equivalents (CO₂e)	A unit of measurement to summarize the effect of the different greenhouse gases in one value and make it comparable, based on their respective contribution to the greenhouse effect as compared to carbon dioxide (CO ₂).
Code of Conduct	A set of behavioral expectations that applies to a company's employees and business partners. It contains guidelines that the company voluntarily imposes on itself and provides information on legally correct, ethical, and social behavior.
Compliance culture	A term for a corporate climate in which all employees at a company comply with the applicable legal regulations and internal company rules.
Corporate Sustainability Reporting Directive (CSRD)	The EU Directive that obliges companies to disclose their sustainability information.
Diversity	Refers to variety among a group of people regarding their age, physical and mental abilities, ethnic origin and nationality, sexual orientation, social background, gender and gender identity, religion, and worldview.
EC fan	A fan driven by a brushless DC motor; operates more quietly and efficiently than an AC fan.
EcoVadis	A provider of sustainability ratings, which evaluates the performance of companies in the areas of environment, labor and human rights, ethics, and sustainable procurement.
End-of-life test	A reliability test that determines the technological limits of a product by subjecting it to sustained stress until total failure.
Environmental, social, governance (ESG)	The term used to refer to the criteria used to measure the sustainability and social impacts of a company.
Facility management (FM)	The administration and management of buildings and their technical installations.
Global Reporting Initiative (GRI)	An independent organization that sets globally recognized standards for company sustainability reporting.
ISO 50001	An international standard that defines the requirements for an energy management system to improve energy efficiency.
Local-for-local	A business strategy in which products and services are produced and consumed locally to reduce transport distances and strengthen local economies.
Materiality analysis	A method for determining which sustainability issues are relevant for a company, based on an assessment that combines several internal and external factors.
Refurbishing process	The restoration, repair, or renovation of used products or appliances to bring them back to a functional and almost new condition.
Retrofit	The process of upgrading and modernizing older ventilation systems with more efficient EC fans to increase energy efficiency.
R-strategies	Circular economy approaches that focus on reducing, reusing, repairing, recycling, and other measures to reduce the consumption of primary resources and promote the use of secondary raw materials.
Science Based Targets Initiative (SBTi)	A climate protection organization that enables companies and financial institutions worldwide to help combat the climate crisis. Submitted emission targets are scientifically evaluated by SBTi based on the Paris Climate Agreement, to limit global warming to a maximum of 1.5°C.
Scope	A company's GHG emissions are divided into three areas, also known as scopes. Scope 1 refers to direct emissions from the company's own sources or sources under the company's control. Scope 2 refers to indirect emissions resulting from the generation of energy purchased by the company. Scope 3 refers to all indirect emissions (not included in Scope 2) that arise at some point along the company's value chain, including upstream and downstream emissions.
Supply Chain Due Diligence Act (LkSG)	German legislation obliging companies to fulfill human rights and environmental due diligence obligations throughout their global supply chains.
Sustainable Development Goals (SDGs)	Seventeen interlinked goals adopted by all United Nations member states in 2015. These goals form a common foundation for peace, prosperity, and ecological sustainability.

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