HEIDENHAIN

Responsible

For the Future

Together

Environmental Declaration **2025**

FOREWORD

Dear Reader,

Dependable energy is increasingly becoming a strategic factor in the ability of companies to maintain competitiveness, ensure uninterrupted production and safeguard the viability of manufacturing sites. For these reasons, HEIDENHAIN is pursuing a comprehensive sustainability plan. Our location in Traunreut, Germany, affords us effective ways to increasingly meet our energy needs through renewable sources on our own. This growing self-sustainability allows us to ensure future viability as well as make long-range site and production plans based on manageable energy costs.

Our mid-2024 acquisition of the local geothermal power plant in St. Georgen was a perfect fit for this strategy. This acquisition allows us to manage our own access to renewable district heating. By taking responsibility for ensuring continued operation of the district heating network, we are also sending a clear signal to the city, its citizens, and our employees that we are committed to our Traunreut site.

At the end of 2024, important progress was also made toward installing two wind turbines that will supply green power to our main Traunreut site. Now that we have received the permit for both wind turbines, we are able to proceed as planned with the implementation phase.

Although all of our electrical power already comes from renewable sources, starting in mid-2026, our wind turbines will meet one third of our power needs with self-generated green energy. This, together with our locally generated geothermal power, will add up to 100%.

We have been diligent in continuing to pursue energy-saving measures. Our power and heat consumption levels have seen a significant decline thanks to the cumulative effect of numerous small changes, including our migration to energy-saving LED technology in production buildings and the optimization of our compressed air system. Expanding our energy monitoring capabilities down to the level of individual production areas will give us even greater insight into the effectiveness of existing measures and help us to uncover further room for improvement.

When it comes to corporate responsibility, energy is not our only topic of concern. A longstanding priority at HEIDENHAIN has also been the safety and health of its employees. Through an audit of our extensive occupational health and safety management system as per ISO 45001 and ILO-OSH 2001, we have demonstrated to our employees and business partners a high level of systematic occupational health and safety that far exceeds the legal requirements.

March 28, 2025, Traunreut, Germany

Lutz Rissing
Executive Officer
Development and Production

Anna Enzinger
Executive Officer
Finance and Internal Services

Hubert Ermer
Executive Officer
Products and Markets

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HEIDENHAIN

OUR COMPANY

Innovation made in Bavaria and Germany

HEIDENHAIN IN NUMBERS

HEIDENHAIN CORPORATE GROUP

1.3
Billion EUR
Turnover

30
Sales and service subsidiaries

40
Distributors
worldwide

8,200
Employees
worldwide

3,015
Patents
worldwide

DR. JOHANNES HEIDENHAIN GmbH

680
Employees
R&D

15%
R&D investment
from turnover

2
Wind turbines
in planning

Approx. 20
Environmental and sustainability objectives
reported for 2025

4,000
sqm of
photovoltaic panels

24
Charging stations
for e-bikes

20
Charging stations
for electric cars

95%
Recycling rate
for our waste in 2024

84%
of our **consumed power and heat**
was from renewal sources

-3.5%
Water consumption
compared with 2023

ABOUT HEIDENHAIN

Exceptional accuracy and continuous progress

Driving technological innovation

"High-tech made in Germany" is what HEIDENHAIN stands for around the globe. For more than 135 years, we have been pioneers and benchmark setters in the fields of measurement, control and drive-system technology. Our products often create the conditions for technological progress in the world's most innovative industries. The computing and storage capacity of today's computer chips, for example, which are vital for artificial intelligence, self-driving vehicles and humanoid robots, are ultimately made possible by ever growing accuracy in processes such as advanced packaging and hybrid bonding. To achieve this accuracy, the semiconductor and electronics industry uses HEIDENHAIN-developed encoders featuring MULTI-DOF TECHNOLOGY and nanometer-level accuracy. Other HEIDENHAIN CORPORATE GROUP solutions, such as dual encoders and secondary encoders, enable the dynamic performance, accuracy and safety of robots and cobots used for automating production machines.

Present around the world, anchored in Traunreut

We serve our global customers through our own sales and service subsidiaries, along with a network of regional distributors. But the heart of HEIDENHAIN lies at the home of our headquarters in the Upper Bavarian town of Traunreut in Germany. Our firm commitment to this location gives our employees a high level of stability and enables long-range planability for both our company and the wider region, especially for extensive capital investment in the sustainable utilization of climate-neutral energy sources, new energy-efficient buildings and renovation projects.

WHERE WE ARE

Operational proximity for optimal results

HEIDENHAIN in the Chiemgau region of Bavaria encompasses six production departments, a training center for customers, an apprenticeship center for our young talent, our administrative headquarters and our R&D operations, all distributed across two neighboring sites providing 63,000 sqm of production space.

Production processes

- Metal and glass machining
- Production of precision optical graduations
- PCB assembly
- Final assembly

ENVIRONMENTALLY RELEVANT PROCESSES

Production in installations as defined by the German Immission Control Act and the German Water Management Act:

- Generation of electricity and heat in a gas-fired combined heat and power plant for peak-load demand and emergency backup
- Reintroduction of wastewater from glass processing

Installations for handling water pollutants and emissions containing volatile solvents:

- Handling, storage and transport of hazardous waste and materials
- Galvanic and chemical surface alteration of optical glass and steel carriers, with pH neutralization of the rinse water
- Manual and automated surface cleaning of semi-finished and finished graduation products using volatile solvents
- Operation of recooling plants as part of room ventilation systems

FACTS

HEIDENHAIN sites Traunreut and Hochreit

Area:

305,000 sqm total area
141,000 sqm in Traunreut
164,000 sqm in Hochreit

72% sealed area
23% near-natural area
5% other green area

4,150 employees

EUR 463 million
Gross value added in 2024

3,416 t
Total output in 2024
(total weight of all products sold, with packaging)

Hochreit site

Traunreut site

Our logistics center and metal and glass machining lines are in Hochreit, located just one kilometer from our main site in Traunreut.

The environmental impacts described on the following pages refer to both sites, with the majority arising from our headquarters in Traunreut.

WHAT WE DO

Measurement and control technology for rigorous positioning tasks

Creating long-term value

Our products have always been designed to increase the efficiency and performance of our customers' machines and processes on the one hand and to promote sustainability and eco-friendly operation on the other. That's why HEIDENHAIN products are not wear parts. They are designed for the entire life cycle of a machine. It's why we prioritize resource-saving repairs and long servicing periods in our product servicing strategy. And it's why we use a high proportion of reusable materials to ensure high recycling rates when our products reach the end of their service lives.

99% smaller carbon footprint:
Sealed encoders for machine tools

FACTS

Over **29.6 million**
rotary and angle encoders

Over **8.8 million**
linear encoders

Over **519,600**
digital readouts

Over **331,600**
controls

And much more:

- Software solutions
- Touch probes and vision systems
- Length gauges
- Signal converters
- Inspection and testing devices

Number of products sold up to the end of 2024

More productive time:
The new TNC7 control generation

HEIDENHAIN encoders

Our pioneering encoder technology has a direct impact on sustainability: The latest generation of our LC and RCN encoders for machine tools are a case in point. These encoders utilize TRUE IMAGE TECHNOLOGY, which completely eliminates the optical distortions caused by condensation and other liquid contaminants, thereby rendering purge air systems unnecessary. This functionality reduces the encoder's carbon footprint by up to 99% throughout its service life.

HEIDENHAIN controls

HEIDENHAIN controls have a 35-year proven track record of day-to-day use on milling machines, lathes, drilling machines and machining centers. Besides optimizing the motion control of machine axes, their high-performance functions ensure higher accuracy, faster removal rates and greater process reliability. By reducing non-productive time and making productive time more efficient, they enable higher throughput and a sustainably smaller carbon footprint per finished part.

SUSTAINABLE STEWARDSHIP

Less consumption and more biodiversity

800 MWh of green electricity in 2024: Photovoltaic panels on production buildings in Hochreit

Investment in an independent renewable energy source: The geothermal power plant in St. Georgen

ENERGY EFFICIENCY PROJECTS

Adjust, conserve and sustain

FACTS

100%
Green electricity

1.6%
Less electricity used

0.7%
Less heat energy used

Compared with 2023

Ensuring an independent energy supply

In mid-2024, we acquired the local Geothermische Kraftwerkgesellschaft (a geothermal power plant company) in St. Georgen. This power plant supplies geothermal heat to the Traunreut district heating network, which HEIDENHAIN uses to cover two thirds of its heating needs. This capital investment has made us more independent from third-party providers in meeting our renewable heating needs.

In December 2024, we received approval for two planned wind turbines. As a result, this project, which is expected to meet one third of our electrical power needs and feed directly into our corporate power network starting in mid-2026, will be implemented within the planned time frame.

Hydroelectric, solar and wind power

Our Traunreut site and all our affiliated companies in Germany receive 100% of their electricity from verifiable renewable energy sources. This green electricity is purchased from a variety of suppliers. About 60% of it comes from power purchase agreements that contractually specify the type of power plant. Hydroelectric power, for example, meets one third of our total electricity needs.

The photovoltaic panels on the roofs of our production buildings in Hochreit generated approximately 800 MWh of electrical power in 2024. Additional installations on the roofs of the parking garages and on our new R&D building are being planned.

Dr. Günther Obermeier
Senior Head of Facilities
and Systems Engineering

> By acquiring the geothermal plant in St. Georgen, we can now safeguard a key heating source for our company and for the city of Traunreut.

District heating

District heating from Traunreut's municipal utilities covers most of our heating needs. This heat comes primarily from renewable biomass and geothermal sources. Secondary buildings with low heating needs but which are still heated with fossil fuels will also be connected to the district heating network as part of an expansion of the Traunreut district heating network. Our gas-fired combined heat and power plant, along with other heating equipment, is now largely only a fallback for emergencies or for covering peak demand during the winter. Our natural gas consumption is handled via carbon offsetting, which compensates for the amount of emissions by means of certified emission reduction credits for climate projects.

Reducing energy consumption

Switching to renewable energy sources is important to us, but equally important is saving energy in the first place, not least for economic reasons. It's why we continuously pursue energy efficiency projects in our production departments, such as:

- Switching to LED lighting
- Optimizing the compressed air system and lowering its pressure
- Using district heating in place of electrical power for the hot water used in an extrusion cleaning system in our encoder production department.

Our holistic approach to energy conservation covers:

- New buildings and renovations
- Replacing and modernizing equipment

Our new R&D center, for example, is being built in accordance with the German EG 40 standard. This means that the primary energy demand of the new building is permitted to be no more than 40% of the demand for a defined reference building. A special feature of the building's heating system will be the use of downhole heat exchangers, which we are deploying for the first time and for which we have drilled 80 boreholes to a depth of approximately 200 m. We are also seeking the "silver" certificate from the German Sustainable Building Council (DGNB). This building project is also tied to renovation projects for older buildings and their services.

Energy monitoring

We monitor the effects of our energy saving measures through comprehensive energy monitoring, which we are continuously expanding. Not only do we now track the energy consumption of all buildings, but we are also expanding the system to encompass manufacturing departments. This gives us detailed insight into the specific energy consumption and the changes in consumption during individual processes or for specific production equipment. The insight thereby gained permits reliable conclusions about the effectiveness of already implemented measures and indicates possible areas of further improvement. Energy monitoring thus plays a vital role in optimizing our energy consumption.

PROJECTS FOR MORE BIODIVERSITY

Creating habitats and increasing botanic diversity

We know that built-up land is the hallmark of a manufacturing site, with production and administrative buildings interlinked by roads and truck courts. Nevertheless, all of us at HEIDENHAIN value the beauty of nature. One of our concerns has been to increase botanic diversity on our grounds, thereby providing a habitat that not only protects but also attracts birds, insects and other wildlife. For many years, we have made a point of creating green spaces that are as wildlife-friendly as possible. This includes:

- Fallow land
- Wildflower lawns
- Protective hedges
- Orchard meadows

Birdhouses and birdbaths are installed on both sites. We are happy to report that all the birdhouses are occupied. And insect hotels, especially at our heavily built-up headquarters, provide a habitat for insects right in the center of town. These measures will continue to be expanded.

This is our contribution to the conservation of wild bees and biodiversity in Bavaria. This year, we would like to receive the official "Flowering Company" designation from a state program that promotes insect-friendly wildflower areas across Bavaria.

But our concern for the environment isn't limited to our outdoor premises. The plants in our office rooms are cared for by a trained gardener working with the Leitungsteam Allgemeine Dienste Reinigung (General Services management team). This work includes the breeding of young seedlings and a station for treating plants that have fungus or parasites. In caring for these plants, we deliberately use only organic products, intentionally forgoing synthetic chemicals and fertilizers.

FACTS

69,000 sqm
Near-natural area

Approx. 30
Birdhouses and birdbaths

"We've enjoyed the challenge of creating wildlife-friendly spaces that are both visually appealing and easy to tend on a built-up industrial site."

Ludwig Haslberger
Landscape Gardener

HEIDENHAIN

PROMOTING SUSTAINABILITY THROUGH PRODUCTS

Our green path to manufacturing

Thilo Schlicksbier
Senior Product Manager
Encoders

ENCODERS FOR MACHINE TOOLS

Smaller carbon footprint, lower system costs and greater process reliability

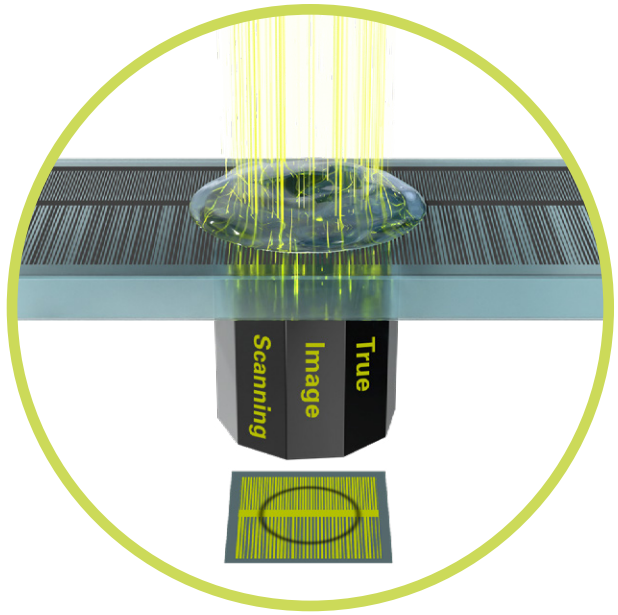
TRUE IMAGE TECHNOLOGY saves CO_2 and costs

Making high-accuracy products on machine tools requires precise motion and position control of the machine table that moves the workpiece and of the spindle that holds the tool. The required position feedback is provided by linear and angle encoders. Due to cooling lubricant in the machine envelope, these feedback devices need to operate reliably in the face of significant liquid contamination. The latest generations of HEIDENHAIN linear and angle encoders for machine tools feature optimized optics. This TRUE IMAGE TECHNOLOGY reduces the amount of diffraction and diffusion for the light used in scanning the scale. A special light-guiding element provides the sensor with a distortion-free image of the scale even in the presence of condensation and other liquid droplets. Encoders with this technology don't need purge air to reliably provide high-accuracy position feedback.

This benefits machine manufacturers, who can dramatically simplify their purge air systems and forgo extra air filters. In many cases, encoders with TRUE IMAGE TECHNOLOGY can forgo purge air altogether, thus reducing their carbon footprint by up to 99% during operation while also lowering system costs.
Machine-tool users also benefit from these next-generation encoders in several ways:

- Less energy consumption due to less compressed air
- Lower operating costs due to less maintenance of the compressed air system
- Improved process reliability due to higher operational availability of the encoders, even without compressed air

> Thanks to the interplay of optimized optics, a HEIDENHAIN-developed scanning ASIC and our precision components, TRUE IMAGE TECHNOLOGY ensures high scanning accuracy. Customers benefit from HEIDENHAIN reliability without needing purge air.



Clear vision: Thanks to the latest encoder generation with TRUE IMAGE TECHNOLOGY, the sensor's view of the scale remains crisp despite liquid contamination.

CONTROLS FOR MACHINE TOOLS

Saving energy through less non-productive time and greater scrap-free productivity

FACTS

5x
Faster workpiece setup

3x
Faster workpiece milling

1 second
Faster workpiece probing

6 seconds
Faster tool-breakage inspection

Getting the most out of productive time

The technologies we develop for our controls reduce machining time and allow more parts to be machined faster with process reliability. HEIDENHAIN controls enable single-setup milling, turning and grinding on the same machine without rechucking the workpiece. This complete machining capability ensures a consistent manufacturing process. We also provide functions for automated processes that make it possible to plan jobs for unattended shifts and to orchestrate seamless job sequences ahead of time, all on the control. It therefore becomes possible to machine parts in perfect quality, even for one-off parts, thereby resulting in less scrap and rework. The saved time, energy and resources add up to highly effective environmental stewardship.

Functions for TNC controls, such as component monitoring, process monitoring or dynamic collision monitoring, increase machine availability and prevent unplanned downtime.

> Although responsible for only about 20% of a machine tool's total energy consumption, the components of HEIDENHAIN control systems can significantly contribute to energy efficiency by greatly reducing the amount of energy required per part.

Michael Weber
Senior Application Engineer,
Numerical Controls,
Product Management and Marketing

More productive time

Significant energy-saving potential can be realized by shortening a machine tool's non-productive time. During non-productive time, machine tools still consume more than 50% of the electricity needed during machining. One source of non-productive time is the machine setup process. HEIDENHAIN controls provide smart functions to accelerate this work step. Specifically, 6D setup options for the new TNC7 control help users probe workpieces and workholding up to five times faster. This saves significant amounts of time and energy, especially for complex parts requiring numerous probing routines. During automated setup and in-process inspection for large-batch production runs, our touch probes deliver speed gains of up to one second per probing cycle.

Another source of non-productive time is unplanned downtime. Various factors may cause interruptions in the production process, including:

- Errors in machine-tool programs
- Collisions between machine parts
- Tool wear and breakage
- Lack of proper tools for the machining processes

The ability to detect and prevent such interruptions ahead of time is therefore a key factor in improving the energy efficiency of a machine tool. Our controls significantly increase the process reliability of machine tools through Digital Twin technology, extensive simulation capability, continuous component monitoring and non-stop process and collision monitoring. Other HEIDENHAIN solutions provide additional support. An inductive tool breakage detector, for example, inspects tools on the fly and is up to six seconds faster than conventional laser systems.

HEIDENHAIN

ENVIRONMENTAL MANAGEMENT

Fostering sustainability in our business practices

HEIDENHAIN takes a holistic approach to environmental management. Protecting natural resources has always been an important concern at our company. My mission as the environmental officer is to create the conditions for orderly and feasible environmental management, thereby enabling compliance with legal requirements and internal policies. Every employee plays a role in saving energy, preventing waste and conserving resources. By pulling together, we can achieve our common goals.

Karl Landinger
Environmental Officer

ENVIRONMENTAL POLICY

Setting objectives, aligning resources and taking action

FACTS

No violations of environmental regulations were found to have occurred at our site during the 2024 reporting period.

The company's context

HEIDENHAIN uses an environmental management system to implement its core environmental protection and occupational health and safety policies in the form of practical step-by-step procedures. Key environmental factors form the basis of our environmental objectives and our continuous improvement measures. In the process, full compliance with all legal requirements is essential.

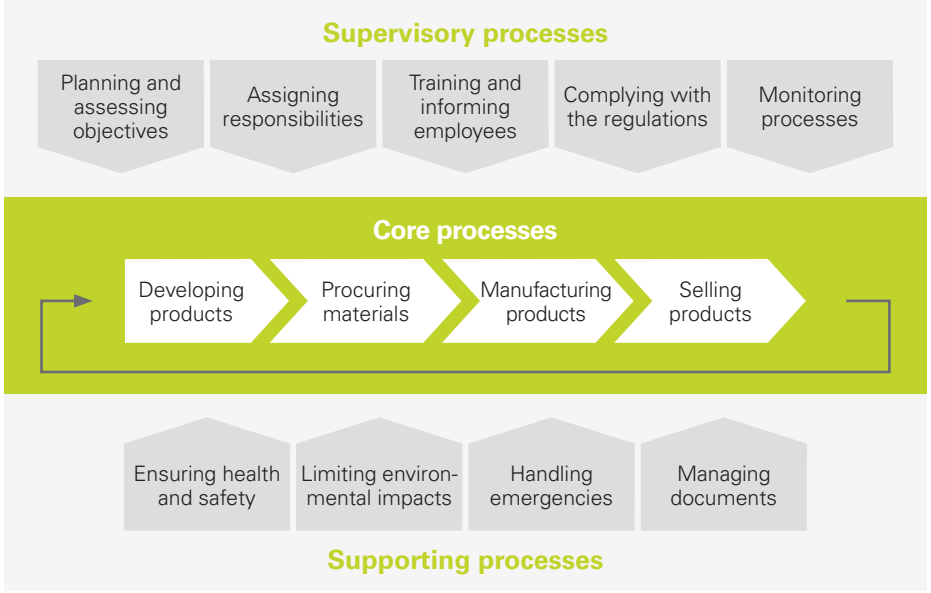
Organizational structure and process landscape

An environmental protection officer appointed by the Management Board monitors the company's compliance with its environmental and occupational health and safety policies. The environmental protection officer is supported by officers for:

- Emissions control
- Water pollution control
- Waste management
- Hazardous materials

These officers track and evaluate all relevant legal changes, informing any affected corporate departments. They thereby ensure that legal requirements are met while identifying possible options for improvement. Documents for the environmental management system are managed on a digital knowledge platform. These documents include:

- High-level process descriptions
- Work and operating instructions for specific business units



ENVIRONMENTAL POLICY

Analyzing processes, tracking trends and making improvements

Assessing environmental impacts

Our business activities have a variety of effects on the environment. To identify these effects, we analyze our environmentally relevant processes under normal operation and potential operational breakdowns, taking the following factors into account:

- Operational consumables
- Waste
- Energy
- Emissions
- Water and soil

For each factor, we determine the resource and energy consumption, examine the use of any environmentally relevant equipment and record the results as core indicators. These indicators are then regularly reviewed so as to determine whether and to what extent we were able to meet our environmental objectives. We also examine how these numbers have changed in recent years, thereby identifying trends and ensuring a continuous improvement process.

Internal environmental audits

Internal environmental audits help ensure:

- The systematic and periodic evaluation of our environmental performance
- Compliance with the relevant environmental regulations

All activities of the company therefore undergo a full audit at a defined interval of at most three years. We also summarize the results of the environmental audit program in a document that helps the Management Board evaluate the suitability, reasonableness and effectiveness of the environmental management system.

These audits are supplemented by periodic, department-specific internal environmental and occupational health and safety audits. The audit participants include trained auditors, the relevant managerial employees, the company physician and the Works Council. We then document, follow-up on and resolve any identified deviations in a timely manner, thereby ensuring that the current environmental management system aligns with our corporate environmental and occupational health and safety policy.

PROTECT NATURE

PRESERVE HEALTH

CREATE AWARENESS

Guidelines for Occupational Health and Safety and Environmental Protection

1. HEIDENHAIN shall protect and preserve the environment as essential for the existence of current and future generations.
2. HEIDENHAIN shall comply with all applicable labor and environmental law.
3. HEIDENHAIN shall comply with the environmental provisions and standards that affect its operations, act in an environmentally conscious manner at all of its sites and handle natural resources responsibly.
4. HEIDENHAIN shall, in the spirit of continuous improvement, strive to develop and use new products and production technologies to optimize the consumption of raw materials, to mitigate negative environmental impacts and to reduce employee exposure to hazards and physical stressors.
5. HEIDENHAIN shall ensure that its safety systems and organizational measures are always at the current state of the art.
6. HEIDENHAIN shall inspect, monitor and evaluate the effects of its corporate activities on the safety and health of its employees and on the environment so as to eliminate hazards and limit risk.
7. HEIDENHAIN shall expect its managerial and non-managerial employees to actively contribute to environmental protection and occupational health and safety.
8. HEIDENHAIN shall train and inform its employees in order to promote safety and sensitivity to environmental matters both inside and outside the company.
9. HEIDENHAIN shall endeavor to ensure the seamless flow of information to public authorities through a cooperative relationship.
10. HEIDENHAIN shall inform its business partners and the public regarding the safety and environmental impact of the company and its products.

Occupational health and safety and environmental protection are a core part of our corporate policy

The company's occupational health and safety and environmental protection guidelines are the basis for ensuring employee health and safety and for protecting the environment. The environmental officer, who is appointed by the Management Board, is responsible for initiating, implementing and continuing to develop our environmental and occupational health and safety policies. He is also responsible for ensuring that they are complied with throughout the company. Environmental protection and occupational health and safety are equivalent in importance to other corporate objectives. We provide the resources needed to ensure safe and healthy work conditions and to minimize negative environmental effects.

Certification of the occupational health and safety management system

A longstanding priority at HEIDENHAIN has been the safety and health of its employees. Guided by the legal requirements for occupational health and safety, we have been taking a preventive approach to safeguard against work accidents, minimize work-related illness and create a healthy work environment. To efficiently implement these principles in practice, we have introduced a comprehensive occupational health and safety management system and have had it certified.

In 2024, we successfully completed the audit in accordance with the ISO 45001 and ILO-OSH 2001 standards, thereby demonstrating to our employees, business partners and sustainability rating agencies a level of systematic occupational health and safety that exceeds legal requirements. All our employees are covered by this management system for occupational health and safety.

Evaluating working conditions

We systematically evaluate the working conditions of all employees on a regular basis in accordance with the German Occupational Health and Safety Act and with regard to hazards and physical stressors. Through internal audits, we also periodically review our compliance with all occupational health and safety requirements, such as our operational and equipment safety, and initiate measures for improvement.

Employee training and professional development

We train our employees with the aim of preventing work accidents caused by human error. Employees receive periodic instruction from their supervisors about hazards as they arise and about how to avert them. Our employees can also take advantage of training offerings about occupational health and safety regarding the hazards they are exposed to. Our low occupational accident rate relative to that of the overall industry attests to the effectiveness of these measures.

Internal communication

The safety and environmental committee convenes periodically to promote internal communication between safety specialists, the company physician, the Works Council and representatives of the various technical divisions. This committee discusses topics regarding environmental protection and occupational health and safety and jointly defines necessary measures.

ENVIRONMENTAL IMPACT

Continuously reducing our effects on the environment

ENVIRONMENTAL IMPACTS AND MEASURES: WASTE

Although waste is unavoidable, we aim to minimize its production and maximize its recovery

Waste recovery through high-value recycling

HEIDENHAIN produces the main following types of waste:

- Metal from metalworking
- Glass from graduation production
- Wastepaper from offices
- Cardboard from packaging
- Electronics waste, especially from electronics manufacturing
- Household-like commercial waste
- Hazardous waste, especially solvent-water mixtures and cooling lubricants

Whenever possible, we strive to reuse packaging. We have established a circulation system, for example, for our 220-liter chemical barrels used for storing hydrogen peroxide or other substances. When shipments arrive, the supplier collects and refills our empty barrels.

If it is not possible to reuse packaging, then we take measures to reduce our packaging waste. By switching to larger containers, for example, the number of packages for ceric ammonium nitrate has been reduced from 400 to 16 containers per year, and for coolant from 280 to 23 containers per year. Through these and other measures, the total amount of plastic waste has been reduced by 23%.

Waste disposal

Through rigorous waste separation, we were able to recycle 2,644 t of waste, or 95% of our total waste, in 2024. Two processing plants in our manufacturing departments separate metal chips from the emulsions they are trapped in. Reducing the moisture content of the chips to less than 1% enables effective and cost-efficient recycling.

On enclosed machine tools, we increasingly use centrifugal extraction units, where we separate the picked-up cooling lubricant from the oil and emulsion mist for reuse within the system. Non-reusable cooling lubricant is stored as waste in centralized tanks near the cooling-lubricant treatment equipment.

We also use washable polymer nets instead of trash bags in all business units where the type of waste allows it. This policy saves around 120,000 trash bags annually.

FACTS

95%
Recycling rate

23%
Less plastic waste

120,000 per year
Fewer trash bags used

Compared with 2023

Hazardous materials

The following hazardous materials arise from the company's manufacturing processes:

- A solvent-water mixture for the surface cleaning of semi-finished and finished products
- Waste from coating processes, adhesive residue from assembly processes and soiled cellulose cloths from cleaning activities
- Various waste products containing acids and bases from graduation production

The hazardous materials are filled or packed into approved transport containers and then declared and loaded in compliance with applicable regulations.
The employees involved in the transport process use a checklist to monitor the packing and loading process.

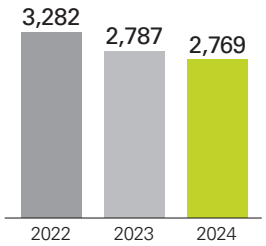
All employees involved in the transport of hazardous materials are trained and regularly instructed based on their specific role. An external hazardous materials officer monitors compliance with the hazardous materials regulations.

Waste statistics

Waste and recyclables
in t

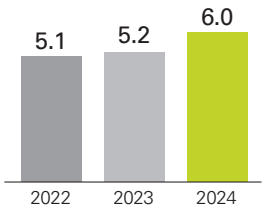
	2022	2023	2024
Electronics	100	107	109
Glass	52	44	43
Industrial waste	243	243	248
Wood	154	139	137
Metal	1075	868	878
Paper	255	232	185
Hazardous waste	1016	915	971
Other waste	387	239	198

Total
in t

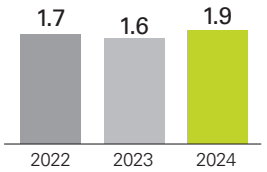


Per TEUR of gross value added*
in kg

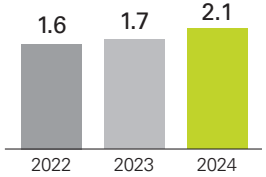
Total waste



Metal waste



Hazardous waste



*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than the amount of waste. For this reason, some of the values are worse than those of the previous year.

Switching to organic washing and cleaning products helps the environment, and our colleagues are pleased with the superior tolerability of the ingredients and the lack of aggressive chemicals.

Theresia Muckenschnabel
General Services Management
Team for Cleaning

ENVIRONMENTAL IMPACTS AND MEASURES: WATER AND SOIL

Reducing consumption as much as possible and eliminating waste

FACTS

80,000 kWh
Power saved

5,500 m³
Water saved through recovery

Compared with 2023

Projects to save water

As the basis of life, water is a valuable resource that must be protected. We use water in our manufacturing processes but aim to significantly reduce our consumption. Through the water and energy recovery systems put into operation in 2024 for cleaning the filters of the ultrafiltration systems, we saved more than 80,000 kWh of power and, by recirculating 75% of the approximately 50°C to 60°C water, saved 5,500 m³ of water.

Water and wastewater

In 2024, we consumed around 138,000 m³ of freshwater, mainly through rinsing processes during graduation production and through air conditioning systems in our production and assembly departments. All our fresh water is sourced from the public mains of the Traunreut waterworks. In 2024, we generated around 96,000 m³ of production and sanitary wastewater. The discrepancy between fresh water and wastewater is due to evaporation in cooling systems and humidifiers.

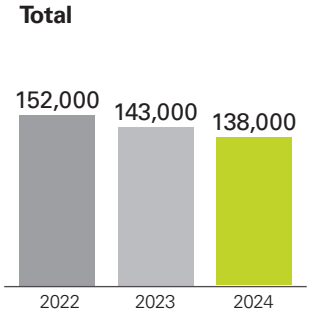
Before being discharged into the public sewage system, a portion of our wastewater is pretreated with the following equipment:

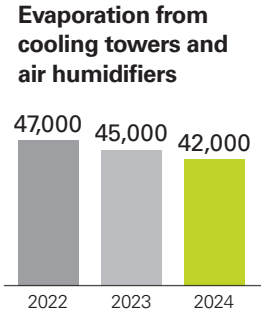
- A system for wastewater homogenization has been in operation since 2024, ensuring consistently low levels of wastewater contamination arising from hazardous substances from our manufacturing department.
- Grease interceptors separate oil and grease from the wastewater and rinse water produced by our in-house cafeteria
- Light liquid separators treat wastewater containing petroleum-based oils from the company's in-house car wash stations
- Neutralization systems for wastewater from graduation production, which treat and monitor the pH of mildly contaminated rinse water

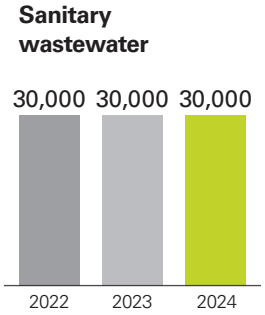
Our separator systems are operated in accordance with applicable legal requirements.

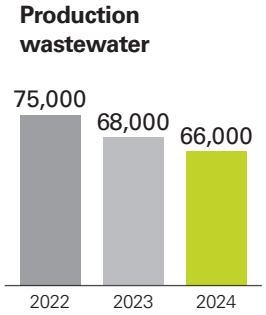
Water consumption and wastewater

in m³



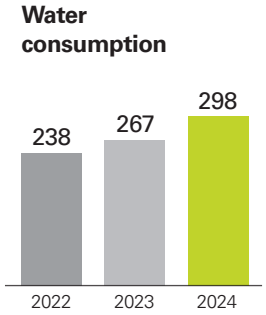


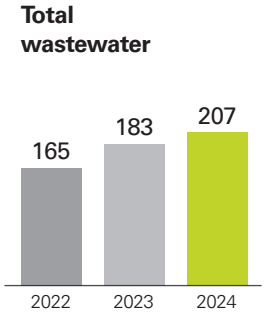




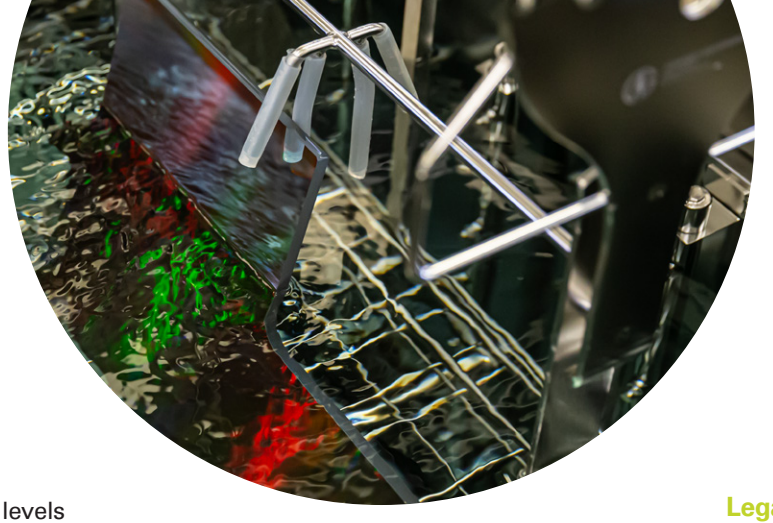
Per TEUR of gross value added*

in dm³





*Due to the reduced utilization of production capacities in 2024, gross value added fell more sharply than the water consumption. For this reason, some of the values are worse than those of the previous year.



Wastewater contaminant levels

An accredited measuring body annually inspects our wastewater from graduation production. The contaminant levels are considerably lower than the government-required wastewater limits, indicating good biological characteristics:

- The organic, nitrogen and phosphorous contaminant levels are significantly lower than those found in household raw effluent.
- Other water contaminants, such as heavy metals, were identified in very small amounts.

The machining of glass and glass-ceramics produces wastewater. Releasing this wastewater into the public sewage system requires approval in accordance with the German Water Resources Act. The minimum requirements for releasing this wastewater are based on Appendix 41 of the German Wastewater Ordinance and are defined in our approval notice.

Within the scope of our in-house monitoring in accordance with the German Water Resources Act, we also perform periodic inspections of our corporate sewage system and resolve any deficiencies.

Runoff water

For many years, all our new buildings have been designed to divert runoff back into the natural water cycle through soakaway pits.

Soil protection

In the interest of protecting soil and water from hazardous pollution, areas once suspected of contamination were examined in the past for hazardous substances in accordance with the requirements of the German Soil Protection Act. As a result, the company grounds are currently free of suspected contamination areas from the past.

Legal and government agency wastewater limits and measurement results

	Unit	Limit value	Measurement results
Graduation production			
Hydrocarbons	mg/l	20	< 0.1
Zinc	mg/l	5	< 0.05
Chromium	mg/l	1	< 0.01
Nickel	mg/l	1	< 0.01
AOX	mg/l	1	< 0.1
Glass machining			
Copper	mg/l	0.3	< 0.39*
Lead	mg/l	0.3	< 0.01
Arsenic	mg/l	0.3	< 0.22
Wastewater quantity	m^3/d	80 / 99	< 1 / < 75

These measurements come from the reports of an accredited measuring body.
For our two glass-machining collection sites, the stated value is the maximum measured value.

* Our self-monitoring process detected a single minor exceedance of the limit for copper. This occurrence was examined, and countermeasures were taken. Afterwards, more rigorous sampling was conducted and no limit exceedances were detected.

„Cleaning and rinsing processes are essential for ensuring the quality of our graduations during production. We are proud to have found a solution that saves both the resource water itself and energy when preparing the required ultrapure water, without compromising on quality.“

Steffen Unger
Engineer, Production, Development and Production Graduations

ENVIRONMENTAL IMPACTS AND MEASURES: ENERGY

We source electricity and heat primarily from renewable sources while continuously lowering our consumption

Renewable energy

Renewable sources make up 100% of our electrical power. For heating, we use district heating primarily from renewable sources. Our total energy consumption in 2024 was 61.4 GWh. Of this consumption, around 50.3 GWh were covered by renewable energy. The proportion of renewable energy was therefore approximately 84% across all sources used.

New buildings

When planning a new building, we make sure to implement:

- Energy-efficient operation
- External heat loss prevention
- Energy-efficient building services for heating, ventilation, cooling and lighting
- State-of-the-art eco-friendly technologies, such as heat recovery technology in air systems

We also ensure that all such measures meet the applicable legal energy-saving requirements for buildings.

Energy rehabilitation for existing buildings

We improve the energy efficiency of existing buildings by renovating them and their building services. The objective is to ensure the economical and, by extension, eco-friendly operation of existing buildings.

FACTS*

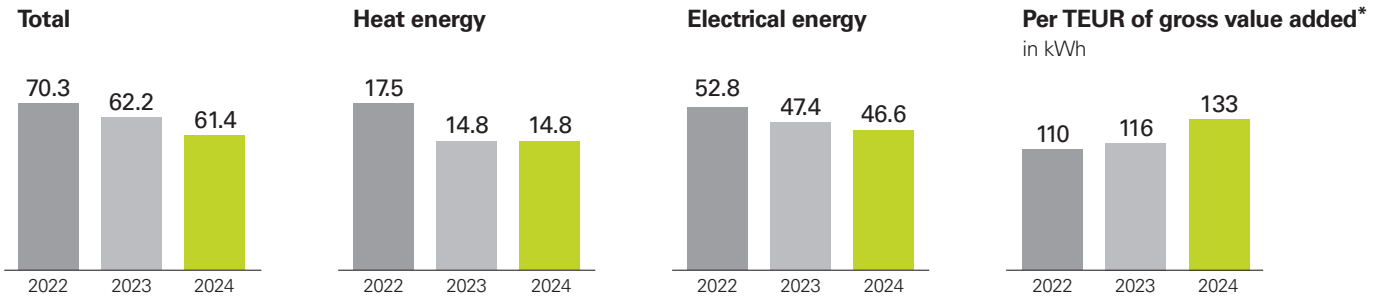
100%
Green electricity

1.6%
Less electricity consumed

Compared with 2023

*For more details about our energy efficiency projects, see page 11.

Energy consumption
in GWh



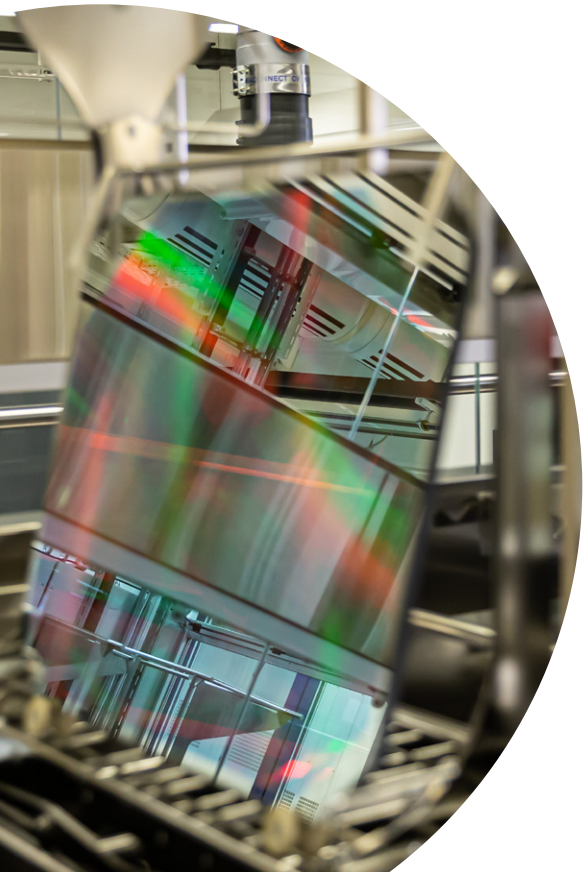
*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than energy consumption. For this reason, some of the values are worse than those of the previous year.

Felix Welkhammer
Senior Head of
Construction Services

"From the moment of breaking ground to the building's end of life, sustainability is a key focus during the planning, construction and operation of our new R&D building from top to bottom, including geothermal heat, photovoltaic panels and roof greening. Designed for reaching the DGNB silver certificate, the building is expected to receive a seal of quality for its sustainability."

ENVIRONMENTAL IMPACTS AND MEASURES: PRODUCTION MATERIALS

Through the careful use of materials and the monitoring of their flow, we are able to optimize the raw material requirements in our production departments



Our manufacturing operations exhibit unusually high vertical integration. The following processes are performed in-house:

- Metalworking
- Glass machining
- Graduation production
- Electronics manufacturing
- Final assembly

The main materials used in our production processes are as follows:

Steel and aluminum

- Linear encoder extrusions
- Flanges for angle and rotary encoders

Flat glass

- Carrier for our precision graduations
- ▶ The amount of flat glass procured was lowered by 0.5 kg to 0.4 kg per TEUR of gross value added compared with 2023.

Solvents

- Cleaning the surfaces of finished and semi-finished goods

Cooling lubricant

- Machining of metallic materials
- Glass machining during graduation production

Acids and bases

- Galvanic and chemical processes for treating the surfaces of encoder graduations
- ▶ These substances are handled predominantly in closed systems where the ambient air is monitored.

Chlorofluorocarbons

- Refrigerants in closed cooling cycles
- ▶ Tiny amounts of these substances escape via leakage during the operation of air conditioning systems, and this loss is replaced. We are striving to transition all our air-conditioning systems to eco-friendly refrigerants and to reduce refrigerant loss.

Cardboard and wood

- Recycling-friendly packaging materials
- ▶ To increase our share of recyclable packaging materials, our packaging design team is increasingly introducing packaging blocks made from molded pulp rather than plastic to create a sustainable packaging cycle.

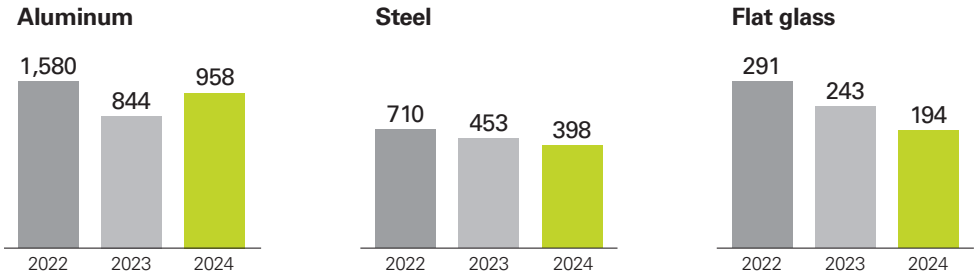
Johannes Gallinger
Senior Head of
Purchasing, Logistics

> In 2021 and 2022, we significantly increased our inventory due to the supply-chain shortage. Since 2023, we have been continuously working to optimize our inventories. At the end of 2025, we will reach the desired level.

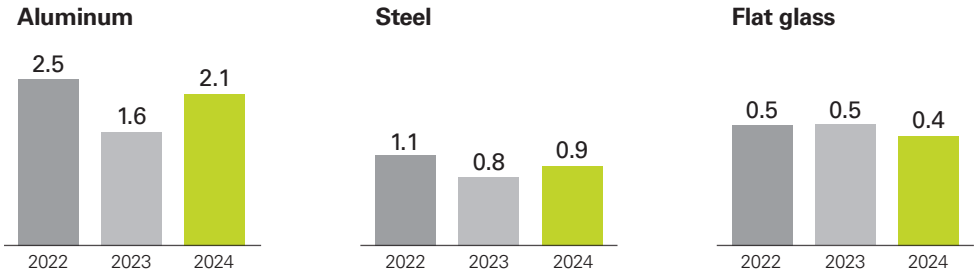
Material efficiency

For determining our material efficiency, we did not consider our material consumption but rather the procured amount of three materials that, in terms of mass, make up the bulk of our products: aluminum, steel and flat glass. Efficient materials usage during production significantly contributes to the conservation of natural resources and to the economic efficiency of production processes. We have recorded the main flow of raw materials and other production materials. This tracking allows us to identify reasonable savings potential.

Raw materials
in t



Raw materials
Per TEUR of gross value added*
in kg



*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than the amount of materials procured. For this reason, some of the values are worse than those of the previous year.

ENVIRONMENTAL IMPACTS AND MEASURES: EMISSIONS

Reducing our emissions of greenhouse gasses and volatile organic solvents is a continuous environmental objective

Greenhouse gas emissions
To reduce greenhouse gas emissions, we continually perform building and equipment optimizations with great success, such as continuing the switch to climate-friendly district heating. In 2024, we were thereby able to reduce our year-on-year CO_2-equivalent emissions by 28% to 2,100 t, down from 2,900 t in 2022. This comparison takes into account anthropogenic greenhouse gases from the following emissions sources:

Scope 1 = Direct emissions of climate-damaging gases by the company itself
Thanks to efforts in recent years, heating at the site now primarily comes from renewable district heating, meaning that Scope 1 greenhouse gas emissions now play only a very minor role. Our gas-fired combined heat and power plant, along with other heating equipment, is now only a fallback for emergencies and peak demand during the winter.

Scope 1 greenhouse gases are also emitted by in-house factory traffic. We are gradually transitioning our in-house vehicle fleet to electric vehicles. Three electric cars, two transport vehicles and an electric minibus have replaced equivalent vehicles with combustion engines. One car and one transport vehicle are set to be replaced with electric alternatives in 2025.

Scope 2 = Indirect emissions of climate-damaging gases by energy suppliers
Due to the switch to green electricity and district heating from primarily renewable geothermal and biomass sources, carbon neutrality has been achieved since 2021 for the greenhouse gas emissions related to purchased energy.

Scope 3 = Upstream and downstream activities
We have begun tracking Scope 3 greenhouse gas emissions. Based on this data, we are planning measures for improving our greenhouse gas emissions for this scope as well. A significant source of greenhouse emissions from upstream and downstream activities has proven to be the purchase of goods and services and the use of sold products.

Surface cleaning with organic solvents
We have a long-term objective of reducing our volatile organic compounds (VOC) emissions. These emissions primarily arise from the surface cleaning of finished and semi-finished goods at various machines and workstations. For this purpose, we installed a new exhaust air system in 2024 that reduces the VOC content in the exhaust air to less than 75 mgC/m^3 through thermal-catalytic treatment.

FACTS

28%
Less CO_2-equivalent emissions than in 2022

Climate-neutral
In Scope 2 since 2021

Along with water, various solvents are used as cleaning agents, especially alcohols and acetone. But we are striving to identify less environmentally harmful replacement substances. These efforts, however, must contend with the extremely high quality requirements for individual cleaning processes.

Through the thermal-catalytic treatment of VOC-contaminated exhaust air, solvent emissions will be further reduced despite our simultaneous increase in solvent-intensive serial production with fan-out technology (FOT). The thereby arising waste heat will also be made usable via an energy recovery system.

Systems requiring approval

For the operation of the combined heat and power plant and our central heating system, we must comply with the requirements for the relevant approval notice and the 44th Ordinance of the German Federal Immission Control Act.

Most of our VOC emissions occur during graduation production, which is subject to the special requirements of the 31st Ordinance of the German Federal Immission Control Act.

This requires recurring emissions measurements at different exhaust-air systems by an accredited measuring body. In conjunction with implementing the abovementioned exhaust-air system, new ventilation routes were installed and new measuring points were defined with government agency approval. These changes will be validated as part of pending acceptance measurements. Current internal data shows that the legal requirements are complied with.

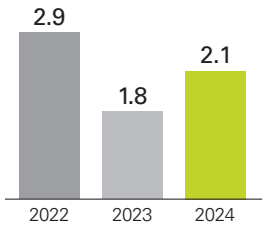
Evaporation cooling systems are required especially for air conditioning systems in buildings. Their operation requires compliance with the 42nd Ordinance of the German Federal Immission Control Act. The required hygiene inspections of the raw water from these systems are performed on a regular basis in order to prevent the hazardous discharge of legionella bacteria into the outside air via aerosols.

Other environmentally relevant emissions

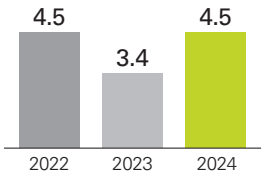
Odor, dust and noise emissions arise only in low amounts

Emissions

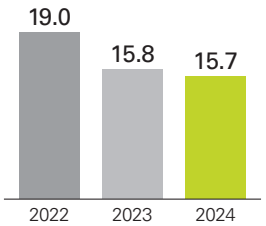
CO_2 equivalents
in 1,000 t



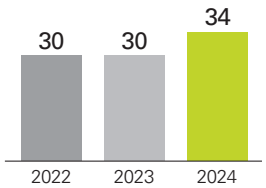
CO_2 equivalents per TEUR gross value added*
in kg



Volatile organic compounds (VOC)
in t



VOC emissions per TEUR gross value added*
in g



*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than emissions. For this reason, some of the values are worse than those of the previous year.

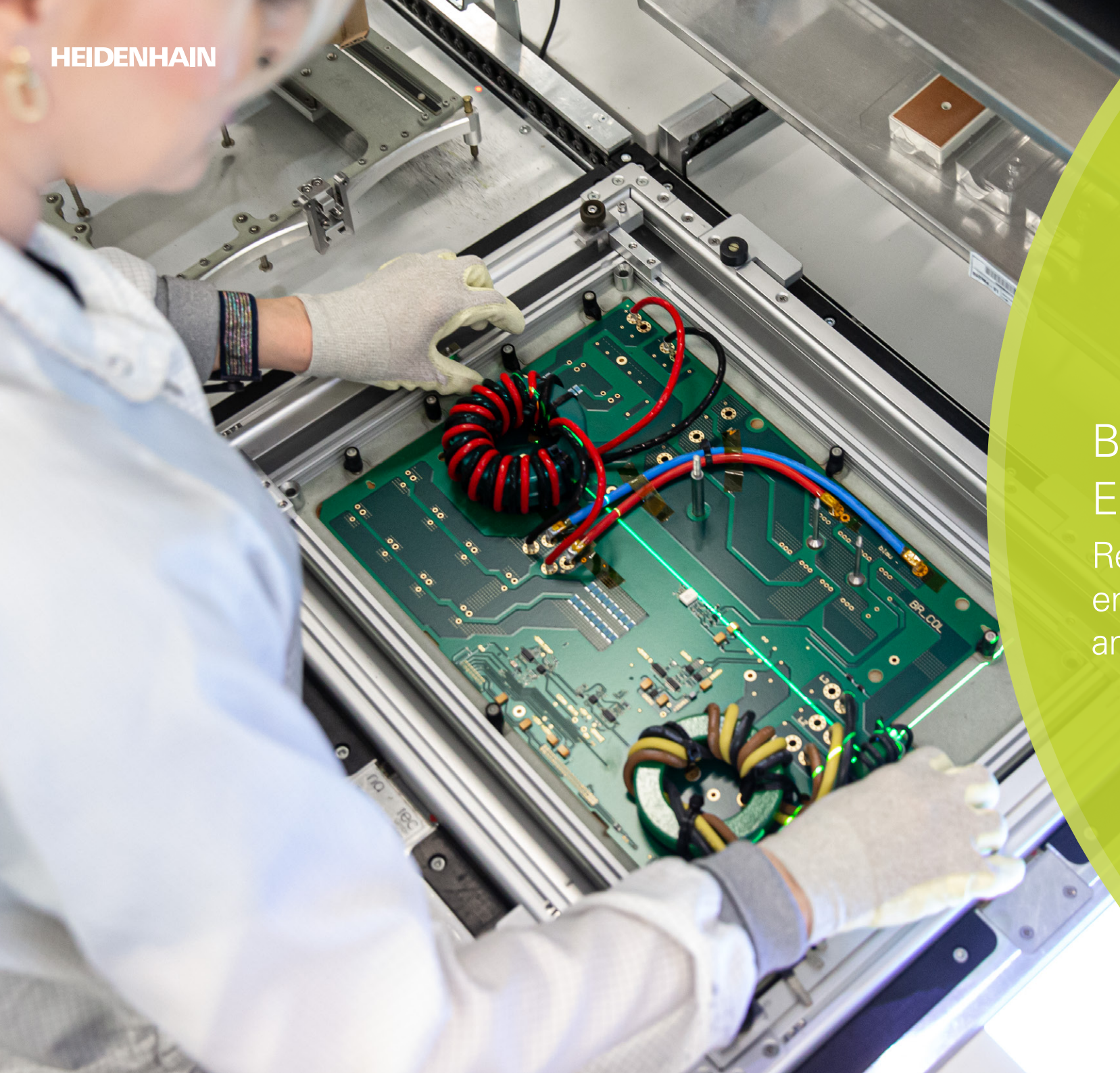
Legal and regulatory emission limits and measurement results

	Unit	Limit value	Measurement results
Combined heat and power plant			
Carbon monoxide	mg/m³ NC	300	< 20
Nitrogen oxides	mg/m³ NC	250	< 240
Formaldehyde	mg/m³ NC	20	< 5
Sulfur oxides	mg/m³ NC	10	< 1
Boiler plant			
Nitrogen oxides	mg/m³ NC	150	< 56
Emissions loss	% NC	9	< 7
Graduation production			
Total carbon A40 exhaust air system	mgC/m³ NC	75	35
Total carbon E90 exhaust air system	mgC/m³ NC	75	15
Total carbon E92 exhaust air system	mgC/m³ NC	75	47

The results (in mg/m³ NC = mg/m³ in normal condition) are taken from the measurement reports of the accredited measuring body. For the combined heat and power plant, the measured maximum value of the four modules is stated. For the boiler plant, the measured maximum value of both boilers is stated. The officially required measurement interval is three years. The most recent measurement date for the combined heat and power plant was in 2022. The most recent measurement date for surface cleaning in the Graduations Production department was also in 2022.

Dr. Markus Michalski
Director Production, Development and Production Electronics

„Through the installation of a new exhaust-air purification system, we can begin serial production using fan-out technology without reaching a critical level of VOC emissions.“



BEYOND THE ENVIRONMENT

Responsibility toward employees, their safety and the supply chain

OUR RESPONSIBILITY TOWARD EMPLOYEES

Our employees exemplify expertise, passion and creativity. To help them optimally contribute to the company and reach their full potential, we nurture and support young talent and longstanding professionals alike, providing attractive benefits and promoting ecological awareness.

Above-market compensation

We value the high performance of our employees and compensate it accordingly. At HEIDENHAIN, all our employees are paid at least in accordance with the collective bargaining agreement of the IG Metall trade union. This is supplemented by various extra benefits, such as the following:

- Monthly profit sharing, which allows our employees to benefit directly from the company's success and their key role in achieving it
- Voluntary corporate bonus for workers on rotating shifts
- A significantly above-market corporate pension
- A 10-year work anniversary bonus

Vocational training and continuing education

Education and expertise are essential in a technology company like HEIDENHAIN. For over 70 years, we have been offering a highly successful vocational apprenticeship program that currently encompasses ten different career fields. We also support higher-education students by enabling internships, degree papers and scholarships. In addition, we offer dual study programs and doctorate programs in eight fields of study. Time and again, our vocational apprentices are top-of-their-class in a Germany-wide comparison. In 2022, this applied to apprentices in our microtechnology and industrial optics technician programs. In addition to a first-rate apprenticeship in a modern training center with state-of-the-art equipment, our apprentices enjoy a variety of benefits, ranging from health seminars and addiction-prevention training to driver safety instruction and in-house hiring opportunities.

FACTS

EUR 14.2 million
Investment in education

2,960
Employee participants in continuous education

192
Apprentices

105
Financially aided higher-education students

267
Continuing education courses

100%
Of our employees receive an annual performance evaluation

We also continually train our longstanding employees. In 2024, the number of employees participating in continuing education courses numbered 2,960 (for in-house and external courses). Our specialist career path is an opportunity for employees who wish to deepen their skills without assuming a supervisory role. And our "Skills and Knowledge" program financially supports career-advancement training for employees who wish to become certified production supervisors, technicians, industrial managers and more.

Work flexibility: at home, in the office and in production

To make it easier for employees to balance work, family and private commitments, HEIDENHAIN has significantly increased the flexibility of its timekeeping policy. Employees with flextime are free to organize their own breaks and work times within a 6:00 a.m. to 8:00 p.m. window.

Many of our employees also work from home part of the time if their duties allow. This not only provides flexibility but also helps the environment. Due to our rural location, 60% of HEIDENHAIN employees would normally drive 11 km to 40 km to work each day. With over 1,000 employees working from home part of the time, the emissions reduction from less driving is considerable.

Flexible production shifts

In a new approach, our production departments are moving away from rigidly defined work times toward giving employees a greater say. A pilot project for flexible shift work in the metal machining department was successfully completed in 2023. In September 2024, this model was launched for all of the production departments. Since then, more than 720 employees have been working in shifts but without a predefined core time window.

Promoting environmental awareness

The actions of every employee affect our corporate ecological footprint and help to minimize it. In exchange, we provide multiple benefits that reduce the ecological footprint of our employees: Since 2023, twenty parking spaces with charging stations have been available to employees who wish to charge their vehicles during work. Twenty-four charging stations for e-bikes have been available since 2023 as well. For employees who bike to work, we also offer showers and changing rooms. To promote employee and environmental health, we actively encourage employees to leave their car at home and bike to work instead.

It is firmly anchored in our founding principles that employees should share in the success of the company and receive as much work flexibility as possible. These principles are still highly relevant today. In 2024, we launched a shift model without a core time window across the entire Production department, thereby giving all employees complete control over their work times in coordination with their supervisors.

Andreas Piehler
Senior Head of Labour Law and Social Affairs, Human Resources

MEASURES FOR OCCUPATIONAL HEALTH AND FIRE SAFETY

Fully equipped and ready to respond

Protecting employees from hazards and health risks in their everyday work is of prime importance at HEIDENHAIN. Our Traunreut and Hochreit sites counted 35 reportable work or commuting accidents in 2024.
In the event of a fire, the Plant Security team is qualified to take rapid preliminary measures before the city fire department arrives.

Fire safety improvements

- Purchase of a small, electric-powered vehicle equipped with barrier supplies, wet vacuums and small fire extinguishers
- Optimization of firefighting gear
- Basic fire safety training for all 30 Plant Security employees

Ingo Klepke
Fire safety officer at HEIDENHAIN and voluntary district fire chief of the Traunstein District Fire Office

FACTS

Approx. **13,000** fire and smoke detectors

More than **220** fire safety helpers

30 Plant Security employees for 24/7 vigilance

„Plant security and fire safety go hand in hand. At HEIDENHAIN, we've significantly improved our on-site response times in recent years by placing a strong emphasis on fire safety and by investing in fire-fighting equipment and technology."

OUR SUPPLY CHAIN IN FOCUS

Regional, local, trusted

HEIDENHAIN has always worked closely with regional suppliers. Of our 4,900 suppliers of services and production materials, 4,300 are based in Germany. A detailed risk analysis in 2024 found that none of them pose a risk in terms of the environment, human rights or employment standards.

The production materials needed at our product manufacturing plants in Traunreut and Hochreit come from roughly 800 suppliers. Of these, around 10% are located less than 50 km away from our production sites. Their close proximity allows us to handle some of the transport ourselves, enabling us to optimize routes and reduce emissions.

What's more, 70% of our suppliers' goods are transported in reusable packaging, which reduces waste.

Short distances and dependable partners also play an important role in meals provided to our employees. Of our 24 cafeteria suppliers, 14 are located less than 50 km away. Eggs and some of our meat, for example, are sourced from select organic farms. Our coffee comes from regional roasters. It's our way of ensuring fresh, high-quality and sustainably sourced food and beverages for our employees.

FACTS

0 reported violations of the LkSG

Risk analysis for all of our

approx. 4,900

direct suppliers

100% of our key suppliers* have signed our Supplier Code of Conduct

* Of our approx. 4,900 immediate suppliers, approx. 100 are considered key suppliers due to their importance for our business model (based on turnover, uniqueness and critical components). They account for approx. 80% of our expenditures.

> In the future, we will also check the relevant sub-suppliers of our direct suppliers—if necessary, all the way down to raw materials production, thereby ensuring that environmental standards, human rights and fair business practices are complied with. This will also help in identifying possible risks to our supply chain at an early stage so that we can take measures to increase its resilience to disruption.

Michael Reichl
Vice President Logistics

HEIDENHAIN

ENVIRONMENTAL OBJECTIVES

Setting the right objectives, getting the right results

EMPLOYEES
PROCESSES
PRODUCTS

From lifting aids to company-owned wind turbines, no objective is too small or large

Objectives are an essential part of our environmental and sustainability policy. All of them, whether small-scale or ambitious, help us to protect our employees and continually reduce our environmental impacts.

Our environmental and occupational health and safety objectives are defined as part of a continuous improvement process. This is how we develop our annual environmental and occupational health and safety program, which is approved by the Management Board. Aimed not only at meeting applicable legal requirements, many of our objectives actually exceed them.

Objective	Measures	Deadline
Energy consumption, emissions and greenhouse gases		
Reducing emissions	We use solvents during the cleaning of our encoder graduations. The thereby arising vapors are removed via exhaust ventilation. To reduce the proportion of solvents in the removed air, we will trap them by installing a VOC absorption system that burns off these residual substances in controlled dosages. We will also be putting a new exhaust purification system into operation.	2025
	Our environmental objective for the new R&D building is the German EG 40 building standard. The building is to be carbon-neutral thanks to complete thermal insulation and the use of renewable geothermal and photovoltaic energy sources. We will be applying for certification by the German Sustainable Building Council (DGNB).	2026
Reducing energy consumption	Reducing our energy consumption is very important to us, and we are pursuing ambitious objectives in nearly all corporate areas. In particular, we see considerable potential for our building services, and we have set goals accordingly for the next two years. ■ **LED lighting:** Switching to LED lighting in parking garages (2025) and in three production buildings (2026) will save an approximate total of 500,000 kWh per year.	2025/2026
	■ **Compressed air:** Lowering the line pressure in the Metal Machining department will reduce power consumption per hour by 3%. The line pressure will also be reduced in the Encoder Assembly department. Optimizing the compressed air network through larger pipe diameters, optimizing compressed air drying and further lowering network pressure (2026) will reduce consumption by a total of 320,000 kWh per year.	
	■ **Saving and recovering heat:** We plan to save a total of 600,000 kWh per year by installing heat recovery systems into exhaust air systems and VOC exhaust air purification systems, and by replacing skylight windows as well as reconfiguring the warehouse heating system for a lower flow temperature.	
	In addition, we will be expanding energy monitoring to the Electronics Manufacturing department and for the production of encoder graduations. By using power consumption meters and dashboards, we expect to uncover further savings potential.	2025

Objective	Measures	Deadline
Energy consumption, emissions and greenhouse gases		
Switching to renewable energy	To meet our energy needs, we will increasingly rely on various ecologically sustainable energy sources: ■ **Geothermal energy for heating:** Two additional building wings will be connected to the municipal district heating network and will therefore be using geothermal energy. Our gas-fired boiler used up to now will thereby be replaced.	2025
	■ **Solar energy:** We will install additional photovoltaic panels on the roofs of our two parking garages.	2027
	■ **Wind power:** We now have a permit to build two company-owned wind turbines. Implementation will begin in the spring of 2025. The expected 18 GWh of annual energy yield will cover approximately one-third of our power needs.	2026 (at the earliest)
Resource consumption, chemicals and waste products		
Reducing hazardous materials	The use of solvents is necessary for cleaning purposes in the Metal Machining department. Our objective to is increasingly use water for cleaning our products and to thereby reduce our use of solvents by 25%.	2025
	The coolant used in the Glass Processing department contains boric acid. We will replace this coolant with an alternative that does not contain this chemical.	
Improving recycling and reducing waste	To reduce our amount of packaging material, we will be putting a new packaging system into operation that, instead of individually packaging scale tape carriers and mounting spars, will enable large packaging for multiple products.	2025
Product usage		
More eco-friendly packaging	Products from HEIDENHAIN exhibit high performance and long service lives, and are often high-tech products used in highly complex systems. Safe transport to the customer is a high priority. One of our common packaging materials is convoluted foam. In order to reduce the amount of plastic in our packaging, we will be implementing a study about this topic. We will also be optimizing our cardboard packaging, thereby using more endless cardboard instead of discrete cardboard panels. Mixed packaging solutions using cardboard and foam will be switched to pure cardboard.	2025

Objective	Measures	Deadline
Water		
Saving water	During surface-finishing in our Metal Machining department, the products are cleaned at the end of the machining process. By acquiring a new, resource-efficient treatment system, we will reduce the amount of wastewater containing cleaning solution by approximately 50%.	2026
Occupational safety		
Optimizing ergonomics	We still see potential for improving workplace ergonomics, especially for our production employees. This includes the following measures: ■ **Encoder assembly:** Acquiring a new granite table with changed recesses for the motor holder will reduce unnatural user posture. Introducing automated processes for gluing components will reduce the number of microscope workstations. Ergonomic chairs will be purchased. Work heights will be further optimized through the purchase of a lifting device that will lift collective packages to an ergonomic height. Height-adjustable transport vehicles will be deployed. More height-adjustable tables will be used, and screens will be mounted higher.	2025
	■ **Electronics manufacturing:** A cobot will be introduced in order to reduce monotonous tasks. An automatic feeder pool (AFP) will be introduced to reduce the need for filling the feeder. A motorized axis will be put into operation for panel handling at the photoresist stripping machine. New electric dollies will be deployed for transporting materials. New screens with ASMPT software will be deployed over the production lines in order to reduce unnecessary legwork. And height-adjustable soldering stations and new lifting aids will be used.	
Reducing physical stress for production employees	An assembly machine will be built for making gear systems, thereby reducing the monotonous and repetitive tasks during the production of rotary encoders and angle encoders.	2025
	In the Electronics Production department, we will be moving vacuum pumps into a separate utility room, thereby allowing us to significantly reduce noise pollution at the workstation.	

TRACKING AND REACHING OBJECTIVES

Results from the environmental objectives set in 2024

The measures taken in previous years for occupational health and safety, as well as the environmental programs, are making a difference. Our objectives were largely achieved and the environmental impacts thereby reduced. The occupational health and safety of our employees has improved. We aim to continuously improve, which is why we continue to work hard toward achieving our objectives. These objectives undergo an annual review in conjunction with our Management Board and are redefined as needed.

The qualitative and quantitative reductions in our environmental impacts are based on environmental data from yearly reports.

Objective	Outcome of implemented measures
Energy consumption, emissions and greenhouse gases	
Reducing emissions	We use solvents during the cleaning of our encoder graduations. The thereby arising vapors are removed via exhaust ventilation. To reduce the proportion of solvents in the exhaust air, an activated-carbon filter system that stores the hazardous substances was installed in 2024. However, tests have revealed that this did not have the desired effect. A new system will therefore be installed in 2025. And due to delivery problems, the VOC absorption system originally planned for 2024 will not be installed until 2025.
	To further reduce our carbon emissions, we had planned to connect more office, production and warehouse buildings at our Hochreit site to the district heating network and to dismantle our currently used gas-fired boiler. Due to a delay in the expansion of the public district heating network, this objective has been postponed.
Reducing energy consumption	Adhesives used during the assembly of our rotary encoders and angle encoders are cured in special ovens. The resulting air is removed via an exhaust ventilation system. To remove air in a more controlled manner as needed, the exhaust ventilation system was to be equipped with automated butterfly valves. A preliminary analysis, however, revealed that these valves would offer only a very small benefit. This objective was therefore not implemented.
	Lighting also has a significant impact on our power consumption. For 2024, we had planned to renovate our parking garages and production buildings, thereby saving up to 330,000 kWh of electricity, but due to limited capacity, it was not possible to implement this objective. Implementation will occur in the years to come.

Objective	Outcome of implemented measures
Energy consumption, emissions and greenhouse gases	
Reducing energy consumption	Compressed air is used in many production steps and is another key driver of energy consumption. We are aiming for savings in this area as well. Our planned reduction in the amount of compressed air that we use could not be implemented in 2024 due to limited capacity, with the compressed air lines first needing to be rerouted. Implementation is planned for 2025. In 2024, however, we acquired new compressed air pumps and optimized the compressed air lines with the help of leakage detection equipment. We even made leakage detection a monthly recurring process. We also lowered the line pressure in the compressed air network, which is an ongoing process, with further pressure reductions planned.
	More savings were achieved by switching to LED UV lamps that have been used since mid-2024 to cure adhesives during the production of rotary encoders and angle encoders that have an interior glass scale.
Switching to renewable energy	Oils and greases are removed at an operating temperature of 50 °C to 60 °C during the production of linear encoder extrusions. Since 2024, the cleaning agents have been heated to the required temperature using geothermal heat. The effective savings will not be measurable until 2026 because both the previous system and the new one were in operation for part of 2025.
Resource consumption, chemicals and waste products	
Reducing hazardous substances	Cooling lubricants are essential in the Metal Machining department for cooling stock, lubricating equipment and transporting chips. Until the end of the year, all systems are to be switched to an eco-friendly, formaldehyde-free coolant. This has not yet been fully achieved. Approximately 80% of the project has been finished. Approval for the remaining implementation is currently pending, and the project is to be completed by 2026.
Improving recycling	Tin and solder paste are essential materials in the production of electronic components. Drawing on an internal employee suggestion, we have been recycling tin and solder paste through a special service provider since November 2024. This provider is much better at recycling this type of waste.
Product usage	
More eco-friendly packaging	Products from HEIDENHAIN exhibit high performance and long service lives, and are often high-tech products used in highly complex systems. Safe transport to the customer is a high priority. One of our common packaging materials is convoluted foam. In particular, we have been using approx. 10 t of polyurethane foam per year. But this material is difficult to recycle. In 2024, we were able to implement more than 70 requests to change the packaging material and thereby send approximately 130 different product types to our customers in polyurethane-free packages. This too, has been made into a continuous process. The long-term objective is to forgo polyurethane foam altogether.
Product carbon footprint	In order to be able to evaluate the climate effects of our products, we created a product carbon footprint (PCF) for selected reference products in accordance with ISO 14067 for the first time in 2024. This revealed that, throughout the life cycle of our products, our in-house production has very little impact on greenhouse gas emissions. The largest proportion comes from upstream and downstream processes. In 2025, we will examine the carbon footprint of more reference products.

Objective	Outcome of implemented measures
Water	
Wastewater treatment	Polishing is an essential process in our Glass Surface Finishing department, but it leaves behind particles in the process water. To further improve our wastewater treatment, we put a mixing and equalization tank into operation in November 2024. This allows the polishing sludge to settle to the bottom, thereby allowing the sufficiently treated residual water to be returned to the wastewater.
Conserving water	During graduation production, the final cleaning stage requires ultrapure water, which we produce using special equipment. But operating this equipment entails a certain amount of water loss. In September 2024, additional valve technology was installed that reduced losses by 50%.
Biodiversity	
Creating wildflower lawns	Having more near-natural green area supports biodiversity. In 2024, we increased our amount of this area to over 20% relative to our total open area. To achieve this goal, regularly mowed lawns were converted into wildflower lawns.
Occupational health and safety	
Optimizing ergonomics	In 2024, we improved the ergonomics for our employees in the Production department. By modifying shelf trolleys and introducing height-adjustable worktables, for example, we were able to optimize working heights. We will continue to optimize ergonomics in the future. Purchasing ergonomic seats, eyepieces and macroscopes in October 2024 further improved work conditions.
Reducing physical stress in production departments	In 2024, we optimized the lifting and carrying tasks for our Production department employees through new aids and improved movement routes. For cable-connector testing, we introduced lifting and gripping mechanisms in 2024 with which employees can connect and disconnect multiple cables at the same time, thereby significantly reducing the amount of strain on their joints. This project was even implemented for more work steps than was originally planned and will be further expanded in 2025.
Noise protection	Because noise can negatively affect personal well-being and health, we implemented noise reduction measures in 2024, particularly in our manufacturing areas. These measures include: ■ Relocation of fume extraction units from workstations to a crawl space under the floor ■ Switching to special, quieter compressed-air nozzles for removing excess cooling lubricant, lowering the air pressure in the lines and training employees in the proper use of compressed air ■ New silent rooms for focused working The planned installation of the movable noise barriers in offices near production areas was not pursued because a preliminary test was unsuccessful. Other solutions will now be found in order to reduce the amount of noise pollution.

CORE INDICATORS AND CERTIFICATIONS

Essential information at a glance

CORE INDICATORS AS PER EMAS*

Land use
(size of property, sealed area and near-natural area)

Total land area
305,000 sqm

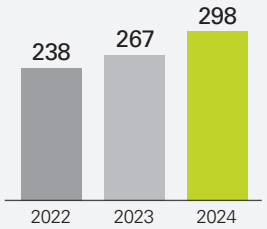
72% Sealed area
23% Near-natural area
5% Other green area

Electricity
100% green electricity from renewable sources

Total energy consumption in 2024:
61.4 GWh
Of which 50.3 GWh were from renewable sources

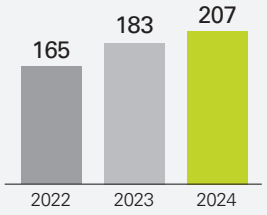
Water

Water consumption
Per TEUR of gross value added in dm^3



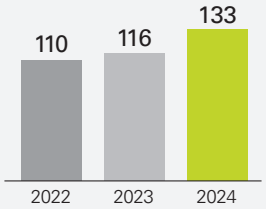
Wastewater quantity

Per TEUR of gross value added in dm^3



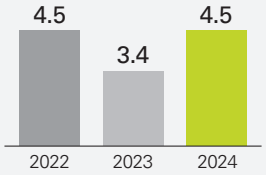
Energy

Energy consumption
Per TEUR of gross value added in kWh

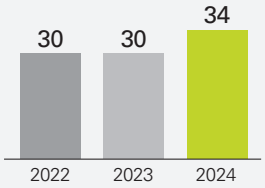


Emissions

CO_2 equivalents
Per TEUR of gross value added in kg



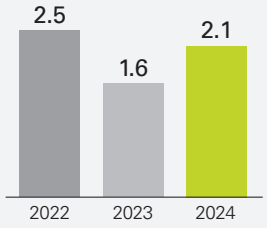
VOC emissions
Per TEUR of gross value added in g



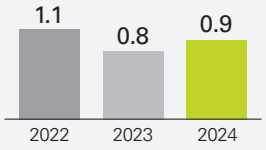
Raw materials

Mass-flow of key materials used

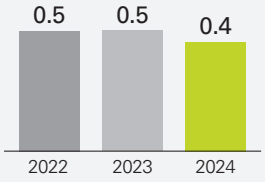
Aluminum
Per TEUR of gross value added in kg



Steel
Per TEUR of gross value added in kg



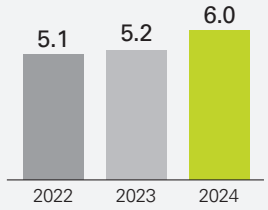
Flat glass
Per TEUR of gross value added in kg



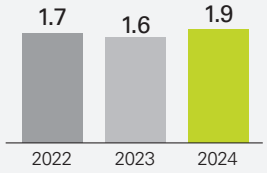
Waste

Waste amount by type

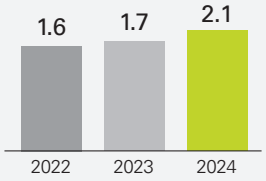
Total waste
Per TEUR of gross value added in kg



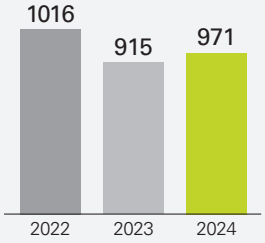
Metal waste
Per TEUR of gross value added in kg



Hazardous waste
Per TEUR of gross value added in kg



Hazardous waste
in t



*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than consumption. For this reason, some of the values are worse than those of the previous year.

ENVIRONMENTAL PERFORMANCE OVERVIEW

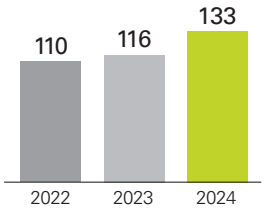
Thanks to the efforts of our employees in Traunreut and Hochreit, our environmental results for 2024 showed improvement.

Our input-output statement summarizes the environmentally relevant material and energy flows already described on the previous pages and is the basis for assessing the environmental impacts of our economic activities.

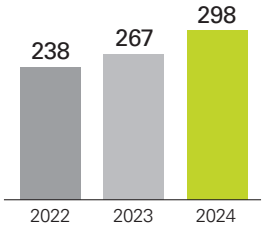
Input-output statement (per TEUR of gross value added*)

Input

Energy consumption
in kWh

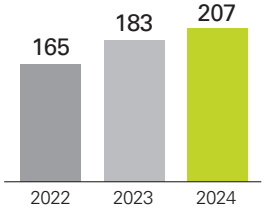


Water consumption
in dm^3

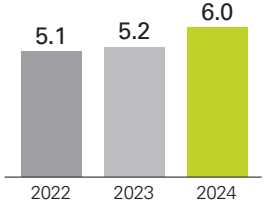


Output

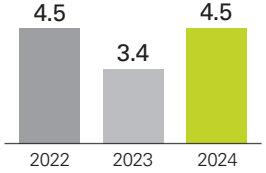
Wastewater
in dm^3



Waste
in kg



CO_2 equivalents
in kg



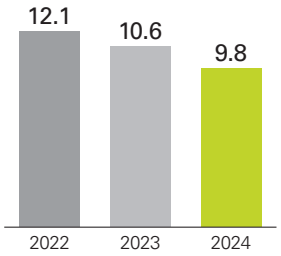
*Due to the reduced utilization of production capacity in 2024, gross value added fell more sharply than consumption. For this reason, some of the values are worse than those of the previous year.

A CLOOSER LOOK AT OUR HOCHREIT SITE

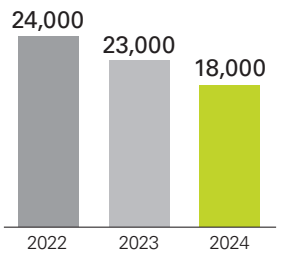
Our Hochreit site covers an area of 164,000 sqm. Its metalworking and graduation production facilities provide around 9,000 sqm of production space. The site is also home to our state-of-the-art logistics center, covering roughly 7,100 sqm. Just like at our headquarters in Traunreut, we are environmentally conscientious about the Hochreit site's open spaces. The employee parking lot, for example, uses water-permeable gravel instead of paving, allowing rainwater to drain directly into the ground. Meanwhile, orchard meadows and other near-natural spaces surround the buildings.

We have been able to continuously reduce the energy and resource consumption at our Hochreit site in recent years.

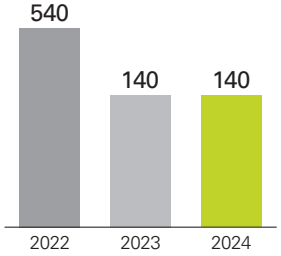
Energy consumption
in GWh



Water consumption
in m^3



CO_2 equivalents
in t



GRI CONTENT INDEX

DR. JOHANNES HEIDENHAIN GmbH has reported the information stated in this GRI index for the period from January 1, 2024, to December 31, 2024, with reference to the GRI standards. This reporting used the "GRI 1: Foundation 2021" standard.

GRI standard	Topic	Pages	Sustainable Development Goals
GRI 2: General Disclosures 2021	2-1 Organizational details	5 – 6	
	2-3 Reporting period, frequency and contact point	57 – 60	8 DECENT WORK AND ECONOMIC GROWTH
	2-5 External assurance	59	
	2-30 Collective bargaining agreements	39	
	2-6 Activities, value chain and other business relationships	5 – 9, 43	
	2-22 Declaration on sustainable development strategy	2	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	2-23 Policy commitments	20 – 22	
GRI 301: Materials 2016	301-1 Materials used by weight or volume	33 – 34	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
GRI 302: Energy 2016	302-1 Energy consumption within the organization	31, 54	
	302-3 Energy intensity	31, 54	7 AFFORDABLE AND CLEAN ENERGY
	302-4 Reduction of energy consumption	28, 48, 51	
	302-5 Reductions in energy requirements of products and services	15 – 17	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	28	
	303-2 Management of water discharge-related impacts	29	
	303-3 Water withdrawal	29	6 CLEAN WATER AND SANITATION
	303-4 Water discharge	29	
	303-5 Water consumption	29	

GRI standard	Topic	Pages	Sustainable Development Goals
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	35, 36	
	305-2 Energy indirect (Scope 2) GHG emissions	35	
	305-4 GHG emissions intensity	36, 54	
	305-5 Reduction of GHG emissions	35, 48	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	37	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	26	
	306-2 Management of significant waste-related impacts	25, 48	
	306-3 Waste generated	26, 54	
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	43	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	23	
	403-2 Hazard identification, risk assessment, and incident investigation	23	
	403-5 Worker training on occupational health and safety	23	
	403-8 Workers covered by an occupational health and safety management system	23	
	403-9 Work-related injuries	42	
GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	40	
	404-3 Percentage of employees receiving regular performance and career development reviews	40	

STATEMENT BY THE ENVIRONMENTAL AUDITOR

The signing party, Dipl.-Ing. Wolfgang Brandl, EMAS environmental auditor from **TÜV SÜD Landesgesellschaft Österreich GmbH**, with registration number AT-V-0003, accredited for group 26.5 (NACE code), hereby confirms that he has evaluated whether the corporate site stated in the Environmental Declaration of the organization

DR. JOHANNES HEIDENHAIN GmbH
Dr.-Johannes-Heidenhain-Str. 5
83301 Traunreut, Germany,

including the Hochreit facility (Fraunhoferstr. 1) with registration number D-155-00010, fulfills all of the requirements of Regulation (EC) No 1221/2009 of the European Parliament, and of the Council, of 25 November 2009, regarding the voluntary participation by organizations in an EC system for eco-management and auditing (EMAS), updated by Regulations (EU) 2017/1505 and (EU) 2018/2026.

With the signing of this Statement, it is hereby confirmed that

- the expert assessment and validation were conducted in full accordance with the requirements of Regulation (EC) No 1221/2009, updated by Regulations (EU) 2017/1505 and (EU) 2018/2026,
- the result of the expert assessment and validation confirms that there is no evidence of any non-compliance with the applicable environmental regulations,
- and that the data and information contained in the updated Environmental Declaration for the company location provide a reliable, plausible and truthful portrayal of all activities at the location in the area stated within the Declaration.

This Statement is not equivalent to an EMAS registration. EMAS registration may be conducted only by a competent authority in accordance with Regulation (EC) No 1221/2009, updated by Regulation (EU) 2017/1505. This Statement must not be used as the sole basis for informing the public.

The submission of an updated Environmental Declaration is planned for 2026.

April 18, 2025, Munich, Germany

Wolfgang Brandl
Environmental Auditor

DR. JOHANNES HEIDENHAIN GmbH has been validated in accordance with the European Eco-Management and Audit Scheme (EMAS) since August 21, 1996.

DR. JOHANNES HEIDENHAIN GmbH has been certified in accordance with the international environmental management standard DIN EN ISO 14001 since July 31, 1998, and with the quality management standard DIN EN ISO 9001 since 1993.

HEIDENHAIN

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