NETZSCH
Proven Excellence.

Environmental Protection and Energy Report 2025

Pumpen & Systeme GmbH, Waldkraiburg (Germany)

Pumps & Systems

ENVIRONMENTAL PROTECTION AND ENERGY REPORT 2025 NETZSCH PUMPEN & SYSTEME GMBH WALDKRAIBURG

Preface

Active environmental protection is one of the most important tasks of any modern company today. Sustainable business can only take place in an intact environment. Based on this deep conviction, our company already introduced an environmental management system in accordance with DIN EN ISO 14001 in 2015.

In addition, we successfully carried out an energy audit according to DIN EN 16247-1 in 2016 and 2020. This year, we achieved the initial certification according to DIN EN ISO 50001. With this energy management system, we have established the basis to systematically analyze our energy consumption, identify potential efficiency improvements and implement as well as monitor targeted measures and programs for reducing energy usage.

We are a partner of the VDMA's Blue Competence sustainability initiative and have been an ÖKOPROFIT-certified company since 2006, as well as a member of the ÖKOPROFIT Club and the Bavarian Environmental Pact. Through our partnership with Blue Competence, we are committed to complying with the twelve sustainability principles of the mechanical and plant engineering sector.

Since 2018, we have been assessed annually by EcoVadis regarding our corporate social responsibility (CSR). In 2024, the Pumps & Systems division was once again awarded the Silver Medal. The topic of CSR goes far beyond simple compliance with regulations - it addresses how companies manage their economic and social impacts on the environment and how they engage with stakeholders such as employees, business partners and authorities.

Our environmental management goes beyond creating a healthy working environment for our employees. We are fully aware that our consumption of resources and energy must not be at the expense of future generations.

The Environmental and Energy Report 2025 systematically analyzes all environmentally relevant processes and consumption from previous financial years. This forms the basis for continuously identifying opportunities for improvements and savings in energy and materials.

„Let's do everything we can to ensure that we leave the next generation, the children of today, a world that not only provides them with the space they need to live, but also the environment that makes life possible and worth living"

*Richard von Weizsäcker (*1920; †2015), German politician*

CONTENT

OUR COMPANY

Development of the company

NETZSCH Pumps & Systems GmbH was founded in Waldkraiburg in 1962 and is the headquarters of the business unit of the same name. Under the management of Erich NETZSCH B.V. & Co. Holding KG, NETZSCH Pumps & Systems is, with approximately 2,500 employees, the largest business unit of the NETZSCH Group, along with NETZSCH Analyzing & Testing and NETZSCH Grinding & Dispersing. The company was founded in Selb in 1873 by the brothers Thomas and Christian Netzsch.

The NETZSCH Group is a medium-sized German company in mechanical, plant and instrument engineering with production, sales and service companies worldwide. The owner-managed company employs around 4,600 people worldwide.

In addition to the production site in Waldkraiburg, Germany, there are four other sites with their own production facilities in Brazil, China, India and the USA, as well as subsidiaries in Argentina, Australia, Austria, Belgium, Canada, Colombia, France, Great Britain, Indonesia, Italy, Kazakhstan, Malaysia, Mexico, the Netherlands, Poland, Singapore, Spain, South Africa, South Korea, Thailand, the United Arab Emirates, Vietnam and many other countries.

The Waldkraiburg site covers the entire value chain on campus. From design, development, production, assembly, tool and fixture construction to internal sales, worldwide shipping and service.

In June 2025, around 645 qualified employees were working on a production area of 63,000 m^2. Up to 120 pumps are produced in Waldkraiburg every day.

Plant consolidation at the Waldkraiburg site

With the consolidation of our production sites, all buildings in Geretsrieder Straße were upgraded to meet the latest energy standards, enabling a reduction of approximately 90 % in the use of fossil fuels.

Currently, our metal production is undergoing a comprehensive restricting process that includes all machines and equipment. Once this transformation is complete, smooth material supply across the campus will be ensured through the use of a tugger train system. At the same time, a process-optimized production setup with short distance and high-tech machinery will be established.

PRODUCTS

In the almost seven decades of its existence, NETZSCH Pumpen & Systeme GmbH has evolved from a machine manufacturer to a solution provider, offering a wide range of positive displacement pumps.

NEMO® PROGRESSING CAVITY PUMPS

The main product is the NEMO® pump, a rotating displacement pump. "NEMO®" is a registered trademark for NETZSCH and was formed from the name NETZSCH and the name of the inventor, Moineau. The versatile pump is used across almost all industrial applications.

TORNADO® ROTARY LOBE PUMPS

Industrial versions cover customer requirements in environmental technology, the chemical industry and a wide range of other industrial sectors, including agriculture. Rotary lobe pumps are also available in hygienic and aseptic designs for the food, pharmaceutical and chemical industries.

NOTOS® MULTI SCREW PUMPS

The NOTOS® multi screw pump family comprises three product series in different designs, suitable for numerous industrial sectors and applications.

PERIPRO® PERISTALTIC PUMPS

Robust, reliable, strong – PERIPRO® peristaltic pumps are suitable for a wide range of applications, particularly for aggressive and abrasive media. With only one wearing part, maintenance costs are kept to a minimum.

NETZSCH grinder

The product range also includes grinding systems that can be integrated into the conveying flow (N.Mac® twin shaft grinders and M-Ovas® cutting plate macerators).

Dosing and barrel emptying systems

The application possibilities of the progressive cavity pump are considerably increased by the active distribution in barrel emptying systems and dosing systems.

NETZSCH pumps are built:

- for flow rates from a few cm^3/min to 2,500 m^3/h
- for differential pressures up to 100 bar and system pressures up to 300 bar
- made of grey cast iron, austenitic and ferritic steel, Hastelloy®*, titanium, copper alloys, zirconium, elastomers and plastics, etc.

Spare parts processes

Original spare parts are offered for all NETZSCH products - proof of our high level of vertical integration.

*Hastelloy® is a registered trademark of Haynes International Inc.

OUR ENVIRONMENTAL POLICY

Environmental, energy and sustainability policy

Environmental and energy management, as a mandatory pillar of sustainability, ensures the continuous improvement of our environmental performance, as well as energy efficiency and the conservation of natural resources. This is achieved on the basis of internal targets, guidelines and processes through the implementation of certified, documented management systems and by means of regular environmental and energy audits. Responsible action creates opportunities for sustainable development and counteracts climate change.

- **Energy consumption:**
  We carry out regular energy audits to identify and prioritize potential savings. This is part of a systematic approach to improving energy efficiency. A metering concept is used to continuously monitor and optimize energy consumption and performance. Progress and challenges are communicated regularly.
- **Biodiversity:**
  In order to promote biodiversity, suppliers with minimal environmental impact are selected. On our premises, we cultivate a diverse flower meadow, which provides a valuable refuge for reptiles and insects.
- **Water resources:**
  Our objective is to provide effective protection and to ensure the careful management of water resources. We are committed to identifying and addressing risks associated with water-hazardous substances. Our focus is on developing efficient and sustainable water management solutions.
- **Waste managements:**
  We separate residual materials properly and recycle as much as possible in order to reduce waste volumes as far as possible. In addition, we regularly review options and technologies for the further utilisation of waste to generate energy.
- **Sustainable supply chain:**
  We are fundamentally committed to aligning the procurement process with ISO 26000 "Guidance on social responsibility". When selecting suppliers, their energy efficiency and environmental practices are taken into account. As a market and technology leader, we take responsibility for a social, sustainable and long-term partnership with our suppliers to improve energy efficiency throughout the supply chain.
- **Social commitment:**
  We bear responsibility in society and are involved in a wide range of social projects.

We at NETZSCH Pumpen & Systeme GmbH are certified in accordance with ISO 14001 and pursue our sustainability strategies in all our business areas. The certification according to DIN 50001 underscores our commitment to systematic energy management. We are guided by ISO 26000 and are committed to developing a sustainable future in accordance with the UN guidelines. Measures, targets and progress are regularly documented and communicated internally and externally.

FIGURES, DATA, FACTS

Noise

Noise emissions are measured, monitored and controlled on a regular basis. All sounds affecting a specific location are recorded, summed and evaluated.

The measurements show that in some work areas, such as in metal and elastomer technology, the average levels exceed the lower action value 80 dB(A). Areas where noise reaches or exceeds the upper action value of 85 dB(A) are designated as high-noise areas. These areas are physically separated from the other work areas and halls. Employees working in high-noise areas are required to wear personal hearing protection. As an additional measure, employees who regularly work in these areas are provided with individually fitted hearing protection. For employees who only spend short periods in high-noise areas, clearly visible hearing protection dispensers are installed at various locations.

Externally, no significant noise emissions are released, and to date, no complaints regarding noise have been recorded.

Energy

Due to constantly rising energy prices and current climate protection targets, we are constantly confronted with the issue of energy efficiency. Energy efficiency offers us an opportunity to create win-win situations: cost pressures are reduced, competitiveness is strengthened and both the environment and resource consumption are conserved. At the same time, CO_2 emissions are minimized.

Through the consolidation of our production sites and the connected switch to a new heating system, we have already significantly reduced our consumption on fossil fuels. Our goal is to completely eliminate the use of fossil energy sources in the coming years.

FIGURES, DATA, FACTS

Energy consumption

During fiscal year 2024/25, our electricity consumption decreased slightly again, reaching 7 % below the previous year´s level.

Since 2022, we have been sourcing exclusively green electricity instead of conventional energy sources. This has led to a significant reduction in our CO_2 emissions, as green electricity is considered climate-neutral under the market-based accounting of Scope 2. As a result, emissions occur only in Scope 3, Category 3.

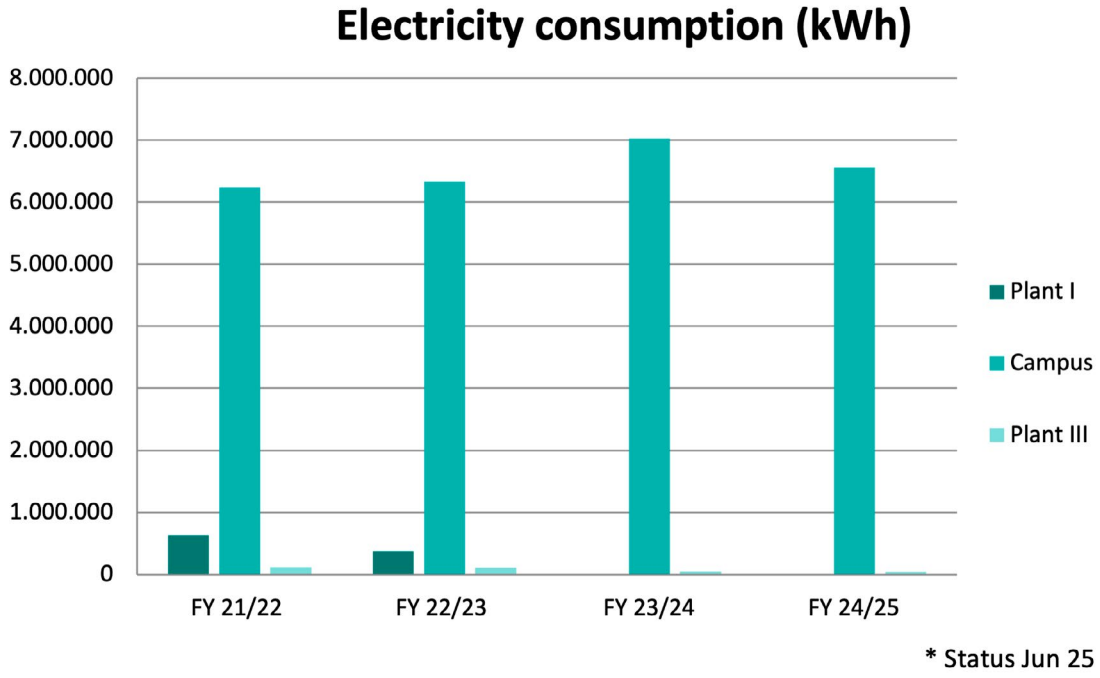
In addition, our photovoltaic system, with a capacity of 520 kWp, generates sustainable self-produced electricity, covering around 8 % of our total electricity demand. Electricity from our own PV systems is also considered emissions-free in Scope 2 under the market-based approach. The only emissions occur in the year of acquisition, due to the production, transport and installation of the system and are allocated to Scope 3. From the following year onwards, the electricity generated is fully climate-neutral.

Total electricity consumption and CO_2 emissions

Electricity consumption (kWh)		
Financial year	Electricity consumption in kWh/year	CO_2 emissions in kg/ year (Scope 2 & 3)
21/22	6,975,996	1,155,017*
22/23	6,810,368	318,657*
23/24	7,072,213	307,075*
24/25	6,593,313	276,359*

CO_2-Emissions NETZSCH Waldkraiburg; Emission factors of Stadtwerke Waldkraiburg and Wuppertal

* Purchase of green electricity since 01.01.2022



FIGURES, DATA, FACTS

Natural gas and wood chip consumption

Compared to previous years, we have significantly reduced our natural gas consumption. The main reason for this is the commissioning of our high-performance wood chip heating system with a capacity of 990 kW, which was installed on our factory site at the end of 2022. The wood chips are sourced regionally and will be delivered in the future using electric trucks. In addition, we take average of groundwater for cooling and heating our new building.

Furthermore, we continuously work to further optimize our processes using innovative approaches such as lean management.

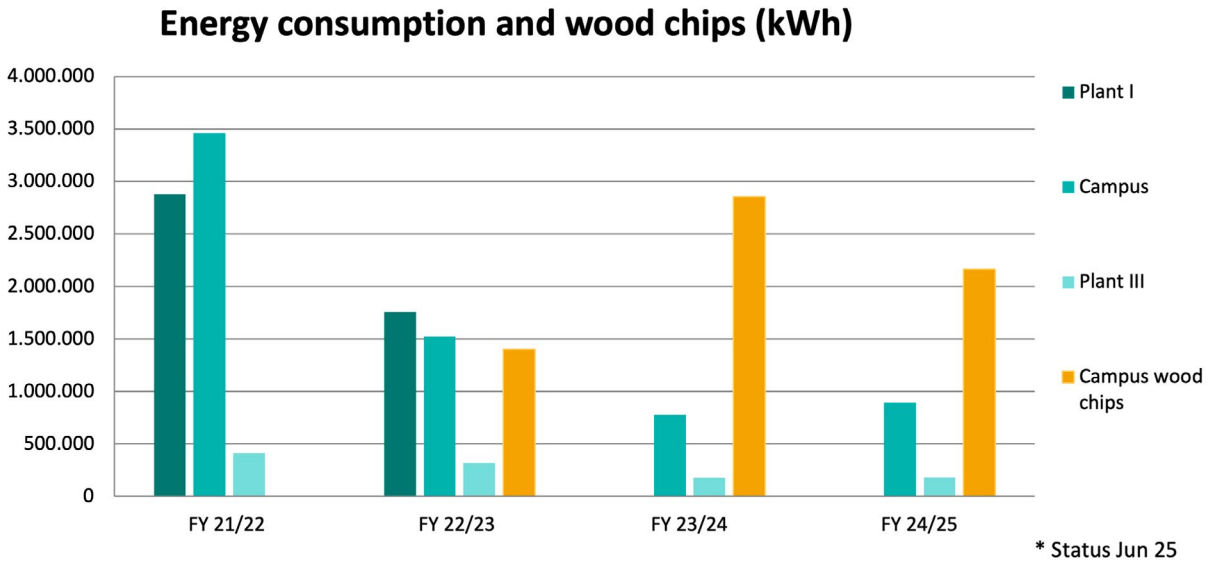
Totals for gas consumption and CO_2 emissions

Gas consumption (kWh)		
Financial year	Gas consumption in kWh/year	CO_2 emissions in kg/year (Scope 1 & 3)
21/22	6,751,926	1,668,786
22/23	3,593,681	1,040,938
23/24	948,419	218,589
24/25	1,073,561	268,355

CO_2 emissions NETZSCH Waldkraiburg; emission factors provided by Stadtwerke Waldkraiburg

Wood chips consumption (kWh)				
Financial year	Wood chips consumption in kWh per year	CO_2-Emissions in kg per year (upstream & direct)	N_2O-Emissions in kg per year (upstream & direct)	CH_4-Emissions in kg per year (upstream & direct)
22/23	1,400,000	31,230	3	60
23/24	2,885,272	60,298	6	123
24/25	2,164,392	45,708	4	93

CO_2 Emissions NETZSCH Waldkraiburg; Emission factors provided by the German Environment Agency (UBA)

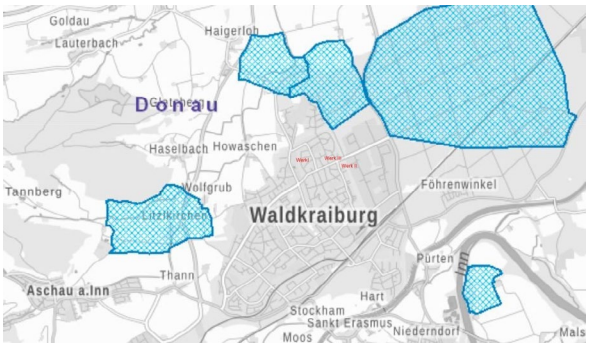


FIGURES, DATA, FACTS

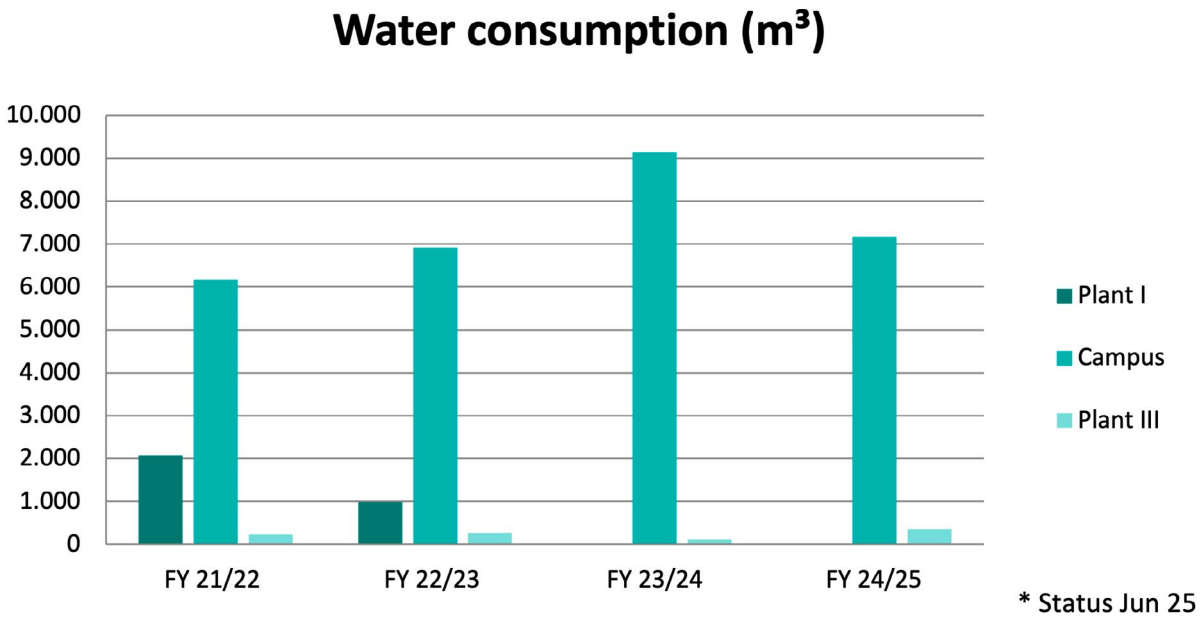
Water

Water is an essential prerequisite for humans, animals and plants, as well as an indispensable resource for the economy. There is no substitute for it, which is why effective protection and responsible use of water are our shared responsibility.

Our process water is monitored and, depending on its level of contamination, either collected by specialized disposal companies or, when within permissible limits (e.g. from flushing or test stand operations), discharged into the municipal sewer system with the city´s approval – thus returning treated water back to the water cycle.



As shown on the map, our campus is not located within a designated water protection area.



Water consumption at the campus amounted to approx. 7,153 m³ in FY 2024/25, representing a decrease of around 22 % compared to the previous year.

FIGURES, DATA, FACTS

Compressed Air

Electricity: 358,887 kWh

At the campus, a shared compressed air network connects the Metal and Elastomer Technology divisions, with central compressor stations located in both main areas. The compressors have drive capacities of 18.5 kW, 25.55 kW, and two units at 37 kW. The energy efficiency of compressed air utilization can be rated as above average. A centralized control system ensures targeted start-up and shutdown of the compressors, while their waste heat is fed back into the heating water circuit. Inspections to detect leaks are carried out twice a year.

Waste

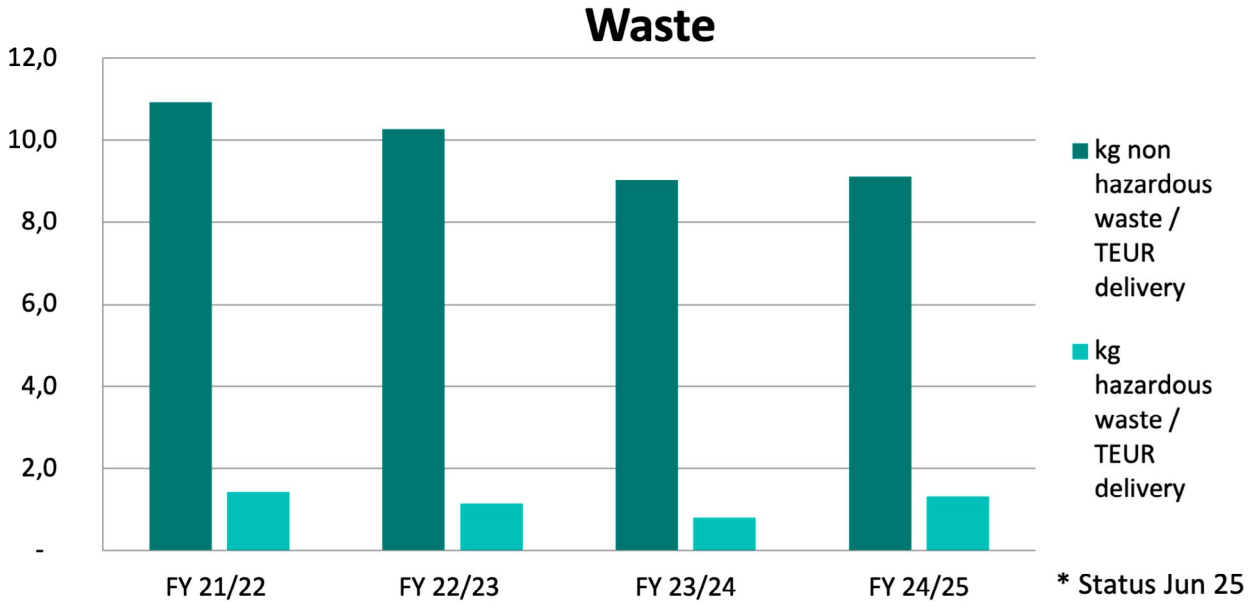
Waste Volume

For non-hazardous waste, the total volume in fiscal year 2024/25 amounted to 1,178 tons, representing a reduction of 11.3 % compared to the previous year. This figure also includes our recyclable metal materials, which are recovered through material recycling.

In contrast, the volume of hazardous waste increased to 170 tons, which corresponds to a rise of around 46 % compared to fiscal year 2023/24. This significant increase is mainly due to relocations within MET, during which cooling lubricants had to be removed from the machines and disposed of properly. In addition, adhesives and solvents were collected over an extended period and their disposal also took place during the reporting year.

The recycling rate for fiscal year 2024/25 reached 80 %.

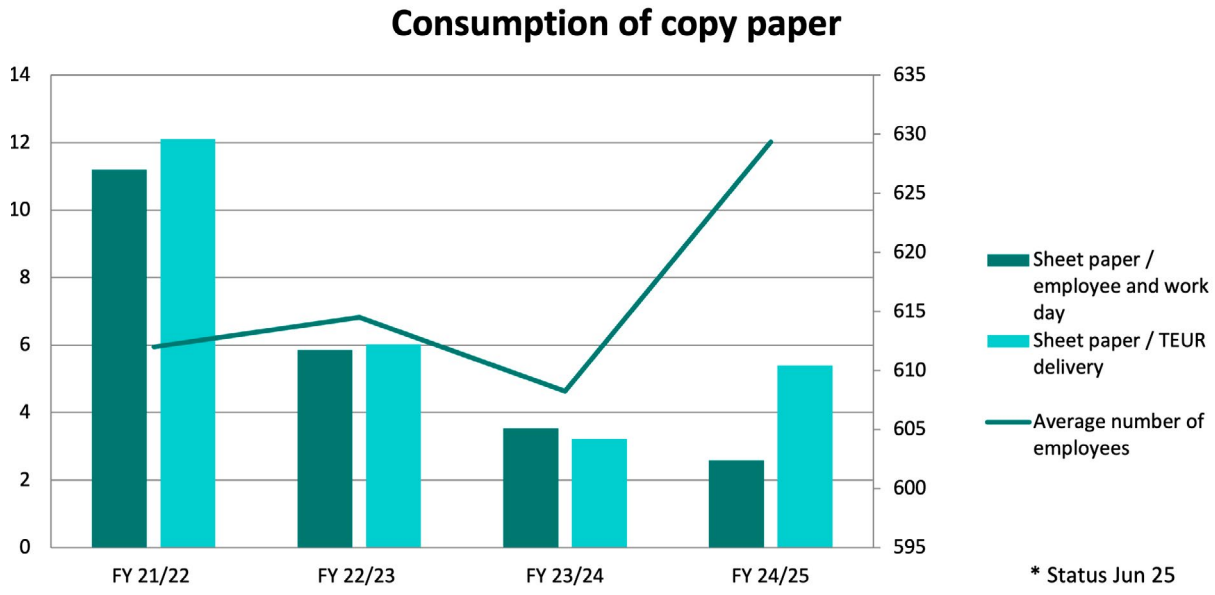
Going forward, our goal remains to use raw materials, products and hazardous substances as sparingly as possible in order to protect the environment.



FIGURES, DATA, FACTS

Ways of avoiding and reducing waste: Consumption of copy paper

We have been continuously reducing our paper consumption for several years by promoting IT solutions and will continue our efforts in the future. In 2021, we launched the project "Going Paperless" with the aim of sorting all documents and files in digital form. This initiative has already led to a dramatic reduction in paper usage. At present, each employee consumes an average of just three sheets of paper per working day.



OUR ENVIRONMENTAL GOALS

Planning

Environmental protection roadmap NPS 2024/25		
Financial year	Q3-Q4/24	Q1-Q2/25
Activities: What has been done in the past 12 months?	**System and management optimizations** ▪ Conducting emergency management drills (leakage emergency training with all industrial employees, incident response plan, use of emergency materials, reporting procedures, handling of incidents) ▪ Training and awareness-raising for NETZSCH employees on the topics of waste separation, energy efficiency, hazardous substances management and sustainability ▪ Auditing of suppliers relevant to environmental protection and waste management	**Saving resources** ▪ Establishment of a beehive on the meadow at Plant III ▪ Implementation on the metering concept across the campus ▪ Reduction of energy consumption by approximately 0.5 % ▪ Minimization of natural gas usage ▪ Certification according to DIN ISO 50001 ▪ Introduction of measures to prevent peak loads ▪ Implementation of hazardous substance management via SAP ▪ Development and communication of a disposal concept for e-cigarettes
KPI: How do we measure our success?	▪ Increase transparency in waste reporting ▪ Make environmental engagement more visible ▪ Record consumption in more detail	▪ Avoid, reduce and properly separate waste ▪ Reduce energy consumption ▪ Lower Scope 1 and Scope 2 emissions

IMPLEMENTED MEASURES

2016: Heating and cooling with groundwater

With the permission granted by the Mühldorf a. Inn District Office, we are allowed to extract groundwater for heating and cooling purposes and return the thermally used water to the groundwater. Heat is extracted from or added to the extracted groundwater as required and used to control the temperature of an oil tank for the pump test bench.

2018: Conversion to LED lighting in the mechanical production workshop

- Savings of 45,000 kWh per year
- Increase in the number of lux in the entire production area, approx. 20 % more
- No more cleaning of light screens required, cost savings of approx. 6,000 €/a
- Battery capacity for emergency lighting currently still 33 % compared to previous requirements
- LED lighting lasts 20,000 – 50,000 hours, neon only 15,000 – 20,000 hours

2019: Conversion of wood disposal

Wood waste was collected in 15 m^3 container skips, with a compaction of approx. 35 %. In 2019, around 110 tons of wood waste were transported. Previously, wood waste was transported over long distances to the disposal company at its full volume, resulting in a high frequency and elevated fuel consumption. By acquiring a wood compactor and switching to a local disposal company, CO_2 emissions have been significantly reduced.

2020: Flowering meadows

Establishment and management of a species-rich flowering meadow, according to the guidelines of the local nature conservation authority and the landscape management association, covering approx. 4,500 m^2 in Plant III and approx. 3,000 m^2 on the NETZSCH campus. The fallow strips have thus been transformed into valuable habitats and refuges for insects.

2020: Changeover to press containers

- Paper and cardboard
- Energetic waste

The waste is thereby highly compacted, reducing the number of container emptyings and transport trips. This results in a significant reduction in CO_2 emissions.

2021: Changeover to chip disposal

Previously, loose metal chips containing up to 14 % coolant (KSS) were collected in 20 m^3 roll-off containers placed over a collection tray. Exposed to the weather, the trays had to be pumped out at regular intervals to ensure that no liquid escaped. A new system was therefore acquired, in which the chips pass through a chip crusher into a centrifuge. The coolant is separated from the chips and stored in a dedicated tank. The chips are then compressed into briquettes in a briquetting press, achieving high compaction. This reduces the number of container emptyings and, consequently, transporting trips, resulting in lower CO_2 emissions. Since the entire plant is now housed under a roof, rainwater will no longer mix with the coolant, drastically reducing the amount of liquid requiring disposal.

IMPLEMENTED MEASURES

2022: Heating and cooling with groundwater
A second well was drilled for the new building to enable the extraction of groundwater for heating and cooling purposes. The water from the well is circulated through a heat pump and returned to the well. Depending on demand, heat is either added to or removed from the groundwater.

2022: Roof renovation of the MET Hall
The insulation renewed during the renovation of the MET hall roof allows for a 20 % reduction in annual gas consumption.

2022: Conversion to renewable energies
Installation of a photovoltaic system with an output of 520 kWp. This can now cover 8 % of our annual electricity consumption. The remaining 92 % of our electricity requirements have been covered by green electricity since 01.01.2022.

2023: Reduction of natural gas consumption
To largely reduce the use of natural gas, a 990 kW wood chip system was installed on the factory premises at the end of 2022. The energy generated is primarily intended for process heat. In addition, the relocation from Plant I to the Campus allowed the baseline natural gas consumption to be reduced by 85 %.

2024: Transition from Single-Use Plastic Coffee Cups to Durable Porcelain Cups
To act more sustainable and reduce our ecological footprint, the plastic coffee cups at our coffee machines and kitchens were replaced with porcelain cups. These cups are durable, reusable and make an important contribution to reducing plastic waste. Additionally, only fairly produced and traded coffee beans are used in our coffee machines.

2025: Increasing Biodiversity on Campus
To protect and promote biodiversity, NETZSCH has implemented various measures. For several years, our site has featured a flowering meadow, which has now been complemented by a insect hotel – a project carried out by our trainees. In addition, six bee colonies, each with up to 40,000 bees, have been established on the meadow behind Plant III. These colonies belong to a local beekeeper who keeps them on a trailer located on our premises.

2025: CSR Report
Retrospectively for the fiscal year 2023/24, we are publishing our first voluntary CSR report for the entire NETZSCH Group, aligned with the requirements of the Corporate Sustainability Reporting Directive (CSRD). This report marks the start of an ongoing development of our reporting practices, preparing us for the future mandatory reporting obligations.

The Sustainability Report of the NETZSCH Group is available on our website.

2026: District Heating Connection
As a further step towards independence from fossil fuels, a district heating connection is planned for Plant III.

IMPLEMENTED MEASURES

Conclusion

NETZSCH acts with foresight and sustainability in terms of environmental protection and energy. We will continue to protect the environment, create attractive jobs and be an exemplary company in all areas. For this reason, we will continue to expand and continuously improve our environmental and energy management system.

The owner-managed NETZSCH Group is a leading global technology company specializing in mechanical, plant and instrument engineering.

Under the management of Erich NETZSCH B.V. & Co. Holding KG, the company consists of the three business units Analyzing & Testing, Grinding & Dispersing and Pumps & Systems, which are geared towards specific industries and products. A worldwide sales and service network has guaranteed customer proximity and competent service since 1873.

The NETZSCH Business Unit Pumps & Systems offers NEMO® progressing cavity pumps, TORNADO® rotary lobe pumps, NOTOS® multi screw pumps, PERIPRO® peristaltic pumps, macerators/grinders, dosing technology and equipment that are custom built for challenging solutions for different applications globally.

Proven Excellence.

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