



STULZ

CLIMATE. CUSTOMIZED.



SUSTAINABILITY REPORT 2023

Contents

03

We are STULZ

04

Letter from the Management

06

About STULZ

16

Managing Sustainability

24

Sustainable Products

36

Resource-Efficient Production

48

Responsible Supply Chain

56

Good Employer

70

Key Performance Indicators

73

GRI Content Index

76

About the Report

78

Legal Information

We are STULZ

Founded **in 1947**, today STULZ is a leading company in the field of air conditioning.

Our core competencies

- Development, production, installation, start-up, servicing and maintenance of precision air conditioning units, chillers, air handling systems and micro data centers, plus direct liquid-to-chip cooling for IT, data centers, medical technology, telecommunications systems and industry
- Sale and maintenance of comfort air conditioning systems and humidifiers, including water treatment for humidifying systems

8 production sites worldwide in Brazil, China, Germany (Headquarters), India, Italy, Spain, UK and the USA.

To achieve this, we work with an exclusive sales and service network in more than **140 countries.**

STULZ Air Technology worldwide

Employees **> 3,300**

Sales volume approx. **€ 800 million**

ONE STULZ. ONE NETWORK.
Discover the world of STULZ

[→ stulz.com/regions](https://stulz.com/regions)

STULZ Group worldwide

Employees approx. **8,200**

Sales volume approx. **€ 1,700 million** including further business segments

Letter from the Management

Dear Reader,

Our second Sustainability Report covers the global STULZ air conditioning business: In it, we highlight our activities and challenges while providing information, examples and figures from our subsidiaries worldwide.

This report deals with the increasing requests from our customers, suppliers, and other stakeholders for transparency about environmental, social, and governance (ESG) aspects across the entire STULZ organization. True to our motto “ONE STULZ. ONE SOURCE.”, we offer identical product and service quality throughout our global organization. When it comes to sustainability, we set ourselves the same standards.

Furthermore, regulatory changes such as the F-gas Regulation and the Energy Efficiency Regulation, with which we are in compliance, are impacting our business in Germany and across Europe. This report provides

information on the status quo of refrigerant consumption, offers an overview of our globally deployed energy-efficient products, and publishes our first Corporate Carbon Footprint for the German site.

Energy efficiency has traditionally been an important factor for the development of our products across our entire product range. Customers demand new, advanced solutions, which we respond to with technologies such as Liquid Cooling. Digitalization, driven by artificial intelligence, 5G, and streaming, requires efficient cooling solutions for high-performance computing. We are developing concepts to utilize the waste heat from data centers. In doing so, we will contribute to society by helping to supply heat to surrounding facilities. We offer our customers intelligent solutions such as monitoring software for measuring and managing energy consumption, as well as other performance indicators. We have developed technical solutions to reduce noise when Point of Presence stations move closer to residential areas. From our perspective, improving these sustainability aspects in our product portfolio presents numerous opportunities for all stakeholders. We will continue to innovate to implement these changes.

“**AS A FAMILY-OWNED BUSINESS WITH A 75-YEAR HISTORY IN THE MISSION-CRITICAL AIR TECHNOLOGY SECTOR, SUSTAINABILITY IS NOTHING NEW TO US, AND OUR PRODUCTS HAVE MADE A POSITIVE CONTRIBUTION TO MAJOR PROGRESS IN ECONOMIC DEVELOPMENT, DIGITALIZATION AND DECARBONIZATION.**”

Marc-Oliver Stulz, CEO



However, sustainability covers more than just our products. We report on four areas which we have identified as key priorities for the global STULZ organization, with products being among them:

“Sustainable Products” describes how our portfolio addresses different aspects of sustainability. We also describe the status quo regarding topics such as refrigerants and circular economy.

“Resource-Efficient Production” talks about how we deal with energy, emissions and waste at our production sites, in particular, and includes examples from our sales and service sites. Although water consumption for our products is very low, we also include information on managing water.

“Responsible Supply Chain” describes our basic ethics and compliance principles in the STULZ organization and how we address crucial aspects in our supplier management.

“Good Employer” contains facts and examples of how we live up to our responsibilities to our employees across our global sites.

We are convinced that we have created a solid foundation to actively manage our impact on the economy, people and the environment. The next steps, such as a global carbon footprint, product carbon footprints and a harmonized global code of conduct, are underway.

Our organization still has a long way to go to achieve systematic management with clear goals and roadmaps for all key issues. Our contribution to sustainable development will become more detailed in the coming years. We are committed to this path and would be delighted if you would actively join us on this journey.

Yours sincerely,

Jürgen Stulz
Marc-Oliver Stulz
Christoph Stulz
Thorsten Weiss

About STULZ



The complete range of air conditioning technology

For over 50 years, we have been supplying products, solutions and services for air conditioning – with our commitment to precision, efficiency and reliability. The STULZ portfolio extends from traditional room and high-density cooling to chillers and air handling systems all the way to humidifying systems and micro data centers.

STULZ is a pioneer for cooling solutions, mission-critical applications and data centers. By virtue of quality, efficiency and sustainability, the company delivers optimum solutions for every requirement in precision and comfort air conditioning. Leading enterprises in industry, telecoms, banks and retail rely on our product promise.

Our own monitoring software further enhances the portfolio and helps customers to deploy made-to-measure air conditioning solutions in the best possible way for their needs. Furthermore, we offer comprehensive services and after-sales support through a worldwide partner network.

In Germany and Austria, we are exclusive sales partners for air conditioning systems from Mitsubishi Heavy Industries.

With 28 subsidiaries, including eight production sites, as well as a major partner network on all continents, STULZ has a presence in over 140 countries around the world. Today, STULZ leads the world market in Direct and Indirect Free Cooling solutions.



PROGRESS BASED ON TRADITION

STULZ has evolved from an innovative family-run business into a modern global player. Company founder Albert Stulz paved the way for our enterprise with his Electro AS GmbH Hamburg in Germany back in 1947. Just six years later, the company's own air conditioning unit was launched onto the market – a comfort air conditioning system that cooled and dehumidified the room.

The air conditioning system division has consistently grown since 1965. When the data center sector started to boom in the 1970s, STULZ was ready and waiting on the market with air conditioning solutions and direct Liquid Cooling for mainframes. In 1977, we introduced precision air conditioning units with a modular design – a groundbreaking innovation that further strengthened our international reputation as a specialist for efficient air conditioning. In the 1980s, units with Free Cooling were developed. These Free Cooling units offer the greatest energy-saving potential for data centers, especially in cold and moderate climate zones.



Innovative products and solutions

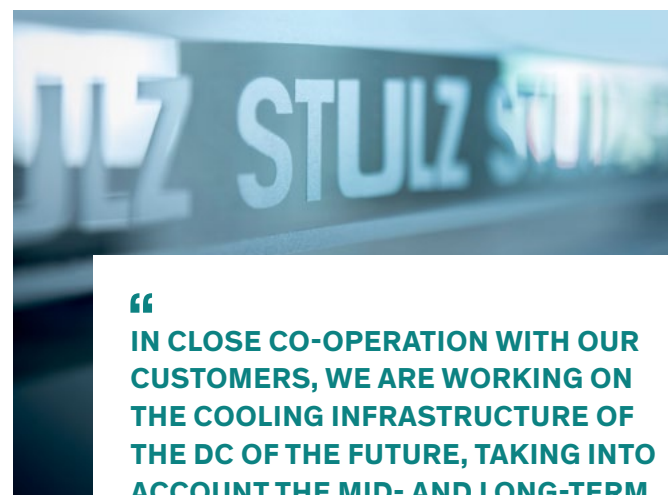
STULZ stands for ultimate quality air conditioning. Thanks to our global network and all-embracing portfolio strategy, today we are able to satisfy all requirements for precision air conditioning. This is in perfect keeping with our claim: "ONE STULZ. ONE SOURCE."

Precision air conditioning is deployed in data centers, in particular, but also in laboratories, museums and medical technology. Our units are helping to bring about global digitalization. At the same time, it is more and more important for our customers to manage increasing data volumes with minimal environmental impact.

In order to remain competitive in a dynamic market, it is vital that STULZ develops new ideas and puts them into practice through future-oriented products and solutions. We constantly invest in research and development to ensure manufacturing of state-of-the-art technologies and control systems that will minimize our carbon footprint.

The energy efficiency of our units has always been a defining feature of our products, which we intend to develop further in the years to come. Topics such as the use of environmentally friendly refrigerants, efficient waste heat recovery, the use of Liquid Cooling and alternative energy sources will become even more important in future.

We strive to adapt our products and solutions to changes in different market segments. For example, we see an ever-growing demand for larger central data centers, while small edge data centers are becoming increasingly decentralized. Other factors changing our industry include 5G and fiber optics. Consequently, we are continuously developing our portfolio accordingly, ensuring our products and solutions satisfy the needs of the market. For more, see (in German): [→ STULZ: Innovation im Rechenzentrum](#)



“ IN CLOSE CO-OPERATION WITH OUR CUSTOMERS, WE ARE WORKING ON THE COOLING INFRASTRUCTURE OF THE DC OF THE FUTURE, TAKING INTO ACCOUNT THE MID- AND LONG-TERM TECHNOLOGY TRENDS AND THE REQUIREMENTS IN TERMS OF ENERGY EFFICIENCY AND SUSTAINABILITY.

Norbert Wenk, Head of Global Product Management



HOW AI REQUIRES NEW TECHNOLOGY

For many years now, predictive AI (Artificial Intelligence) has been an integral part of many data center control and monitoring systems. It helps data center operators increase energy efficiency and enables early detection of impending failures. With the breakthrough of ChatGPT, generative AI is now evolving and becoming a global trend. This development requires data and storage capacities that would have been unthinkable just a few years ago.

In science, medicine, and applications such as autonomous driving, the requirements for computing performance are also becoming more stringent. Add to this the fact that servers used for AI applications multiply their performance capabilities and energy requirement many times over with each new generation, and we see huge power densities in the racks, pushing the air cooling systems commonly used in data centers to their limits.

Rising heat loads per rack require new methods of data center air conditioning. Therefore, Liquid Cooling is the obvious choice for cooling servers efficiently and reliably, despite this additional load. STULZ is developing several products and solutions with Liquid Cooling to address the market demand.

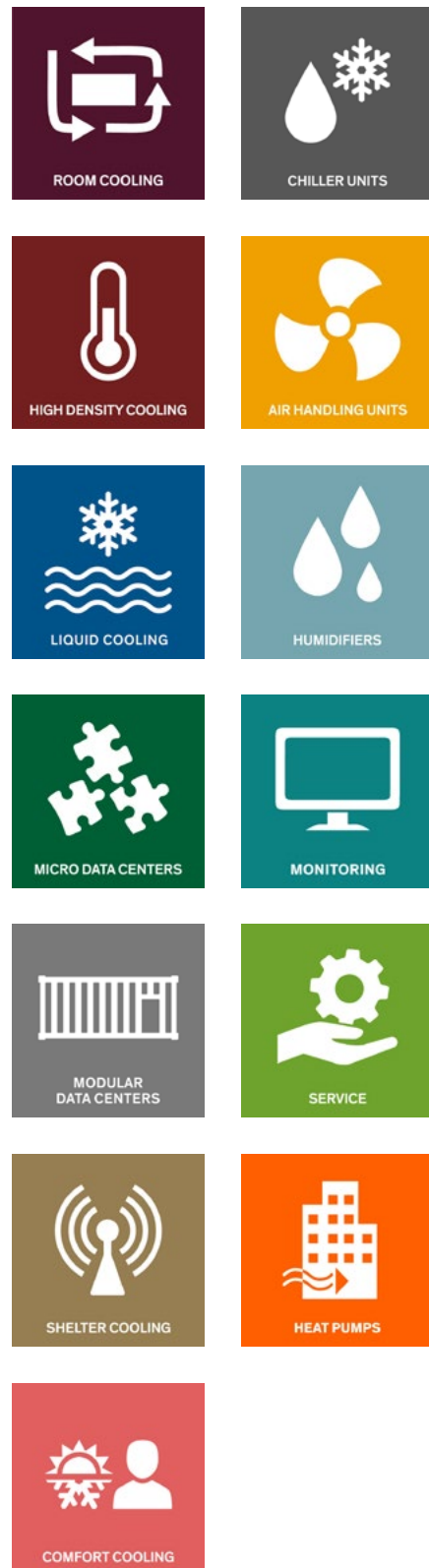
To convert an air-cooled data center into Liquid Cooling, several factors need to be considered in order to correctly install components such as CDUs, cold plates, tanks, and pipes. Racks and servers cannot be used without modifications. If a completely new high-performance data center is being built, Liquid Cooling, specifically with the immersion cooling solution, should be included in the plans, at any rate, and both systems extensively compared with one another at the planning stage.

Liquid Cooling: Energy-efficient cooling, even at high power densities

The increasing use of high-performance computers is presenting cooling infrastructure with new challenges. The efficient and reliable management of extremely high heat loads is of major importance.

Consequently, the demand for innovative cooling solutions is on the rise, with Liquid Cooling emerging as a particularly promising option. STULZ stands as a global partner for customers, offering cutting-edge solutions to tackle these challenges and ensure future-proof cooling infrastructure. The technologies used include Direct Chip Liquid Cooling and immersion cooling (see page 29). For more, see: [→ Our Liquid Cooling solutions page](#)

Our product portfolio



EXAMPLES OF OUR PRODUCT RANGE

Room Cooling



The air conditioning in rooms housing mission-critical applications requires the reliable and efficient removal of large amounts of heat. With precision air conditioning units from STULZ, our clients can rely on 24/7 availability. Our solutions provide continuous air conditioning with optimized energy efficiency, even at high heat loads.

Our **CyberAir** products are one of our flagships. These units are exceptionally flexible and boast highly efficient air conditioning. When combined with Indirect Dynamic or Direct Free Cooling, they offer our customers significant energy-saving potential during their use.



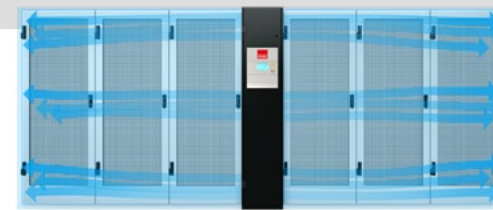
Chiller Units

STULZ Chiller Units are developed for maximum reliability in data centers and industrial buildings. Designed and manufactured under strict conditions, the units are designed to ensure the highest possible energy efficiency at any local temperature profile – 24 hours a day, 365 days a year.



About STULZ

With the **Explorer series**, STULZ is able to offer a budget-optimized yet state-of-the-art chiller with a high level of flexibility that enables it to satisfy numerous customer requirements. The Explorer series is available with a more environmentally-friendly natural refrigerant with a low GWP and has a high Free Cooling capacity to improve energy efficiency.



High Density Cooling

STULZ offers a wide range of solutions and systems for direct rack cooling in order to precisely and efficiently cool high heat loads and hotspots on racks. These solutions provide maximum, reliable and accurate cooling with minimum utility space. Moreover, with the option of Indirect Dynamic Free Cooling,

CyberRow offers high energy-saving potential at high heat loads. The in-line CyberRow solution combines innovative horizontal airflow enhanced with state-of-the-art technology that works with power, flexibility and efficiency – directly at the rack. Fluctuating loads on server racks, spatial constraints, missing raised floors and high density are the parameters for which the CyberRow was developed. The resulting short air conduction routes contribute to the high efficiency of these units.



Air Handling Units

STULZ Air Handling Units can be individually configured and manufactured to meet a wide range of requirements. From small data centers needing roof installation to hyperscale data centers without raised floors: Our indoor and outdoor Air Handling Units offer custom-tailored solutions for projects with optimized energy efficiency.

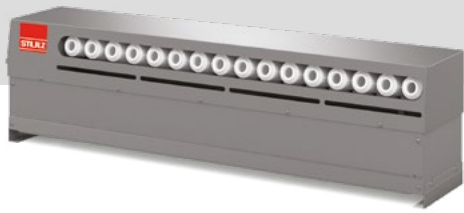
CyberWall devices are suitable for hyperscale data centers yet they are compact and easy to transport. The unit design has been tested and optimized to guarantee efficient and reliable cooling of entire server rooms.



Liquid Cooling

STULZ offers integrated Liquid Cooling systems, manufactured and tested, as well as individual climate units to complement existing Liquid Cooling infrastructure. From design and independent product consulting to installation and maintenance – it all comes from a single source.





Humidifiers

Computers or hospitals, laboratories or offices – humidification is vital for optimally conditioned air. Made-to-measure humidifier solutions ensure highly efficient production in printing and textile industries, as well as in food-related production and logistics.

STULZ **UltraSonic** humidifying systems provide tailor-made humidification, ensuring optimum operation and high-quality standards, as well as high energy efficiency.



Micro Data Centers

Micro Data Centers from STULZ are a cost-effective way of providing scalable IT resources that precisely target customer needs, upgrading mission-critical infrastructure or providing additional computing and storage power for the client's network (edge computing).

With the **Micro DC**, STULZ can offer a complete solution in a single device. The all-in-one principle makes installation very simple and clear. The Micro DC with its modular design and high density also includes environmental monitoring and fire protection.



Shelter Cooling

Free Cooling for stand-alone use in modular buildings, containers, air conditioning receiver and transmitter base stations; STULZ Shelter Cooling units are immediately ready for connection and use based on the plug-and-play principle. They can be precisely configured to customer-specific needs and ensure continuous availability around the clock for years to come.

Our **WallAir** unit is installed outside the container, enabling maximum utilization of

the interior space. These compact, weather-resistant air conditioning units function using the displacement principle and are immediately ready for connection and use. The unit delivers high savings on energy costs – 100% automatically.



Monitoring

We continually strive to improve our cooling systems and solutions, including their control systems, to achieve the best possible results for our customers. That's why STULZ Digital Solutions was founded: to focus on the development of embedded systems, long-term data acquisition, big data measurement, data analysis and 3D data visualization.

CyberHub ECO.DC monitors the data center components and the whole environment (temperatures, humidity, pressure and energy) around the clock. This enhances reliability and flags up potential savings, which can then be achieved. CyberHub ECO.DC supports numerous industry standard protocols, and therefore functions as a higher-level system that can display and analyse a wide variety of information.



Heat Pumps



We are committed to using energy-efficient heat pumps, particularly air-to-air and air-to-water models. These technologies play a decisive role in the energy transition, both in Germany and throughout the EU. Here, we are no longer focusing purely on cooling applications,

but are turning our attention to the use of heat pumps for heating.

The **Q-ton** CO₂ heat pump uses CO₂ as a refrigerant and ensures very efficient hot water production of up to 90 °C for restaurants, sports halls and hotel complexes, for example. Q-ton produces hot water by directing the thermal energy from the outside air into the heat exchanger of the heat pump unit. This means that a significantly higher efficiency level can be achieved even with low outside temperatures.



Service

For over 40 years, our customers have relied on the technical expertise, comprehensive capabilities and global availability of our service at STULZ. We ensure trouble-free, economical and professional operation of technical systems and can take care of the entire application from a single source.



Modular Data Centers

Our modular or containerized prefabricated data centers are built at a STULZ or authorized factory and arrive at a customer site fully tested and ready to be deployed. They are suitable for all data center applications, including the housing of mission-critical IT infrastructure as well as mechanical and electrical plants. A Modular Data Center can be installed externally on a concrete plinth, inside a warehouse – or even in the corner of an office.



Comfort Cooling

The **KX series** provides efficient air conditioning in larger buildings. It offers exceptional comfort and energy efficiency. Indoor and outdoor units can be combined with each other in an almost infinite variety of ways, and can be controlled and monitored centrally and remotely. The KX series is manufactured by Mitsubishi Heavy Industries and distributed under our brand S-Klima in Germany and Austria.



As an exclusive sales partner for air conditioning systems from **Mitsubishi Heavy Industries** in Germany and Austria, we are in a position to offer products that ensure an optimum climate in small commercial buildings or households. Our multifunctional units (for cooling and heating) have excellent energy efficiency and therefore low energy consumption. Mitsubishi Heavy Industries has been focusing on sustainability for a long time.
→ mhi.com/sustainability

PRODUCTION SITES



USA
STULZ Air Technology Systems Inc. in Frederick (Maryland)

- Founded in 2001
- Development, production and distribution of room cooling equipment for the US-American market
 - Production of CyberWall and other large-scale systems for data center cooling
 - Assembly of CRAH and Fanwall products in Dayton, Tennessee



BRAZIL
STULZ Brasil Ar Condicionado Ltda. in Sorocaba

- Founded in 2015
- Production for the Brazilian market



UK
STULZ Modular in Oxford

- Founded in 2016
- Development, production and distribution of Micro Data Center units



SPAIN
STULZ Tecnivel S.L. in Madrid

- Founded in 2016
- Development, production and distribution of Air Handlers, Cyber-Wall devices and heat exchangers



GERMANY
STULZ GmbH in Hamburg

- Founded in 1947
- Headquarters of the international air conditioning technology organization in Hamburg
 - Development, production and distribution for room cooling, high-density production and chillers
- STULZ Digital Solutions GmbH in Hamburg**
- Founded in 2014
- Software development site



ITALY
STULZ S.p.A. in Valeggio sul Mincio

- Founded in 1989
- Development, production and distribution of air conditioning units and chillers for the IT industry and the telecommunications sector



CHINA
STULZ Air Technology and Services Hangzhou Co., Ltd., P.R.

- Founded in 2013
- Development, production and distribution of products for the Chinese and Asian markets



INDIA
STULZ-CHSPL (India) Pvt. Ltd. in Mumbai

- Founded in 2006
- Development, production and distribution of local products for the Indian and Asian markets

SALES AND SERVICE SITES

AUSTRALIA
STULZ Oceania Pty Ltd. in Sydney

AUSTRIA
STULZ AUSTRIA GmbH in Wiener Neudorf

BELGIUM
STULZ Belgium BVBA in Brussels

BRAZIL
Dala Service AR Conditionada, Ltda. in São Paulo

CHINA
STULZ Air Technology and Services Shanghai Co., Ltd., P.R. in Shanghai

FRANCE
STULZ France S.a.r.l. in Rueil Malmaison

INDONESIA
PT STULZ Air Technology in Tangerang

MALAYSIA
STULZ Malaysia SDN. BHB in Iskandar Puteri

MEXICO
STULZ México S.A. de C.V. in Mexico City

NETHERLANDS
STULZ Groep B.V. in Hoofddorp

NEW ZEALAND
STULZ Oceania Ltd. in Auckland

POLAND
STULZ Polska Sp. z o.o. in Warsaw

SINGAPORE
STULZ ASIA HUB PTE. LTD. and STULZ Singapore Pte Ltd. in Singapore

SPAIN
STULZ España S.A. in Madrid

SOUTH AFRICA
STULZ South Africa Pty. Ltd. in Gauteng

SWEDEN
STULZ Nordics AB in Stockholm covering Sweden, Norway and Finland

THAILAND
STULZ Siam Co., Ltd. in Bangkok

UK
STULZ UK Ltd. in Surrey

Managing Sustainability

In-company organization

Our progress in sustainability management and reporting is the result of the joint effort of many players. A team of members from various departments and all our global sites was actively involved in compiling our first global Sustainability Report. During this process, we established our organizational structures for managing sustainability at a global level. The team was led by Environmental and Product Management teams from the German headquarters working in tandem on behalf of the Executive Management. The team for compiling information and data was made up of representatives from all production sites and sales and service sites, who coordinated the work together with their local management and other human resources. For this first global Sustainability Report, we formed an international Steering Committee.

Ultimately, STULZ Executive Management is responsible for managing our sustainability efforts. It will also be responsible for future tasks, such as setting goals, allocating resources for sustainability management, and complying with regulatory requirements. Our Sustainability Team holds weekly meetings with members of the Steering Committee. The Steering Committee and the Project Team at the German headquarters meet three or four times a year.

In the future, sustainability at STULZ will continue to be organized by our Sustainability Team. The existing setup of the Sustainability Report project with representatives from various levels and departments is to be retained.

With members from Executive Management, Quality Management and Product Management, the Steering Committee plays several roles. Examples include taking

OUR COMMITMENT TO THE SDGs

The United Nations approved the 17 Sustainable Development Goals (SDGs) in 2015, to be achieved by 2030. All players – including corporations – are requested to make their contribution. At STULZ, we substantially contribute to these three SDGs with our products and other sustainability activities.
→ sdgs.un.org/goals



strategic decisions, communicating critical concerns, approving the Sustainability Report and acting as the link to Executive Management. The project team, which comprises staff from Environmental and Product Management and various other divisions, is in charge of implementation and recording internal and external requirements. At the headquarters in Germany, various departments, such as Marketing, Purchasing and HR are also involved.

The Works Council in Germany consists of five women and eight men, representing the interests of our workers, in accordance with the German Works Constitution Act. Its most important role is to monitor compliance with legislation, collective bargaining agreements and work agreements. It organizes working committees and is engaged in legal issues, anti-discrimination, equality, social benefits, and environmental concerns.

For the first Sustainability Report 2022 we had surveyed activities and data in Germany and laid the foundations for a defined approach to sustainability management. For the global Sustainability Report 2023, we formed an international team to gather information and data across all international production and sales and service sites. We want to gradually incorporate sustainability throughout the entire organization and have updated our most important future tasks in order to achieve this goal. → [STULZ: Sustainability Report 2022](#)

Our stakeholders

Our stakeholders were identified as part of our ISO certification process (ISO 14001) at our German headquarters. These groups are significant to the global business activities of STULZ. They include customers, suppliers, the general public and employees.

During regular audits, we document and examine the expectations and concerns of our stakeholders. We incorporate stakeholders' concerns when we identify and update our core topics, making sure that they influence our decision-making processes. There are currently no vulnerable groups or groups in need of protection among our stakeholders. With the introduction of global reporting, we are broadening the perspective of stakeholder expectations and concerns to a global level and will continue with this expansion.

Stakeholders' expectations

Customers, including many large, international companies, are demanding greater transparency regarding our efforts toward sustainability. They want long-lasting, energy-efficient products and reliable services. Customers also expect STULZ to align with political framework conditions, such as conditions governing climate protection and the supply chain, for example.

Suppliers play an essential role for stable, reliable supply chains, which are vital to our success. Reliability and partnership are valuable assets on which our relationships should be based.

The **general public** covers various institutions and individuals, for example at our sites and in the business environment. Their expectations are extremely diverse and multifaceted. Here at STULZ, we want to act reliably, with commitment and integrity.

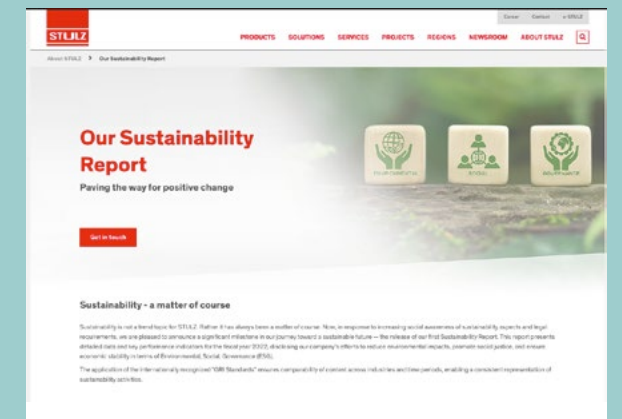
Employees expect STULZ to be an attractive employer, offering opportunities for progression, and with high standards of occupational health and safety. Other requirements are job security, independent working and reliable, transparent communication.

COMMUNICATION WITH STAKEHOLDERS

This Sustainability Report establishes the international framework for regularly and transparently informing various stakeholders about our commitment. Furthermore, we address individuals and organizations with an interest in STULZ's development through additional global channels and formats. We therefore promote sustainability through global activities and communications on the STULZ websites, by providing information about energy efficiency, for example. We want to encourage customers to make informed decisions and help promote awareness of sustainability in our industry. → [STULZ: PRODUCTS](#)

On social media, we explain technological matters and keep readers informed about the latest developments in our products and services. Here, transparency, innovation and approachability are extremely important to us. The opinions and expectations of customers, users and others are incorporated in our product innovations.

Within our global organization, we organize regular interactive events, which we complement through communication at industry events or through surveys. In conversations with customers or suppliers, such as at trade fairs, we coordinate with our stakeholders. The sales offices around the world operate independently according to local and regional needs.



“
OUR FIRST GLOBAL SUSTAINABILITY REPORT IS A JOINT EFFORT BY MANY PLAYERS. ON BEHALF OF THE EXECUTIVE MANAGEMENT, A TEAM OF REPRESENTATIVES FROM ALL PRODUCTION SITES AND OUR SALES AND SERVICE SITES COMPILED INFORMATION AND DATA TOGETHER WITH THEIR LOCAL MANAGEMENT AND OTHER HUMAN RESOURCES.

Ludger Ecke and Jan-Lucas Kinne, Sustainability Team

Material topics

The identification of our material topics lays the foundations for informed reporting and effective sustainability management at STULZ. These topics are strategic priorities for the company. These material topics form the basis for the continuous development of our sustainability management program. For our first report, we worked with a specialist consultancy and the Sustainability Team to set out and internally assess the core topics for STULZ GmbH.

Based on analyses by the Sustainability Team, the status quo was documented and an analysis of the market situation was conducted. During this process, we also identified the requirements that STULZ must fulfill in terms of sustainability. The dynamic market environment, in particular customers, suppliers, competitors and regulatory requirements, delivered valuable information on STULZ’s impact on the environment and society.

From this overall analysis, we then established our material topics – in close consultation with Executive Management – from which four topics were prioritized as focus areas. These in turn cover various specific aspects. For this global Sustainability Report, we analyzed and confirmed the relevance of the material topics throughout the international STULZ organization.

Relevance of material topics in the global organization

In preparation for this report, we conducted an internal materiality analysis evaluating the relevance of the different aspects in our four material topics across the global STULZ organization. The results of the questionnaire confirmed our assumptions about the relevant material topics and aspects. Specifically, we evaluated that:

All **four material topics** are highly relevant on a global scale.

In **“Sustainable Products”**, the focus is on product quality and safety, energy efficiency and refrigerants. Circularity is considered as less significant.

In **“Resource-Efficient Production”**, reduction of greenhouse gases and careful handling of hazardous materials are considered most relevant, followed by diligent energy consumption and energy saving, as well as resource-efficient logistics.

In **“Responsible Supply Chain”**, ethics and compliance are seen as most relevant.

In **“Good Employer”**, almost all aspects were evaluated as highly relevant.

Four material topics with selected specific aspects

Sustainable Products

e.g., energy efficiency, quality and safety, circular economy

Resource-Efficient Production

e.g., energy consumption, emissions, logistics

Responsible Supply Chain

e.g., supply chain management, human rights, compliance

Good Employer

e.g., occupational health and safety, training, modern work environment

Management systems across the STULZ production sites

ISO 9001 Quality management	ISO 14001 Environmental management	ISO 50001 Energy management	ISO 45001 Occupational health and safety management
STULZ China	STULZ China	STULZ Italy	STULZ China
STULZ Germany	STULZ Germany		STULZ India
STULZ India	STULZ India		STULZ Modular (UK)
STULZ Italy	STULZ Italy		
STULZ Spain	STULZ Spain		
STULZ Modular (UK)	STULZ Modular (UK)		

Comprehensive implementation

STULZ has committed, at the highest level, to act responsibly and sustainably, and to treat people and the environment with the greatest care. We attach particular importance to respect for human rights, and are committed to complying with internationally recognized standards such as the ILO Core Labor Standards and the OECD Principles.

High quality standards have been defined for our products in terms of safety, data protection, health and safety and the protection of the environment. Our fundamental obligations are embedded in guidelines, such as security and data protection management and corporate conduct, and in quality and environmental policies.

These commitments have been established by our Executive Management and are shared with employees and stakeholders through our internal communication channels. The implementation and monitoring of compliance with these guidelines are the responsibility of the area managers.

We have set out clear ethical standards and behavioral guidelines in our Code of Conduct. Some local organizations have implemented own Codes of Conduct for employees, such as the production sites in Spain and Italy and the sales and service sites of STULZ Oceania. We are currently working on a global version of the Code of Conduct.

Through regular due diligence of voluntary commitments, we ensure that our business activities and supply chain conform to high ethical, social and ecological standards. The systematic monitoring and prevention of potential risks, such as human rights violations, environmental pollution, corruption and other negative impacts is a future task for STULZ.

Risk management, environmental and energy management, quality management and occupational health and safety management are an established part of our everyday practice. Moreover, at several sites we have introduced a whistleblower system, which gives our workforce and partly also third parties the opportunity to report concerns anonymously, in order to effectively identify and tackle potential problems or violations of our guidelines and standards.

We implement country-specific legal requirements and standards in all countries. The diverse global requirements for energy efficiency, for instance, are a constant challenge and motivate us to continuously improve our equipment portfolio and refrigeration technology. Compliance with regional standards is ensured by local partners in collaboration with our global product management.

CURRENT SERVICE PROJECTS

Within the reporting year, we have enhanced value for our customers and improved our processes through a major project known as PASS (Project After Sales Service), which examined the entire process chain from order entry, production, delivery and service to the end of the product life cycle with the aim of increasing our process efficiency. On this basis, we initiated a range of projects, with a revised service level concept, including a ticketing system. In addition to this, the management structure in production in Hamburg will be adjusted to smaller teams with a more direct management structure. This is intended to improve efficiency and satisfaction in production.

The ticketing system for our services will provide a platform where customers can access and directly report defects and quality issues. Based on the underlying information, the customer will be automatically routed to the company that built the product, to obtain an error analysis and support. This entire process will be paperless, quick and effortless using an app. The implementation of this ticketing system is planned for the German organization initially, but will then be rolled out globally.



A WELL-STRUCTURED ORGANIZATION

The STULZ China site in Hangzhou is certified by several ISO standards (ISO 9001, ISO 14001, ISO 45001). The company management guideline includes a quality policy, environmental policy, occupational health and safety policy and a labor and social responsibility policy. Progress is tracked via several business performance indicators. Compliance is currently covered by an Employee Handbook and an Annual Employee Compliance Confirmation Letter.

In 2023, STULZ China was awarded the “Excellent Enterprise Award” and the “Best Growth Award” in Shanghai Xinzhuang Industrial Park.

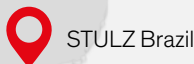


AUDITED QUALITY MANAGEMENT

The S.O.L. Program in Brazil is a quality tool for continuous improvement in daily work. S.O.L. is the Portuguese abbreviation for Safety, Organization and Cleanliness. The site is regularly audited in line with S.O.L., and several indicators are monitored to improve performance. Examples of the benefits of the program include better organization, a clean environment, safety, increased collaboration between colleagues, improved waste disposal, raised awareness and lower costs.



Recycling bins in the production site of STULZ Brazil



Memberships and cooperations

In addition to our obligations and company standards, we show our commitment through membership of relevant organizations in our industry. By doing this, we want to actively move forward with changes and advances in our industry, develop innovative solutions, and do our bit to get the air conditioning industry on track toward sustainability. STULZ is a member or associate of various industry-related organizations across the countries we operate in.



EXAMPLES OF OUR MEMBERSHIPS AND COOPERATIONS



The FGK (Fachverband Gebäude-Klima e. V.) is a leading industrial association for air conditioning and indoor air quality in Germany. It advocates the interests of our industry with market partners, politicians, standardization institutes and the scientific community.



STULZ is member of the Sustainable Digital Infrastructure Alliance (SDIA), an esteemed European platform for sustainability in the digital infrastructure sector. The SDIA is working on drawing up a roadmap for sustainable digital infrastructures up until 2030, and offers its members the opportunity to get actively involved in shaping this sector. Practical challenges are mastered by innovation labs.



Since September 2022, we have been a member of the bwp (Bundesverband Wärmepumpe e. V.). This German federal association is committed to establishing heat pumps as an efficient renewable air conditioning solution.



STULZ S.p.A. in Italy is associated with ASSOCLIMA – Costruttori Sistemi di Climatizzazione. This is the Italian association federated with Anima Confindustria, which represents manufacturers of heating, ventilation and air conditioning systems for buildings and industrial processes. Within the association, STULZ Italy coordinates actions for defining new standards.

STULZ Modular (UK) has a range of memberships and cooperations, among them the Institution of Mechanical Engineers, a global community providing lifelong learning opportunities and space for innovation. It is also a member of the Uptime Institute, the Standard bearer for Digital Infrastructure performance.



Our US site is member of ASHRAE. Founded in 1894, ASHRAE is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry.

STULZ is also associated with ASHRAE Technical Committee TC 9.9, which is concerned with all aspects of mission-critical facilities, data centers, technology spaces, and electronic equipment and systems.

Across Europe, we cooperate with the EN 50600 series. This is a framework of standards and technical reports covering the design, operation and management of data centers, as well as the key performance indicators for their energy-efficient operation.

REGULATION AS A DRIVER

Regulation is a major driver for sustainability at STULZ, at our headquarters in Germany and the rest of Europe as well as around the world. Besides customer expectations, regulations are currently among the most relevant aspects to consider when managing sustainability. Some regulations are local – such as the Supply Chain Act in Germany, for example. Our parent company, STULZ Verwaltungs GmbH & Co. KG, had to comply with this Act in the 2023 fiscal year, so that STULZ Germany was included in the respective assessments and provisions.

Some regulations apply at European level, such as the F-gas Regulation, which limits and partly phases out certain refrigerants. During the assessment of the status quo at our international sites, we also gathered information on the specific regulatory requirements across our global organization.

Sustainable Products

Where product sustainability is concerned, we are and will be focusing on four key areas across the global STULZ organization:

— **High quality and safety standards**

— **Energy efficiency**

— **Low GWP and natural refrigerants**

— **Circular economy**

Our products and brands

With our subsidiaries and a major partner network on all continents, STULZ has a presence in over 140 countries around the world. This way, we can cover the entire bandwidth of refrigeration, air conditioning and air handling and, with our specialist partners, we are also in a position to offer facility management.

From development, manufacture, installation and start-up to the servicing and maintenance of equipment, STULZ covers a broad spectrum in the value chain. We deliver this spectrum for our broad product portfolio, which includes precision air conditioning units, chillers, micro data centers and software for mission-critical cooling.

Our extensive product portfolio enables us to serve a broad customer base in various industries, and to accompany them throughout the entire product life cycle. A committed team of service employees reliably takes care of our precision and comfort air conditioning units with maintenance, servicing and customer service during their life cycle.

“**AT STULZ, QUALITY ISN'T JUST A WORD. WE SEE IT AS A PRINCIPLE. WE STAND FOR GERMAN ENGINEERING AND FAMILY TRADITION. WE OFFER HIGH-QUALITY, DURABLE AND HIGHLY EFFICIENT PRODUCTS AND ACCOMPANY OUR CUSTOMERS THROUGHOUT THE PRODUCT'S LIFE CYCLE.**

Björn Kiffer, Vice President of Global Quality Management



Under our claim “ONE STULZ. ONE SOURCE.” our products and solutions are deployed in IT, data centers, medical technology, telecommunications systems and industrial cooling. These customers use business-critical air conditioning across one or more regions. Our sales are solely to B2B customers, including certified specialist firms in refrigeration, air conditioning and heating. At S-Klima, refrigeration and air conditioning companies are the most important customer groups.

The customers' points of contact are largely responsible for air-conditioned systems and applications in their company and work in roles such as planning, technical or IT management, project management and processing.

We use the STULZ brand for our own products. Our S-Klima brand exclusively distributes premium climate systems from Mitsubishi Heavy Industries in Germany and Austria and offers its own complementary products and STULZ humidification systems. In Germany, the software provider SDS complements our portfolio with solutions such as CyberHub.

STULZ is a world leader in energy-efficient temperature and humidity management technology. As specialists in data centers and telecoms facilities, STULZ offers precision air conditioning units for use 24/7, 365 days a year.



Sustainability:
Key priorities for our products

All the products and solutions we sell are in line with central industry-specific regulations. Chief among these are the CE Declaration of Conformity, the Energy Efficiency Directive, the Ecodesign Directive and the F-gas and REACH Regulations. Directives on the leak tightness of refrigerant circuits were also adopted as part of the Kyoto Protocol and Paris Agreement on climate change. We comply with these directives consistently and as a matter of necessity. Our units bear a special label as proof that they have passed the leak test.

LEGAL AND CUSTOMER REQUIREMENTS

Numerous local and regional regulations apply throughout our global organization. For example, in Brazil, water consumption and pollution are regulated. In India, our work is governed by a range of acts and regulations on such matters as environmental protection, energy conservation, prevention and control of water and air pollution, and the management and handling of plastic and electronic waste. The US states and Canadian provinces have different localized regulations.

Several countries have health and safety acts as well as equality acts in place. In the Nordic countries, there are country-specific rules for the GWP of refrigerants. In Singapore, there is a Green Labeling Scheme that requires a minimum standard in energy efficiency for both products and systems.

Customer questionnaires show a broad range of topics with some similarities across the global organization. Examples of product-related information requests include CO₂ footprint data and energy efficiency data for products, information on recycled materials used, minimum life cycle requirements and transparency concerning policies and objectives such as climate protection and refrigerants.

OUR ROLE IN THE TRANSFORMATION

Our industry can make a significant contribution to the achievement of environmental and climate goals, and here at STULZ we want to be actively involved. We are working to bring technological progress and sustainability into harmony, so that our products achieve resource efficiency, reduced operating costs and a smaller carbon footprint. We are passionately committed to developing and using advanced air conditioning technologies for data centers.

STULZ fosters different areas of digitalization through its technologies, including the expansion of 5G and fiber optics, by providing cooling solutions for the telecoms industry and Point of Presence stations. To do this, we partner with our subsidiary in Italy for Shelter Cooling, for example, and with STULZ Modular in the UK for our Modular Data Centers.

There are currently no institutions or standards that independently test the efficiency of equipment for data centers. Therefore, market-based comparisons of such things as the energy efficiency of air conditioning units are not possible. In some areas, we are already helping the market to move along with the energy transition: for example, some heat pumps and air conditioning units from the S-Klima range have proven performance indicators (Seasonal Coefficient of Performance, SCoP), which meet the stringent criteria for government funding for installation in private households.

With the Eurovent certification of our products from Mitsubishi Heavy Industries, an independent test laboratory confirmed the technical data and efficiency values of these units. The Eurovent certification is valid for the European market.



Sustainable Products

High quality and safety standards

Products from STULZ and S-Klima satisfy the highest quality standards and are subject to relevant European regulations such as the Machinery Directive. For this, we meticulously monitor the product certificates provided by our suppliers, to make sure that requirements – such as those stipulated by REACH or RoHS regulations – are complied with. With the CE label, we declare our compliance with safety and quality standards according to European standards and directives.

Several of our production companies operate a quality management system (see page 19). This defines the processes in conformity with the requirements of ISO 9001:2015, which include supplier management, design verification, and inspections during production. The necessary certifications are also obtained.

What's more, all STULZ production sites have their own Test Center for testing prototypes, products and function.

When developing our units, we aim to achieve a service life of 10 to 15 years. However, some of our equipment has been running reliably for up to 20 years. Our units are designed for continuous operation 24/7, and take into account the requirements of the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) for efficient data center operation. They are service friendly, with simple replacement of wearing parts. In individual cases, equipment can easily be converted to suit changed operating conditions. In addition, the option of remote monitoring helps to ensure safe and reliable operation and dispenses with the need for the physical deployment of a service engineer.

STULZ GmbH has a certificate that attests not just to the high quality of our units, but also to their energy efficiency. In acquiring this seal of approval, we have also committed ourselves to providing spare parts for all our equipment for at least ten years after discontinuation of the product.



BALANCING PERFORMANCE AND ENERGY EFFICIENCY

In close cooperation with our customers, we examine and define the most efficient operating ranges for their applications. With an integrated control system, the design conditions and energy efficiency values are adapted to ensure that the customer's various operating points are within our products' best and most efficient performance range.

This is illustrated by an example from STULZ Oceania. The organization was engaged to carry out an on-site audit of two telecoms facilities of a customer. Both sites had numerous CRAC units that were more than 20 years old and needed replacing. STULZ Oceania's load analysis found that the installed cooling capacity far exceeded the actual cooling load. The customer ordered the replacement units, which were installed in early 2024. Once the replacement was completed, the facilities saw a reduction in power consumption of over 20%. The customer was very pleased with the results.

STULZ Oceania



Energy efficiency

We are committed to high energy efficiency for our products. With precision air conditioning units, the most important levers for optimum energy consumption are:

- maximized heat exchanger surface areas
- filter surface areas
- optimized air conduction
- carefully coordinated components.

In our S-Klima line, energy efficiency is achieved, in particular, by the use of energy-efficient air conditioning systems and humidifiers, heat pumps and cooling solutions, as well as suitable monitoring.

Energy-efficient products should also run on an environmentally friendly energy mix. We tell our customers about the advantages of using renewable energy. The electricity mix is an important factor for the customer's carbon footprint due to the high electricity consumption during the use phase. The first projects using energy supplied directly from wind turbines and solar panels have already been successfully implemented with customers, and we are currently working on a standardized solution. What's more, we are also developing products and system solutions for efficient waste heat recovery, in order to significantly reduce CO₂ emissions.

By measuring the CO₂ footprint of our products, we will increasingly find concrete approaches to increasing energy efficiency and thus reducing emissions. The environmental impact of STULZ products throughout their life cycle has become increasingly important in recent years. That's why we embarked on a pilot project with a customer in Germany: We initiated an Environmental Product Declaration (EPD) process for a CyberAir 3Pro unit, in order to gain experience of implementation. The project was launched in the last quarter of 2023 and will be completed in the course of 2024. As part of the project, we are looking at how we can make this information available to customers in the future. As part of our climate-customized approach, we offer a wide range of product options – therefore, verified concepts such as EPDs are especially pertinent and wide-ranging.

We use inverter technology for all products from Mitsubishi Heavy Industries, without exception. The "HyperInverter" label denotes units that have been specially trimmed for energy efficiency.

One example of a technical solution that increases energy efficiency is Liquid Cooling. Because liquid absorbs heat better than air does, Liquid Cooling has a particularly high Power Usage Effectiveness (PUE). Alongside Germany, the US and our Asia Hub are among the regions where Liquid Cooling products have recently been launched on the marketplace.

WHAT IS LIQUID COOLING?

The most common method of cooling a data center involves the traditional separation of the data center into hot and cold aisles in a process known as containment. If only air cooling is used, in practice the possible power density per rack is roughly 50 kW. This figure is more than adequate for many IT applications, but rapidly becomes a limiting factor where high-performance artificial intelligence systems are concerned.

If Liquid Cooling is used, most of the heat transfer takes place in a closed system without an intermediate medium. Here, additional air cooling is only required for cooling certain components such as power supply units. As it requires less room, Liquid Cooling is also ideal for edge locations with little space and frequently changing ambient temperatures.

Overall, liquids can absorb more heat than air, which means that the power density can also be significantly increased: With Liquid Cooling, figures of 120 kW per rack can be achieved without problem. Even power densities of 250 kW are no rarity in the industry. In practical use, this places additional demands on the electricity infrastructure and hydraulics.

Currently, different versions of Liquid Cooling are available, which differ in design and efficiency. In one version, the parts to be cooled come directly into contact with the cooling liquid (immersion cooling); in the other, the components are equipped with a heat sink, through which the cooling liquid flows (direct-to-chip Liquid Cooling).

Another difference is the way in which the cooling liquid is circulated. In 1-phase Liquid Cooling, a dielectric fluid is selected so as to ensure that the absorbed heat cannot reach its flash point and always remains liquid. In 2-phase Liquid Cooling, the liquid perpetually changes its aggregate state due to the differences in temperature. The advantage of the 2-phase version is that it manages entirely without pumps and therefore fewer moving parts are required. On the other hand, the higher GWP (Global Warming Potential) of these fluids has to be taken into consideration.

STULZ Germany

STULZ China

JOINT DEVELOPMENT OF A CDU PRODUCT

A Cooling Distribution Unit (CDU) for use in Liquid Cooling systems was jointly developed by STULZ Germany and STULZ China. The CDU is a central component in both direct chip and immersion cooling solutions to maximize heat exchange within a limited space. This unit completely isolates the facility water system and technology cooling system sides of the Liquid Cooling system, and accurately controls the supply temperature and flow rate of the coolant while consuming minimal power. Our in-house development of the product represented a huge technological leap forward. In our development of Liquid Cooling, we exchanged knowledge with producers and start-ups in the field. Furthermore, in India, a prototype of a Liquid Cooling tank was constructed.





STULZ Modular (UK)

Sustainable Products

LIQUID COOLING FOR A SUPERCOMPUTER

The University of Göttingen in Germany is home to Emmy, one of the top 100 most powerful supercomputers in the world. In a new prefabricated Modular Data Center, an innovative hybrid data center cooling solution from STULZ Modular supports energy-efficient operations for Göttingen University's leading supercomputer.



Energy efficiency is vitally important for cost-efficient data center operations. However, the primary goal of most data center designs is to ensure reliable operation of the IT equipment and maximize uptime. Increasing heat density means that traditional room-focused approaches to cooling using air as the medium for heat removal are no longer fully effective and present a growing risk of thermal shutdowns. The applied hybrid data center cooling solution uses direct-to-chip Liquid Cooling for hotter server components, including processors and memory devices. It operates in conjunction with row-based air cooling to remove heat produced by other components and server room equipment, providing an effective and efficient response to the challenges outlined above.

The overall solution proposed by STULZ was required to meet the University's demand for a low PUE and reduced carbon footprint for its data center operations. This project was able to achieve a PUE of 1.13 compared to an average PUE of 1.56 for an air-cooled data center. This is a saving of 3.96 GWh a year at an average load of 75%, reducing electricity consumption by 27%.

ENERGY EFFICIENCY WITH FREE COOLING

We are committed to delivering energy-efficient solutions such as Free Cooling to cool our customers' infrastructure, because this way we minimize their carbon footprint and also effectively lower their operating costs. With Free Cooling, cooling is provided from natural cold air instead of using mechanical methods (compressors). High-efficiency air conduction is also key: By designing the surface areas of heat exchangers and filters to be as large as possible, we achieve maximum energy efficiency values and can therefore exploit existing efficiency potential to the max.

“
OUR CONTINUAL FOCUS IN R&D PROCESS IS FINDING AND DEVELOPING INNOVATIVE SOLUTIONS AND TECHNOLOGIES THAT REFLECT OUR COMMITMENT TO SUSTAINABILITY.

Jörg Desler, Global Director Technology

EXAMPLES OF ENERGY-EFFICIENT PRODUCTS AND SOLUTIONS



Our **CyberAir 3PRO** series is the result of over 30 years of project experience here at STULZ. It was specially developed for uninterruptible operation in data centers. For this, the design conditions were repeatedly adapted in line with ASHRAE recommendations, because these focus on reliability and efficiency. This way, our customers can optimize their running costs. The STULZ control system guarantees maximum precision, reliability and energy efficiency. The system therefore offers an ideal performance with a minimal carbon footprint. State-of-the-art cooling technology, flexibility and simple transport, installation, servicing and maintenance ensure that it satisfies our customers' individual requirements.



Our **CyberCool Explorer WS chillers** are specifically designed to meet the cooling needs of data centers. The integrated Free Cooling can operate for most of the year, ensuring high energy savings. It also uses low GWP eco-friendly refrigerants such as R513A or R1234ze.

PROMOTING ENERGY-EFFICIENT SOLUTIONS



STULZ Singapore

STULZ Singapore is currently engaged in promoting advanced energy-efficient solutions to customers in Singapore and Malaysia. The focus is on products such as FanWall, Air Handling Units and our new Liquid Cooling solution. Our Liquid Cooling solution, in particular, has gained significant traction as a promising energy-efficient option for customers. Our team collaborates closely with regional product management and manufacturing facilities to tailor optimal solutions for our clients.



STULZ Air Handling Units can be individually configured and manufactured to meet a wide range of requirements, from small data centers with the need for roof installation to hyperscale data centers without raised floors.

CyberWall units, engineered and produced in Hamburg, are compact and easy to transport. The CyberWall combines maximum cooling capacity with minimum power consumption. At the same time, it offers easy handling and installation, and is specially designed for indoor use.



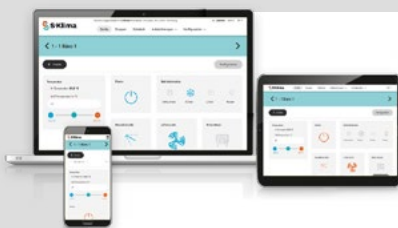
The **UltraSonic** humidifier generates an extremely fine mist that's easily absorbed by the ambient air. By further developing this technology for more than 40 years, today it achieves an energy consumption of 60 W per 1 kg/h of humidifier capacity. This makes it approximately 93% more effective than conventional steam humidifiers. As extremely durable components have been installed and the steam cylinders don't need replacing, operation is resource-efficient.



STULZ Shelter Cooling units are designed for air conditioning containers, modular buildings, and receiver and transmitter base stations with a plug-and-play principle. Products such as **WallAir** for outdoor use and **TelAir** for indoor installation guarantee reliable and efficient operation all year round with long maintenance intervals. The low CO₂ emissions are the result of Free Cooling, which cuts energy consumption by over 90%.



The **Q-ton** CO₂ heat pump slashes annual CO₂ emissions by 74% compared with electrical heating systems and by 48% compared with gas boilers. With the natural refrigerant CO₂ (R744), these air-to-water heat pumps are an eco-friendly alternative to conventional heating systems in existing buildings. Their Coefficient of Performance (CoP) of 4.3 is proof of maximum efficiency with natural refrigerant. With a Global Warming Potential (GWP) of 1 and an Ozone Depletion Potential (ODP) of 0, the Q-ton CO₂ heat pump is especially environmentally friendly and virtually exempt from the provisions of the F-gas Regulation.



With the **CompTrol** control system, we enable optimum control of our comfort air conditioning systems

throughout the year. This solution records and documents operating temperatures. With the addition of the "automatic temperature control" function, the energy efficiency of the entire air conditioning system can be enhanced. Thanks

to energy monitoring, customers can keep an eye on the energy consumption and energy efficiency of air conditioning systems.

CyberHub ECO.DC is an intelligent system for monitoring and optimizing the data center. It displays, for example, load capacity and cooling performance, and automatically suggests improvements. CyberHub allows the efficient use of cooling devices and generates cost savings through low energy consumption.

Low GWP and natural refrigerants

Refrigerants are an essential element in almost all our products, as air conditioning units and cooling system cannot run without them. As a manufacturer, we are completely dependent on what refrigerants and cooling components are available on the market. This demands close monitoring of the latest developments in the market and in legislation, such as the F-gas Regulation, which is highly relevant across Europe and has been renewed for 2024. We are preparing to adapt our products with refrigerant alternatives. We also work with our component suppliers to achieve this.

Low GWP refrigerants are better for the environment due to their lower greenhouse effect. However, they also have adverse characteristics, such as high flammability (propane) or toxicity (ammonia). Therefore, their use in customers' systems entails complex safety measures. Moreover, they are still considerably less efficient in refrigerant circuits. Consequently, many customers still demand traditional, conventional refrigerants. Despite their disadvantages, we assume that the market will shift toward natural refrigerants in future. There are more and more incentives in the market, for example through the F-gas Regulation, which are making low GWP refrigerants much cheaper.

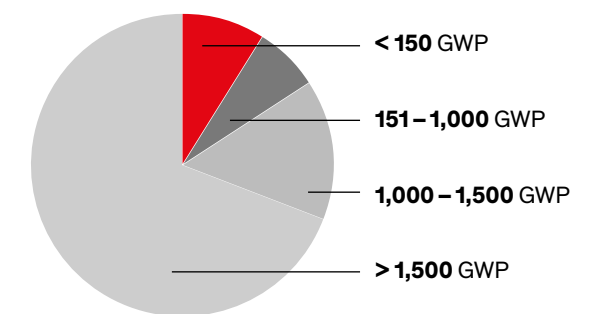
In light of ongoing discussions about the F-gas Regulation, we see it as our mission to forge ahead with the development of units with natural refrigerants as possible future alternatives. Their actual use will depend on component availability, the balance between safety and efficiency, and customer acceptance.

Many popular chemical refrigerants have Refrigerant Safety Classification. This means that they are highly efficient and optimized for use in our product portfolio. Nevertheless, they have a high GWP, meaning that they contribute to global warming. It is our responsibility to minimize the use of refrigerants with a negative impact on the climate, while gradually transitioning to refrigerants with a lower greenhouse effect.

We are already taking action to achieve these objectives:

- The transition to eco-friendlier refrigerants with a low GWP – these are generally natural refrigerants – is one way our industry can progress. We are already using more sustainable refrigerants such as R1234ze and R513a (hydrofluoroolefins).
- In S-Klima products, the natural refrigerant R744 (CO₂) is also used.
- We also plan to use R290 (propane) in future. The advantage of propane is its exceptionally low GWP of 3. Moreover, its excellent thermodynamic properties enable high energy efficiency. It is suitable for mixing with numerous oils, further boosting its flexibility. Its high flammability, however, is a disadvantage. Flammability is a major factor, especially for shelter cooling (radio masts such as 4G/5G and Point of Presence (POP) stations), as there is a wide variety of electronic components in a confined space.
- R513A was introduced as a short-term alternative with a GWP of 573, and offers the great advantage of being non-flammable.
- In addition, we have equipped our CyberCool Indoor units with R454c as standard for the first time. With a GWP of 148, it can be used for longer periods. Due to the small filling quantities, the classification as A2L (flame-retardant) is less critical. Further solutions are being developed.
- We attach great importance to the tightness of our systems in order to prevent leaks in refrigeration circuits. The possible loss of refrigerant is a significant Scope 3 aspect in the carbon footprint of our products and will therefore be a focus for the future.

2023 Used refrigerants, by Global Warming Potential (GWP)





CHILLER WITH NATURAL REFRIGERANTS

STULZ CyberCool Indoor, manufactured in Hamburg, offers powerful and highly efficient cooling in the smallest space. The chiller enables flexible cooling solutions such as Free Cooling. As CyberCool Indoor is available in three different variants, the systems are scalable and can be adapted to future requirements.

A special feature: CyberCool Indoor is available with the natural refrigerant 454C, with a low GWP of 148.



“**THE STRONG FOCUS ON FURTHER DEVELOPING OUR COOLING SOLUTIONS REFLECTS OUR COMMITMENT TO SUSTAINABILITY AND INNOVATION.**

Rocco Bressanelli, Air Conditioning Product Team Leader
STULZ Italy

NEW REFRIGERANT ALTERNATIVE

In 2023, R513A was introduced as a new refrigerant alternative for the German and the Italian markets. It is a short-term alternative with a GWP of 573 and offers the great advantage of being non-flammable.

R513a is a hydrofluoroolefin-based azeotropic, non-ozone-depleting, low Global Warming Potential (GWP) refrigerant for medium-temperature refrigeration systems. Although its GWP is lower than that of conventional refrigerants, it cannot match the reduced GWP of a natural refrigerant. Yet, R513A offers a major advantage as it is classified in safety class A1. This indicates that it is non-toxic and non-flammable and therefore offers a safe alternative to natural refrigerants. R513A can currently be used in CyberAir 3Pro, as well as in the Shelter Cooling Line at STULZ Italy.



STULZ Germany

STULZ Italy

Circular economy

STULZ meets the reporting obligations of the European Directive on Waste Electrical and Electronic Equipment (WEEE). The German STULZ GmbH is registered accordingly, and registration for the STULZ brand as a whole is in progress. The circular economy is set to become a major focal point for our industry over the next few decades – tying in with efforts in the European Union to close loops by 2050, which we are keeping a close eye on.

We are also currently targeting our efforts at various aspects of the circular economy, to fit in with the different requirements of our individual business units. This includes equipment recyclability, component reuse, use of recycled materials in products, and Life Cycle Assessments. What's more, STULZ has the potential to develop these themes on a global scale.

Currently, we already comprehensively cover recycling aspects in our use of packaging. The plastic films and wooden pallets we use are fully recyclable. Furthermore, we have established recycling and reuse loops for various materials in our production in Germany. Recyclable materials were identified as a significant aspect in our Environment Product Declaration project in Germany: The examination of CyberAir confirmed that it has a high proportion of recyclable material.

We are currently in the planning stages of a recovery scheme, in collaboration with a German partner from the electronics sector. With this system, we aim to refurbish fans and recycle refrigerant, steel and copper. We will increasingly work together with partners in future on these complex interdisciplinary issues.

We have not yet set up any take-back schemes for our products. However, numerous registrations guarantee our compliance with legislation on electrical waste and packaging in the European market. We are therefore also involved in the circular system through regulatory requirements. Take-back is carried out by specialist companies.

FIGHT AGAINST PLANNED OBsolescence

STULZ France actively fights against planned obsolescence by adopting an approach focused on sustainable design, extended warranties, upgrade programs, and by raising awareness among its customers to promote responsible consumption.

This is part of other activities promoting a circular economy, among them taking broken down small appliances to resource centers and choosing recycled office supplies if available.



STULZ France

Resource-Efficient Production

As a manufacturing company, resource-efficient production plays a major role in our business. We have defined five environmental aspects as priorities:

— **Diligent energy consumption and energy saving**

— **Reduction of greenhouse gases**

— **Efficient water use**

— **Waste prevention, reduction and reuse**

— **Careful handling of hazardous materials**

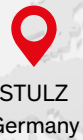
— **Resource-efficient logistics**

The strategic importance of environmental protection

Our production sites in Europe, China and India have management systems that are certified according to the ISO 9001 (quality) standard. These European and Asia Pacific production sites are also certified according to ISO 14001 (environment). Our task in the future is to further develop these management systems.

We share information, as required, about energy use, goods and services for environmental protection, and climate-impacting substances (F-gas). Through our global collaboration in various standard committees and specialist working groups such as ASHRAE, we stay up to date and share our findings with our subsidiaries.

POLICIES AND STRUCTURES



The quality and environmental policy of the German headquarters is an integral part of the corporate strategy. In it, we emphasize the significance of environmental protection for our business activities. A core aspect of the policy is our voluntary commitment to develop and sell innovative, energy-efficient, high-quality products and services that are environmentally sound. The importance of environmental protection is a key topic within the STULZ GmbH policy statement on safety, health, protection of the environment and data protection.

In our Code of Conduct for the German organization, we describe the importance of environmental protection and have compiled specific guidelines for employees as well as expectations for customers and suppliers. For example, workers are obligated to adhere to environmental protection provisions. As for customers and suppliers, we expect them to follow the relevant domestic and international laws and declare their CE conformity by evidencing their compliance with the required technical standards. Moreover, environmental protection requirements are integrated into our terms of purchase, including stipulations on the use of eco-friendly packaging materials.

We ensure compliance with principles and requirements through an integrated quality and environmental management system. This integrated management system is monitored annually by an independent organization and is certified on a regular basis. It is promoted and further developed by the plant management. In the “Integrated management system” manual, we have defined instructions, guidelines and action plans, and monitor the implementation of these through internal and external audits. Regular quality, energy, environmental and social compliance audits are carried out at the production site in Hamburg.

We comprehensively assess our environmental performance in an annual environmental and quality management review. We analyze various key performance indicators and action taken, present the results of audits and evaluate the risks and use of resources, any non-conformities and corrective action to be taken. In order to continuously improve, we incorporate feedback from customers and other stakeholders into decision-making process and take into account changes in the market environment. We set ourselves annual targets, which we back up with measures and responsibilities, and we monitor these in the following year’s review.

RESOURCE EFFICIENCY



At our STULZ Modular plant in the UK, 50% of electricity comes from renewable sources. LED bulbs are installed everywhere and, in some areas, automatic lights are used. To cut down on logistic-related emissions, warehouse opening times have been reduced to three days per week. The site runs a paperless office and strives to recycle where possible.



EXPERTS FOR BEST QUALITY

STULZ engineers, designs and assembles maximum precision air conditioning units across the globe, with a huge and diverse range of products and optional extras. STULZ engineers specify every detail of each individual component and define the assembly process in depth. Suppliers manufacture suitable sheet metal components based on this information. Our highlyqualified staff produce refrigerant circuits from copper pipes on digitally controlled CNC bending machines. For the installation of electrical components, our engineers are assisted by a production line with augmented reality. Following the pre-fabrication of these components, the air conditioning units are completed on the assembly lines, before being rigorously tested for craftsmanship and quality. Finally, every unit undergoes an electrical test and final inspection. Non-standard versions are additionally put through a technical test run, to enter default settings and check further safety chains.

- To save energy, we have put a range of measures into practice in production and management:
- Changing lighting to LEDs throughout the company
 - Switching to modern heating systems
 - Use of non-residential thermostats in stairwells and washrooms
 - Use of heat recovery systems to reuse waste heat for our own test benches and data centers
 - Installing micro switches in vacuum cleaner systems, so that they only run when needed
 - Adapting and optimizing indoor spaces to reduce heating needs in production, thus countering energy losses
 - Heating temperature set to 19–20 °C in winter
 - Training and awareness-raising among workers regarding office heating
 - Software-aided central planning for service vehicle deployment to reduce distances, thus saving fuel

STULZ strives to increase the use of renewable energy. We use solar panels, are re-aligning our entire heating strategy toward new technologies, and are gradually replacing existing systems. Almost 17% of our global production is covered by renewable energy with proof of origin. In the long term, we aim to minimize the use of fossil fuels, such as oil and gas.

At our sales and service sites, the influence we have on energy infrastructure is limited, as we do not own the properties. However, since these sites are purely offices, the impact there is comparatively insignificant. We see it as our future responsibility to integrate a sustainability aspect into the selection of rental properties, such as modern heating systems, the use of renewable energies, waste concepts or modern building management.

“
ALL EUROPEAN AND ASIA PACIFIC PRODUCTION SITES ARE CERTIFIED ACCORDING TO ISO 14001. RESPONSIBLE MANAGERS HAVE BEEN APPOINTED TO ACT AS CONTACT PERSONS WITHIN THE ORGANIZATION AND TO FURTHER DEVELOP THE SYSTEMS.

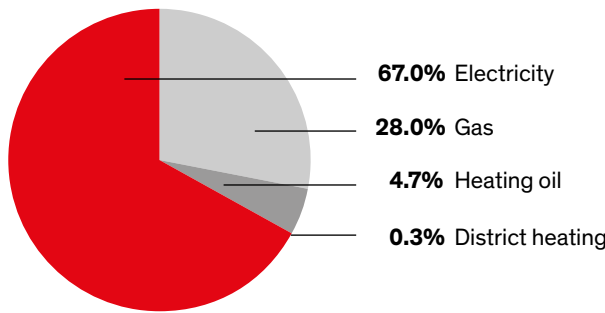
Alberto Coin, Head of Operations STULZ Italy

Diligent energy consumption and energy saving

Energy management is taken care of by the management of the production sites and the sales and service sites.

In the reporting year, total global energy consumption at STULZ was 16,648,087 kWh.

2023 Global energy consumption, by type
Global total: 16,648,087 kWh



Not including France, Nordics, Thailand.

Resource-Efficient Production

GENERATING SOLAR POWER

For STULZ Air Technologies in the United States, the production and use of solar power is of high relevance. In 2023, around 200 MWh of solar power was generated, covering 56.9% of the total energy consumption.

STULZ USA



UPGRADING FOR RESOURCE EFFICIENCY

At our STULZ site in Spain, renovation works have been carried out on the facade and roofs of the factories to improve their insulation against heat and cold. Conventional lighting has also been replaced with LED lights. Installing them at emergency exits additionally improves their visibility. At the production site, wood packaging waste is increasingly being reused in other industries. Thanks to this, the share of wood destined for treatment and use for energy purposes has decreased in favor of reuse.

STULZ Spain



ENABLING CLIENTS TO BE MORE SUSTAINABLE

STULZ Spain develops various solutions that help clients to operate more sustainably, such as through energy efficiency. Energy audits have begun in data centers, during which various aspects are reviewed so that clients can be advised on how to improve the energy efficiency of their facilities. This process involves using tools such as thermal imaging cameras.

Progress has been made in digitalization for managing start-up and maintenance by technicians at the client's site. As a result, we have almost completely eliminated paper at the client's site, optimized technicians' working procedures, and enhanced the speed of creating and sending reports to the client, which in turn has improved our response rates to the client.





STULZ Benelux

MORE SUSTAINABLE BUILDINGS WITH HEAT PUMPS

Comfort cooling is a core area of expertise for STULZ, especially in Germany, Austria and Benelux. In the Netherlands, we have a variety of projects that demonstrate how restorations, overhauls or new equipment can become more sustainable by installing state-of-the-art heat pumps.

In several infrastructure projects across the Netherlands, STULZ Benelux has provided the equipment and services for the installation of cooling and heating. One example is a former inn dating back to 1770 in the Hoeksche Waard. With a hybrid heat pump, we achieved significant energy and cost savings.

Hotel-restaurant Bij Jacob, located in the heart of Lonneker, pursued the goal of transforming a historical location into a leading

destination for visitors who value sustainability and comfort. STULZ delivered energy-efficient and future-proof solutions to make this possible for the two buildings. By installing a Q-ton heat pump, we could provide not only warm tap water but could also feed the under-floor heating when there is no direct demand for hot water.

Another recent project saw the installation of a state-of-the-art CO₂ heat pump at the new gas-free “youth care plus” facility of Pluryn on Valkenheide in Maarsbergen. The goal was to provide an energy-efficient solution for heating tap water, essential for the 28 showers and sinks in each of the two newly built facilities, as well as a cooling option. By partnering with STULZ, the facility has taken an innovative step towards a gas-free future. Opting for STULZ's CO₂ heat pump highlights commitment to environmental responsibility and the well-being of Pluryn's residents.



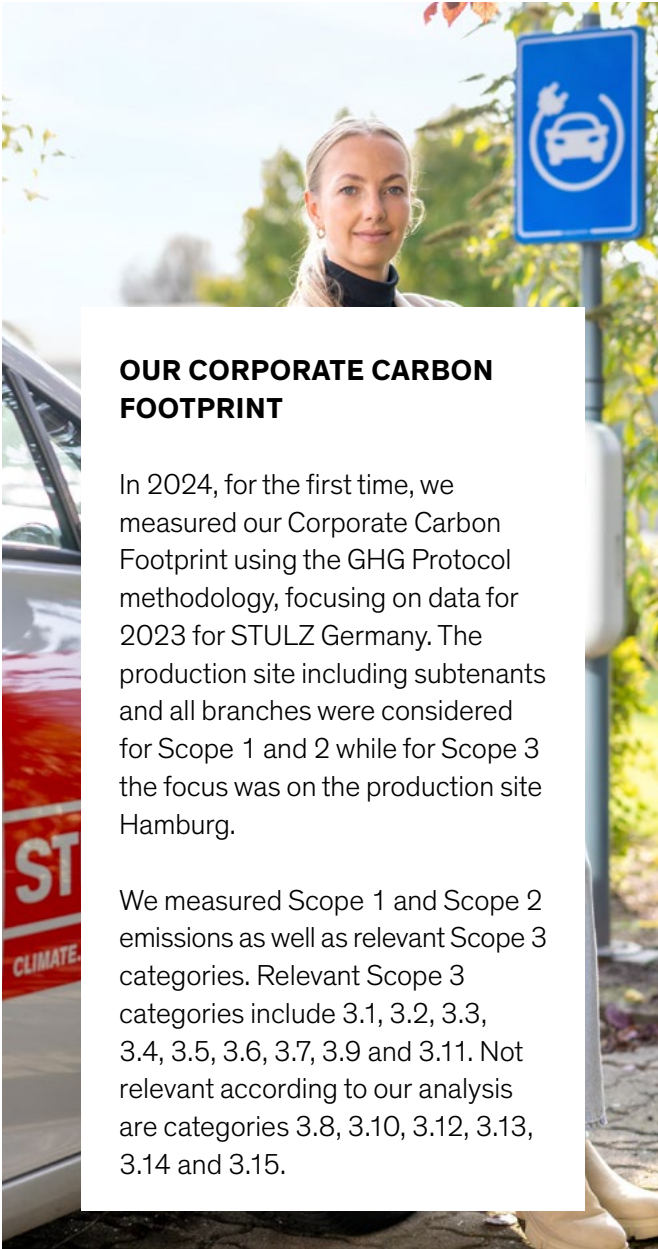
RESOURCE-EFFICIENT SETUP

STULZ S.p.A., Italy, has installed a range of measures for resource efficiency, including:

- A new building acquired in 2023, in which a climate chamber for performance testing of chillers, air conditioning and heat pumps has been installed. It specializes on testing products with low GWP refrigerants and high safety classes up to A3. The existing second test chamber for high capacity chillers up to 1.5 MW is equipped with a heat recovery system.
- A large number of meters have been installed, which allows the energy consumption to be recorded, reported and specifically broken down.
- The production and warehouse area use only LED lamps.
- Separate waste collection is at 90%, up from 50% in 2012.
- Introduction of the app ADAM, supporting the digitalization of manuals and documentation for customers. Since the introduction in 2020, paper printing has been reduced by 60%.

Reduction of greenhouse gases

Climate protection is a pressing task, and thus, plays a major role in the global STULZ organization. The 2023 Corporate Carbon Footprint analysis, conducted for the German production site, showed clearly that the main lever for STULZ is in Scope 3. Nevertheless, we strive to reduce all emissions that we can influence.



OUR CORPORATE CARBON FOOTPRINT

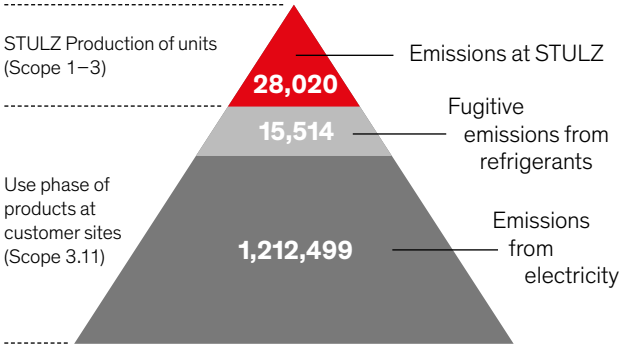
In 2024, for the first time, we measured our Corporate Carbon Footprint using the GHG Protocol methodology, focusing on data for 2023 for STULZ Germany. The production site including subtenants and all branches were considered for Scope 1 and 2 while for Scope 3 the focus was on the production site Hamburg.

We measured Scope 1 and Scope 2 emissions as well as relevant Scope 3 categories. Relevant Scope 3 categories include 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.9 and 3.11. Not relevant according to our analysis are categories 3.8, 3.10, 3.12, 3.13, 3.14 and 3.15.

We have calculated greenhouse gas emissions for Germany based on all air conditioning units produced at the Hamburg site in 2023. The Corporate Carbon Footprint for 2023 is about 1.25 million tonnes of CO₂e, of which 98% are related to the use phase at the customer sites (Scope 3.11: Use of sold products).

2023 Corporate Carbon Footprint STULZ Germany

Total: 1,256,033t CO₂e



28,020 tonnes of CO₂e (2%) are from the production of the units at STULZ: 2,017.5t CO₂e in Scope 1, 243.9t CO₂e in Scope 2 and 25,758.9t CO₂e in Scope 3. With regard to these emissions, purchased goods and services (Scope 3.1) is the most significant Scope 3 category for STULZ with over 70%. Transportation and distribution (Scope 3.4) is another relevant category (7.2%). For these production related emissions, a task force is working on measures to reduce carbon emissions.

During the use phase of our products at customer sites, emissions from electricity are most relevant. This indicates that a major focus of STULZ is on energy efficiency for our products, as this will directly reduce emissions to a large extent. Additionally, we encourage our customers to make greater use of renewable energy to run our products.

Another significant lever is refrigerants. Technically, due to leakage, the emissions are also part of Scope 3 emissions in the use phase at customers' premises. In this case, we as STULZ can influence the amounts of emissions by the type of refrigerants used. For us, encouraging customers to purchase air conditioning units with low GWP refrigerants will be a major field of action over the coming years.

In some sites, such as in the United States and in India, the measurement of emissions has also started. We are currently planning to measure a global carbon footprint for STULZ based on 2024 data.

REFRIGERANT USE

Refrigerants play a significant role in our carbon footprint. Therefore, we globally compile refrigerant balance sheets to assess the climate impact of the refrigerants used. To do this, we analyze the effects of different refrigerants on global warming, using the Global Warming Potential (GWP) as a basis. Upon request, we pass this data over to the relevant government agencies and report the CO₂ equivalents on the EU's F-gas Portal.

Where refrigerants are concerned, we are heavily dependent on our customers' wishes, as they specify which refrigerant is to be used in their orders. We are committed to using more eco-friendly refrigerants and advise customers on the use of low GWP refrigerants [\(see page 33\)](#).

As many low GWP refrigerants are either flammable (propane), toxic (ammonia), or require entirely different materials and production processes (CO₂), we are additionally looking into how to efficiently handle these materials at our production sites. Flammable and toxic refrigerants need to be handled with significantly higher safety standards. Thus, we are further developing processes according to these standards and guidelines. As the use of refrigerants gradually shifts towards low GWP alternatives, we strive to continuously guarantee a safe and secure working environment while ensuring systematically and efficiently organized processes. For more, see: [→ STULZ: PRODUCTS](#)

In our own production processes, we focus on reducing energy consumption by optimizing the infrastructure to cut emissions. We are also taking a variety of steps in fleet management and digitalization: We are gradually converting our service fleet to vehicles with lower fuel consumption. In Benelux, 50% of our service vehicles are already electric. Globally, 11% of company vehicles are powered by alternative engines (e.g., electric, hybrid). Outside Benelux, the service fleet is currently made up of diesel vehicles, as we don't have any alternatives that cover the necessary range. Instead, we are optimizing service deployments using a vehicle monitoring system, to reduce distances and travel times to the site of deployment. In the medium term, we want to switch to electric vehicles for the sales organization, to reduce CO₂ emissions. With this in mind, we are already working on expanding our vehicle charging infrastructure.

With the sales and service sites, we are pushing ahead with the digitalization of service processes. This includes an Online Portal, which we operate via an app. With this tool, up-to-date information about the entire installation (address, direct contacts, installed units and their history) is constantly available digitally, and we can process service orders in a resource-efficient manner.

“SAVING ENERGY AND REDUCING WASTE IN OUR PRODUCTION IS A MAJOR COMMITMENT FOR US. CONSEQUENTLY, THE REDUCTION OF OUR CARBON FOOTPRINT IS ALSO ON OUR AGENDA.

Javier Aramburu, Business Unit Director STULZ Spain

ENERGY SAVINGS IN PRODUCTION AND SERVICES

In Germany, we have adopted an action plan with energy saving measures for both production and in our offices and branches. These measures include guidance for the use of electronic devices, the use of lighting, heating and cooling systems, and monitoring our own energy consumption.

Our CyberHub Service monitoring and service software provides STULZ engineers and customers with comprehensive assistance in performing services more efficiently in operations. With the CyberHub Service tool, we manage the nationwide service operations in Germany. The sophisticated design allows us to minimize travel distances for service personnel and maximize availability of the system data. This enables us to quickly and competently arrive on-site and provides us with reliable data. The entire processing and documentation of our service operations is carried out digitally and directly.

We are increasingly using digital working methods. Since the beginning of the Covid pandemic, we have considerably reduced the number of business trips that we take and even now, after the pandemic, we have managed to keep the number of journeys low. We have achieved this by increasing virtual meetings, and we have also introduced a flexible desk sharing concept. This has enabled us to reduce the number of commutes to and from work at STULZ GmbH.

MANAGING ENVIRONMENTAL IMPACT

We use the internal energy management tool, CyberHub ECO-DC, at the Hamburg production site to comprehensively analyze our own environmental impact. This enables us to create targets and derive actual comparisons for energy consumption, emissions (Scope 1–2) and resource use for the individual work areas. Through this, we can draw up targeted measures to reduce CO₂ emissions. This is supported with an annual management review, in which we analyze progress and come up with further measures.

INTELLIGENT LOW-ENERGY BUILDING

Located in the Dutch business center of Hoofddorp, close to Schiphol Airport, the new STULZ Groep B.V. headquarters is an intelligent building that boasts a state-of-the-art infrastructure.

Inaugurated in 2021, the new Benelux headquarters are designed to be as sustainable as possible through the extensive use of innovative and environmentally-focused technologies, including various STULZ solutions. More than 950 solar collectors have been installed, supplying up to 350 MWh per year – enough to meet the average annual energy requirements of around 130 households. In addition to fully supplying the energy needs of office workstations, production and warehouse facilities, the sustainable concept also provides enough electricity for ten electric vehicle charging stations. These will supply power to a new EV fleet and will be further expanded as required.

More than 60 employees work in the facility, comprising office, service, sales, logistics and production personnel. Alongside highly energy-efficient new office, production and storage facilities, the building will also be used as a live showroom where customers and partners can see and explore the diverse range of STULZ air conditioning solutions.

RENEWABLE ENERGY CERTIFICATES

STULZ Brazil covers the electricity consumption of its plant with renewable energy certificates. In 2023, the 56,000 I-REC Certificates were redeemed, accounting for 56 MWh of electricity generated from renewable sources.

STULZ Brazil

STULZ Germany

STULZ Benelux

STULZ Germany





Efficient water use

Water plays a rather minor role for the STULZ production sites. In 2023, total water withdrawal was 31,240 m³, of which 30,113 m³ was consumed by production sites and 1,127 m³ by sales and service sites. Our production site in Italy has its own water treatment plant. Apart from Brazil and the UK, all of our production sites have performance test benches that reuse water multiple times, reducing water consumption.

In 2023, water withdrawal at the German production site equated to 0.57 m³ per unit produced.

We don't use any ground or surface water for any purpose whatsoever. In order to minimize our water consumption, we have introduced the following measures:

- In production, we are committed to efficient water use through closed circuits and multiple usage. Extensive heat recovery systems enable cooling water to be used multiple times. We also take this approach in our test bench technology.
- We monitor our own water consumption through regular analyses of our water bills. As we rent the buildings of our branches, we have no direct influence on the water supply and infrastructure at these locations.
- Our service organization advises customers with inefficient systems on potential optimizations concerning water consumption, such as by replacing entire systems or, whenever possible, individual components.
- Every employee is encouraged to save water wherever possible. This includes, for example, reporting leaks in washrooms.

Waste prevention, reduction and reuse

We comply with the WEEE (Waste Electrical and Electronic Equipment) requirements of Directive 2012/19/EU. The aim of the directive is to reduce electric and electronic waste through reuse, recycling and other forms of waste recovery.

Waste management is the responsibility of our Waste Management Officers, who are appointed in all production sites certified to ISO 14001. Our aim is to continually reduce the amount of waste that we produce.

In the reporting year, the total volume of waste for Germany was around 474,853 kg (2022: 546,748 kg). Of this, 77% was sorted (2022: 70%) and 23% (2022: 30%) was mixed waste. By being conservative and having a higher awareness of the topic, we have reduced the share of iron and steel scrap in our waste by 25% in the reporting year.

At a global level, our production sites (not including Modular (UK)) generated a total of 3,083,096 kg of waste, of which 99% was non-hazardous waste and almost 86% was redirected for recycling. For us, our main driver of waste is packaging waste that we receive from the upstream value chain, e.g., paper and cardboard and packaging wood. Waste is also produced in production and in the offices. Other waste contains mainly electronic components, mixed plastics and construction waste.

Currently, our figures for sales and service sites are based on assumptions from available data, and equate to around 1% of the total volume of waste. Due to the uncertain data, these figures are not included in our calculations.



RESOURCE AND WASTE REDUCTION IN PRODUCTION PROCESSES

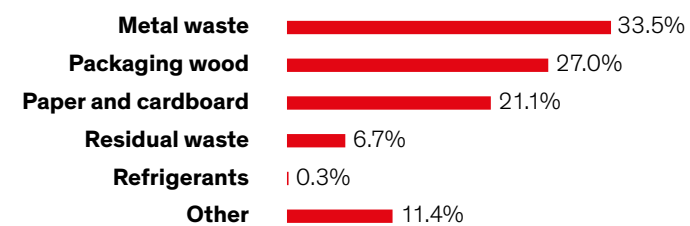
Our production site in China reworked their internal logistics for piping, improved material transfer efficiency and lowered wear of facilities. Originally using plastic storage boxes, production switched to trolleys. 40 trolleys are being used to transport pipe material through each production step, from preparation at the warehouse to cutting, bending, brazing and final assembly. Space occupied in the pipe production zone was halved and labor intensity for the transport and pick-up of pipe parts decreased.

Foam, cardboard and paperboard are given a second life as filling material inside wooden boxes for packaging spare parts. This helps to prevent vibration or displacement during transportation while also reducing waste.



2023 Waste generated at production sites, by origin

Total waste: 1,715,381 kg



Not including Modular (UK), USA.

The volume of waste by origin differs from total global waste, as data does not include waste from our US production sites due to a divergent set of waste categories.

95% of waste in Germany is recycled (2022: 85%). We have registered all the relevant brands sold by STULZ GmbH in accordance with the German Packaging Act and the Waste Electrical and Electronic Equipment Directive.

MORE SUSTAINABLE PACKAGING

Our packaging guidelines comprehensively regulate the handling of packaging. They contain instructions on the kind of transport packaging to be used and the filling of packaging. We use this to stipulate optimum capacity utilization for deliveries.

We discuss the use of reusable and returnable packaging and possible return loops individually with our suppliers.

We process non-reusable cardboard packaging using a cardboard shredder to create filling material for shipping cartons. Our in-house products are packaged in plastic film and/or wooden crates. This ensures maximum safety during transport with resource-efficient use of packaging materials.

For waste prevention, separation, treatment and recycling/reuse, we have implemented measures, including:

- We separate waste such as paper, wood, recyclables (e.g., scrap metal) and residual waste in our production sites. We recycle materials as much as possible.
- With our chipper, we can shred discarded wood so that it is compressed in the transport container. This reduces the number of journeys to and from the site.
- We use reusable pallets, packaging materials and transport containers wherever possible. We use individual metal/wooden pallets and cardboard boxes for transport between suppliers and production sites.
- We vacuum refrigerants out of air conditioning units in an automated process. We always recycle our refrigerants.
- We have hazardous waste disposed of by a specialist waste disposal service in accordance with the waste code and legal provisions.
- We avoid waste through digital workplace practices. This has already helped us generate less paper waste.

Careful handling of hazardous materials

All hazardous materials used in production are subject to the provisions of the RoHS and/or REACH Directive. We keep the use of hazardous materials to a minimum and already incorporate this as a factor in our purchasing, wherever possible.

Hazardous materials include oils, refrigerants, lubricants, nitrogen, oxygen, acetylene and greenhouse gases.

In order to satisfy the requirements of the F-gas Regulation and prevent the unwanted emission of fluids, gases and other substances, we perform leak tests on every product. These computer-aided tests are carried out by qualified staff, approved electronically and then documented.

In Germany, 69 different hazardous materials are currently used. Adhesives, cleaners and gases accounted for the largest proportion of hazardous materials. In 2023, the purchased volume of hazardous materials in

Germany was 31,912 kg for gases and 12,268 kg for operating fluids. The use of hazardous materials varies according to the units produced during a year.

Our hazardous substances register offers a detailed overview of hazardous materials. These are categorized by division to enable the clear allocation of responsibility, while in-depth information on classification, hazard group and other aspects enables risks to be quickly detected and safety measures to be taken. The register is continually updated in line with new requirements and product modifications.

We illustrate the environmental impacts of these hazardous materials in the document "Assessments and impacts on the environment". Environmental relevance in both standard and emergency operations is evaluated and monitored using a scale. In addition to this, we have set up a hazardous substance management system, headed by our Hazardous Substances Officers. These people compile risk assessments and work instructions in line with the German Hazardous Substances Ordinance, and these are centrally available on the intranet. We check at fixed intervals that these are up to date and adapt them when necessary. Risk management also includes regular training sessions for users and officers. We carry out regular substitution checks on hazardous substances in our production lines, to reduce the potential hazards.

In Germany, external hazardous goods officers assist us with the transport of our hazardous substances. The transport vehicles are marked in accordance with regulations and are subject to special procedures.

Refrigerants are always recycled at all STULZ sites.



Resource-efficient logistics

We have specifications to control our inbound logistics, which are implemented by our suppliers. Within Germany, we collaborate with logistics companies as fixed partners, and they are in charge of our transport. The companies we contract primarily use diesel trucks. We contract an external hazardous goods officer for the transport of hazardous goods. An internally appointed Air Freight Safety Officer supervises compliance with the provisions of the German Federal Air Freight Agency for goods that are transported by airplane.

When measuring our Corporate Carbon Footprint for Germany in 2023, transportation (inbound) accounted for 7.2% of our total emissions. 72% of these emissions are caused by ships, with the remaining 28% from trucks and other means of transport.

For outbound transport, each production site delivers directly to the end customer on behalf of the sales subsidiaries. In consultation with our customers, we use the optimal transport routes according to customer requirements. Wherever we have an influence, we organize transport as efficiently as possible, including the avoidance of empty trucks. For exports, transport is mostly governed by contracts and is carried out ex works via our customers.

STULZ Nordics

GOOD PROGRESS

At STULZ Nordics, 50% of company cars are electric. Additionally, the sales and service site pursues a paperless office policy. STULZ Nordics covers Sweden, Norway and Finland.

SUSTAINABLE FLEET MANAGEMENT

STULZ Benelux already has an electric fleet in terms of its various lease cars. Now it has also taken the first step towards making its service buses sustainable. With the ID Buzz Cargo, STULZ now also has a 100% electric service vehicle.

With a range of more than 400 km, the bus is easily deployable and can be used by our mechanics. STULZ's aim is to eventually equip all service technicians with electric vehicles. In addition to the existing electric fleet and the energy-neutral office in Hoofddorp, this is the next step towards sustainable and environmentally aware business operations.

STULZ Benelux



In 2023, STULZ in Germany took part in the KlimaProtect scheme from GLS. We are also conducting a productive dialog about sustainability with Fedex/TNT. The initiatives by our logistics partners aim to achieve more eco-friendly packaging logistics.

Responsible Supply Chain

With respect to responsibility in our supply chain, we focus on three key areas:

— **Ethics and compliance**

— **Responsible purchasing**

— **Managing our supply chain**

Our supply chain

Our in-house STULZ branded products are manufactured in Germany and the global production sites manufacture locally in their respective regional markets. All products are manufactured with high-quality components. Robust design guarantees high reliability, a low demand for spare parts, a long service life and optimum performance under diverse conditions. We work closely with our suppliers to ensure quality and efficiency right from the start.

We purchase mostly finished components and parts. When procuring components, we prioritize reliability and, to an increasing extent, sustainability factors. Our production activities also require the procurement of pre-processed base materials, such as copper. While we strive for a multi-sourcing strategy in all our commodities, we still have some situations in which we rely on a single supplier. In these cases, we work to build close partnerships with our suppliers. For all suppliers, we endeavor to continuously further optimize our component use – in terms of both equipment efficiency and use and cost of materials.

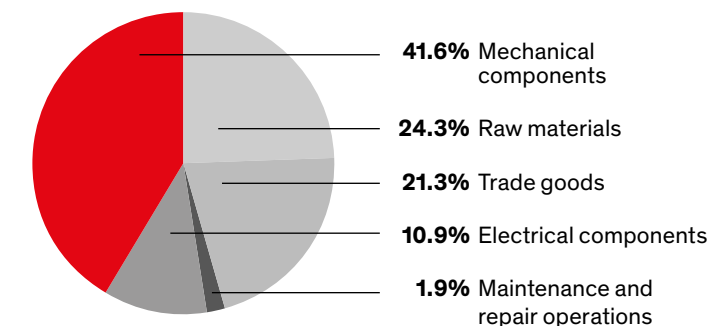
Efficiency plays a vital role when considering whether to work with a supplier. It's extremely important to us that the products and components we purchase are produced in an energy and resource-efficient manner. Together with our suppliers, we explore the possibilities to develop profitable, more sustainable solutions. We have worked, for example, with our sheet metal suppliers to design reusable transport packaging for large sheet metal parts.

91.3%
of our suppliers are located in
the same country as our respective
production site.

Responsible Supply Chain

2023 Purchased materials, by type

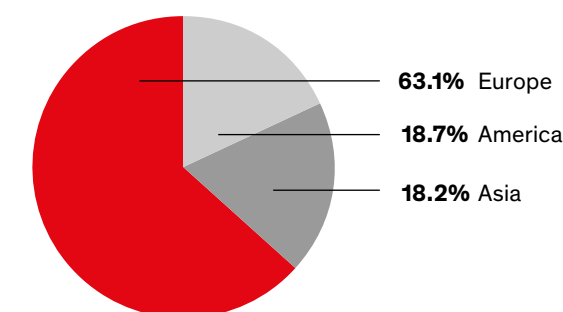
Total purchase volume: 44,421 t



Production sites only, not including Brazil.

2023 Suppliers, by origin

Total: 3,984



Production sites only, "other suppliers" below 1%.

“**MAKING OUR GLOBAL SUPPLY CHAIN SAFE, EFFICIENT AND SUSTAINABLE IS KEY TO BUSINESS SUCCESS. WE FOCUS ON SOURCING AS LOCALLY AS POSSIBLE WITH LONG-TERM PARTNERSHIPS.**

Thorsten Weiss, CFO

Ethics and compliance

For operations at our German headquarters, we have a Code of Conduct that contains clear rules on ethics and compliance for employees, customers and suppliers. We expect our suppliers to comply with the applicable legislation, eschew corruption and adhere to export and import bans and embargoes. The Code of Conduct is currently being revised and updated in line with new requirements governing human rights, for example, and other supply chain aspects.

In Germany, we have adopted a standard operating procedure (SOP), enabling us to examine business partners' compliance with legally binding sanctions lists. An export inspection team is responsible for checking our business partners for compliance.

For us, ensuring humane working conditions and compliance with internationally applicable human rights provisions across our entire supply chain goes without saying. Here too, we expect our suppliers to respect human rights and reject child labor.

HOW WE ENSURE ETHICAL BUSINESS CONDUCT

In Germany, our contract awarding process is subject to an approval procedure and – for contracts above a certain value – a dual control system. This way, we avoid anti-competitive practices. Bribery is a criminal offense and will not be tolerated. We also firmly reject corruption. Employees may only accept gifts, invitations and other benefits from third parties to a reasonable and proportionate extent, and this must not give rise to any conflicts of interest.

We collect, process and retain personal data at the German headquarters in accordance with strict German data protection legislation and have appointed a Data Protection Officer. At the German headquarters, there have been no complaints relating to privacy violations or the loss of customer data during the reporting year.

“**AS IT STANDS, ETHICS AND COMPLIANCE, AND THE MANAGEMENT OF OUR SUPPLY CHAIN HAVE BEEN ORGANIZED IN A DECENTRALIZED MANNER. DURING THE REPORTING YEAR, WE DID NOT RECORD ANY CASES OF CORRUPTION. IN THE COMING YEARS, WE WILL BE DEVOTING OUR EFFORTS TO ESTABLISHING UNIFORM, EFFICIENT STANDARDS ACROSS THE ENTIRE STULZ ORGANIZATION.**

Ya-Hui Yang, STULZ Group Controlling

66.8%
of our included permanent employees
are trained in business ethics.

Not including Asia Hub, Indonesia, Mexico, Nordics, South Africa, UK.

ETHICS AND HUMAN RIGHTS

In the UK market, several ethical and human rights policies are requested from locally operating companies. STULZ UK therefore has a range of policies and mechanisms in place. One of them is the anti-bribery policy and a corresponding procedure.

Responsible purchasing

As with many companies, responsible purchasing will continue to be a matter of high priority for STULZ in the years to come. Our purchasing department at the German headquarters is split into different product groups, each with a responsible purchasing officer. A similar structure is in place for the purchasing departments of our other production sites.

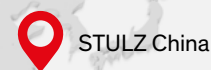
The majority of components are regionally sourced. Of nearly 4,000 suppliers, 91.3% are located in the same country as the production facilities they supply.

Within most production countries, our direct supply chain (Tier 1) is generally considered low risk as regards social and environmental concerns. Our production sites in China and India, however, face comparably different risks from most of our other sites.

For individual product groups (e.g., electronic parts), issues relating to working conditions, human rights and the environment cannot currently be entirely ruled out from the upstream stages of our supply chain. In Germany, an overall risk assessment was carried out for the reporting period 2023. For this, suppliers were analyzed based on their countries and clustered according to risk categories. Furthermore, product and material groups were analyzed for potential risks regarding human rights and environmental protection irregularities.

In the future, we intend to amplify our risk assessments and verification measures to ensure a responsible supply chain. Respect for human rights is regularly checked at our production sites through customer social responsibility audits. In Spain, supply chain management audits are conducted by major globally operating customers. Our US site also participates in customer ESG compliance programs.





SUPPLIER MANAGEMENT

Our production site in China has over 100 suppliers, the vast majority of which are local. The site has established a solid supplier management process. Several departments are involved, including Product Management, Sourcing, Engineering and Supplier Quality Assurance.

For continuous improvement, all suppliers are monitored regularly on performance, quality and delivery. In an annual supplier appraisal, suppliers are reviewed based on different perspectives. According to an audit plan by SQE, three kinds of audits are carried out each year (figures for 2023): New supplier audits (10), Annual audits (12) and Process audits (5). The details are as follows.

- New supplier audits: Potential suppliers are qualified through several stages. After a preliminary screening, an evaluation of the potential supplier is carried out, involving several departments and perspectives including sustainability aspects. Qualified suppliers must then sign the Code of Business Conduct, which is included in the supplier agreement.
- Annual audits: Based on the assessments of the annual audit, suppliers are categorized – one category is audited twice a year; within the other category, a certain percentage is audited once a year.
- Process audits are based on specific quality issues or risks.

Our Chinese suppliers are not explicitly audited for human rights and environmental risks, as many of them are only traders. In China, the EHS (Environment/Health/Safety) department is tasked with evaluating the environmental and occupational safety performance of companies. Thus, the evaluation of environmental management systems and personnel management is taken into account when selecting suppliers and in the annual audit.

“
WE EXPECT OUR SUPPLIERS TO CONFORM TO THE RELEVANT DOMESTIC AND INTERNATIONAL LAWS AND STANDARDS GOVERNING OCCUPATIONAL HEALTH AND SAFETY, ENVIRONMENTAL PROTECTION AND DATA PROTECTION.

Jens Martens, Head of Global Purchasing



Responsible Supply Chain

APPROACH TO CONFLICT MINERALS

We are committed to ensuring that components we have purchased are free from conflict minerals. Metals such as tin, tantalum, tungsten and gold are particularly common in electrical components. The mining of these raw materials is problematic in terms of human rights and other social and environmental aspects. The aim is to increase transparency in future as regards conflict minerals in our supply chain.

Working with suppliers and other players in affected industries, we want to make our contribution to improving conditions in the supply chain. Currently, we ask suppliers on a case-by-case basis whether they deal with conflict minerals. In future, it will be included in our supplier screening and qualification process.

Managing our supply chain

We analyze and assess supplier-specific risks and risks in the supply chain, and instigate corrective action when necessary. Sustainability issues are increasingly factored into these assessments.

At present, we do not yet examine new suppliers in terms of social and environmental criteria. We plan to purposely incorporate sustainability issues into our supplier relationships and include them in both our supplier evaluation and regular exchanges.

THIRD-PARTY INSPECTION



At STULZ Modular in the UK, third party integrators are visited, inspected and eventually approved. All subcontractors must fill out questionnaires to demonstrate competency and other matters, such as insurance levels.

There is a clear focus on occupational health and safety, including ISO 45001, OHSAS 18001, health and safety policies, risk management, governance, training, and insurance. Ecological sustainability is not covered in this questionnaire.

SUPPLY CHAIN RISK MANAGEMENT

STULZ Germany's risk assessment for compliance with the German Supply Chain Act provided insights that helped us prepare our organization to establish a solid supply chain management. We will work hard to extend these high standards to a global level.

In the 2023 fiscal year, the holding company of STULZ in Germany was obliged to report on due diligence in its supply chain. To this end, we carried out an abstract risk analysis within our own company and for supply chains, in line with the German Supply Chain Act. We found that, of the suppliers analyzed by Stulz GmbH, fewer than ten were classified as high-risk, as a result of their countries of origin being internationally classified as such. Our concrete risk analysis then delivered evidence that these suppliers from risk countries comply with global ethical standards.

In addition, various purchase materials were defined as being particularly vulnerable to human rights and environmental risks within the supply chain. In compliance with the German Supply Chain Act, different structures and processes were established at STULZ Germany, such as a whistle-blower system, preventive measures and reporting lines.

We will continue to extend our risk analysis and supply chain management accordingly. For more see (partly in German): [→ STULZ: Due Diligence Obligations in Supply Chains](#)

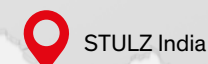
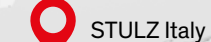
Besides Germany, 7 other subsidiaries have set up a whistle-blower system, with no incidents reported in 2023.



We are exploring options for a holistic supplier relationship management system that will enable us to identify, evaluate and monitor supply chain risks with internal and external data.

In future, other queries (REACH, RoHS, etc.) will be managed using this supplier relationship management tool; we are currently in the process of drawing up a specification sheet for this. Such a platform for continuous risk management is currently being piloted at our Hamburg site. A global rollout is envisioned.

We are continuously conducting compliance screenings. At our German headquarters, we are introducing a new supplier evaluation focusing on performance indicators. In Hamburg, we are currently developing a new supplier qualification process that also examines suppliers' ESG risks.



INTEGRATING OUR SUPPLY CHAIN WITH THE GLOBAL CONTROLLER

The Global Controller is an interesting example of how the supply chain, production and technological developments in our products can be linked.

In early 2024, STULZ announced that it was replacing its proven C7000 control system with the modern E² controller from its US-American subsidiary. The switch applies solely to the CyberAir 3 PRO CW series and will be further extended to other products. The introduction of the E² microprocessor controller is the first step towards the global unification of STULZ control technology. The global use of identical control systems will help to unify software support across the globe and ensure optimum service reaction times 24/7.

The collaboration between the Hamburg and India sites was one of the first major internal software development projects. Our site in Italy was also involved. The main objective of the project was to localize the production of

the Global Controller. In Hamburg, a product previously manufactured in Thailand has now been replaced by one produced in Croatia. Not only does this reduce the carbon footprint, it also reduces the ESG risks from a purchasing perspective. In China and the USA, the production sites make also use of local suppliers.

The Global Controller has several advantages: Procurement of larger quantities reduces costs. Having fewer suppliers makes it easier to manage risks within the supply chain, such as human rights. Our solutions partner is a specialized manufacturer, focusing on optimizing Scope 3 emissions and respecting human rights.

The Global Controller also improves energy management. The compressor control has been adjusted to reduce energy consumption. Additionally, the improved fan control generates a more energy-efficient fan temperature control. The new hardware, software and adjustments have allowed us to monitor and control energy consumption and CO₂ emissions.

[→ STULZ: CyberAir 3 PRO CW series gets a new control system](#)



Good Employer

In the global STULZ organization, we are and will be focusing on four key areas of a Good Employer:

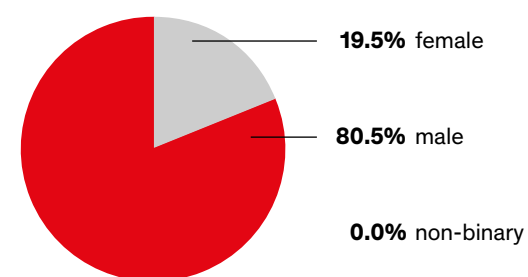
- Occupational health and safety
- Training and career management
- Diversity, equality and inclusion
- Modern work environment

Responsible personnel management

Our qualified and committed employees are the foundations of STULZ's success. In 2023, STULZ had a total global of 3,303 employees. At our headquarters in Germany, employees stay with us for 11 years on average.

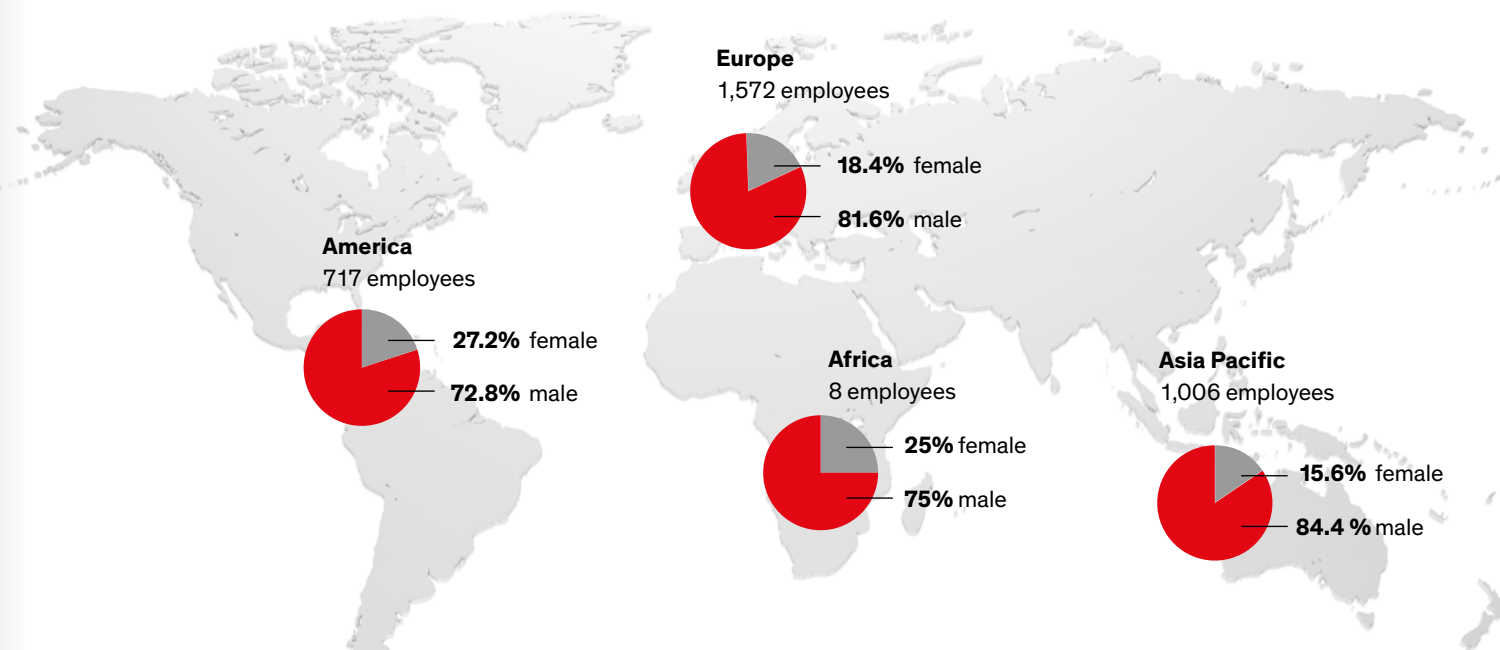
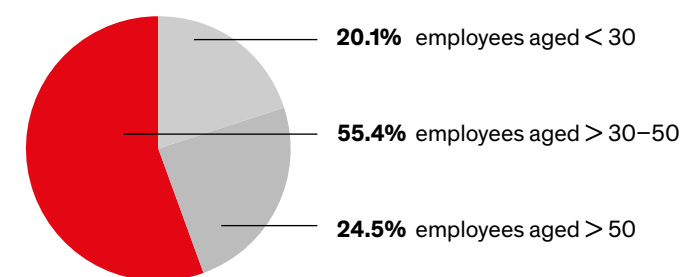
2023 STULZ employees, by gender

Global total: 3,303



2023 STULZ employees, by age

Global total: 3,303



2023 STULZ employees, by contract

	America		Europe		Africa		Asia Pacific	
	Male	Female	Male	Female	Male	Female	Male	Female
Permanent	519	194	1,189	270	6	2	406	36
Temporary	3	1	94	19	0	0	443	121
Total by gender	522	195	1,283	289	6	2	849	157
Total continent	717		1,572		8		1,006	
Total	3,303							



BEST PLACE TO WORK

Our subsidiary in the United States, STULZ Air Technology Systems, was awarded the 2023–2024 “Best Place to Work” in Manufacturing for Frederick County, Maryland.

STULZ USA offers rich benefits to employees including wellness initiatives, internal career advancement opportunities, an online learning catalog for professional and personal development, flexible work arrangements and a variety of working times.



EMPLOYER AWARDS

Having already received an award for socially responsible companies in 2022, STULZ Mexico will also be awarded the “Great Place to Work” certificate for 2024.



Occupational health and safety

The health and safety of our employees is our number one priority. We understand that we are responsible for ensuring that our employees are protected against accidents and other potential risks while they are at work. Our commitment to health and safety is also reflected in numerous measures we have already introduced. While we do not operate a uniform global health and safety management system, several subsidiaries operate under guidelines or management systems. In Brazil, for example, the S.O.L. Programm (see page 21) includes health and safety aspects. On the other hand, our subsidiary in

Thailand is an example of a sales and service site that has established health and safety measures to ensure a safe and healthy working environment. While our office in South Africa operates with a health and safety guideline, Singapore operates a certified management system (ISO 45001) for occupational health and safety.

In 2023, we recorded 69 reportable accidents and 5 injuries resulting in work absence at our global production sites.

Production sites only, injuries not including USA.



MANAGING HEALTH AND SAFETY

We have established occupational health and safety structures that ensure clear organizational and operational procedures for our site in Hamburg and STULZ’s other German branches. These structures, including an Occupational Health and Safety Committee, cover all workers, including those who are not employees. The Occupational Health and Safety Officers, Company Medical Officer and Works Council are members of the Occupational Health and Safety Committee.

Through regular Health Days, which we organize in collaboration with health insurance providers, we encourage awareness of various health aspects. A corporate reintegration management scheme enables employees to find their way back into working life following long-term illness.

We collect and analyze both reportable and non-reportable data on accidents at work, and also absence statistics. According to German law, work accidents are only considered reportable if they result in an absence of more than three days. Any accidents resulting in an absence of less than three days are documented as an injury. The statistics within this report differ from that definition.

To reduce future accidents, we define measures to prevent the recurrence of accidents, which are implemented by line managers.

Our Company Medical Officer assists us with inspections and information on potential improvements, for example in production.

To ensure the safety of our workforce, we organize inspections and visits by external experts, hold regular meetings of our committees, and make any adjustments necessary to prevent accidents at work. We conduct regular risk assessments of all workplaces, both in terms of equipment and the handling of hazardous materials. The respective heads of division and line managers are responsible for these risk assessments. These members of staff are also responsible for drawing up suitable measures to reduce and prevent potential hazards.

We offer training and education schemes on occupational health and safety. These are organized into overarching and specialized topics. Overarching topics include, for example, fire safety, noise, handling defibrillators and fire extinguishers, crane operators, correct lifting and carrying. Specialized topics include what to do in the event of infection, and desk sharing.

We regularly train our 108 First Aiders and new recruits, who are employed at the Hamburg site, at S-Klima, and in all the branches. As of today, over 80% of all employees have received health and safety training. These yearly training sessions are held in person for factory workers and via an eLearning module for office workers.



 STULZ Spain



REWARDING SAFETY ACHIEVEMENTS

At our Spanish production site, we established a routine to celebrate a safe working environment with our employees. Staff were rewarded with a buffet during the working day for achieving more than two months without any work-related injuries resulting in absence.



“**OCCUPATIONAL HEALTH AND SAFETY IS A MAJOR CONCERN IN OUR GLOBAL STULZ ORGANIZATION. AT OUR PRODUCTION SITES IN PARTICULAR, WE STRIVE TO KEEP THE NUMBER OF ACCIDENTS AND INJURIES AS LOW AS POSSIBLE. RESPONSIBILITY LIES WITH THE COMPANY MANAGEMENT.**

Stefan Hellmann, Management Representative for Occupational Health and Safety STULZ Germany

Training and career management

To ensure STULZ's long-term success, we want to recruit and develop great people around the world. Training and career management are organized in a decentralized manner, so all subsidiaries organize it according to the local needs and opportunities.

All production sites and most sales sites manage good employer programs, despite differing depth and focus areas. For example, our sales site in Indonesia offers various inhouse training opportunities for employees, and in Austria we educate out technicians internally or at supplier training courses.



 STULZ Germany

In 2023, we employed 28 apprentices and 15 students in Germany who have excellent prospects for a professional future with STULZ, with an average retention rate of 95%.

APPRENTICESHIPS FOR YOUNG TALENT

We want to secure young talent at an early stage. In Germany, we offer young people a wide range of training options through apprenticeships as well as combined with a degree qualification.

Professions in our apprenticeship track

- Industrial Electrician
- Production Mechanic
- Cooling Technology Mechatronics Engineer
- Warehouse Logistics Specialist
- Industrial Management Assistant
- Office Management Assistant
- IT Specialist

Apprenticeship with Degree Qualification

- Industrial Management Assistant & Business Studies

Degrees with Vocational Training

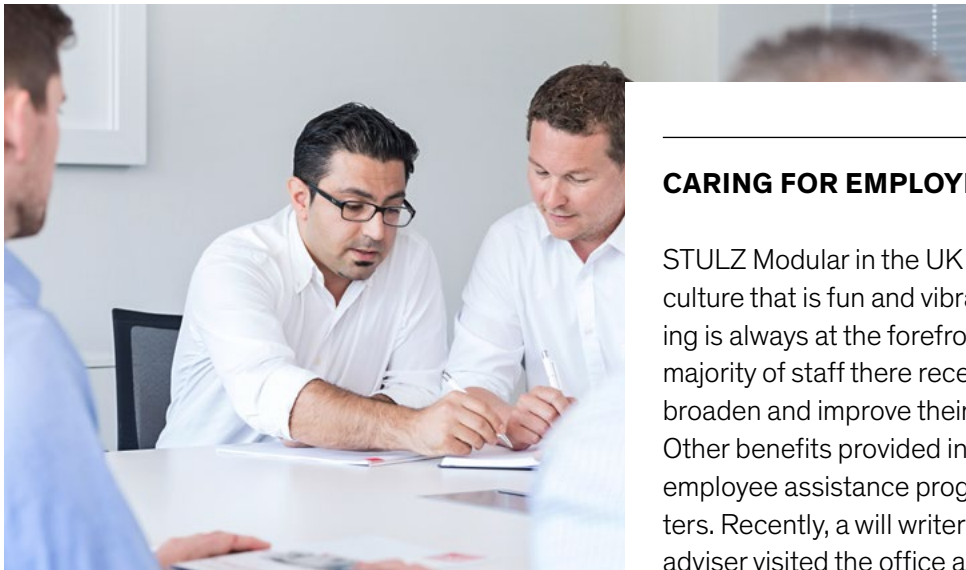
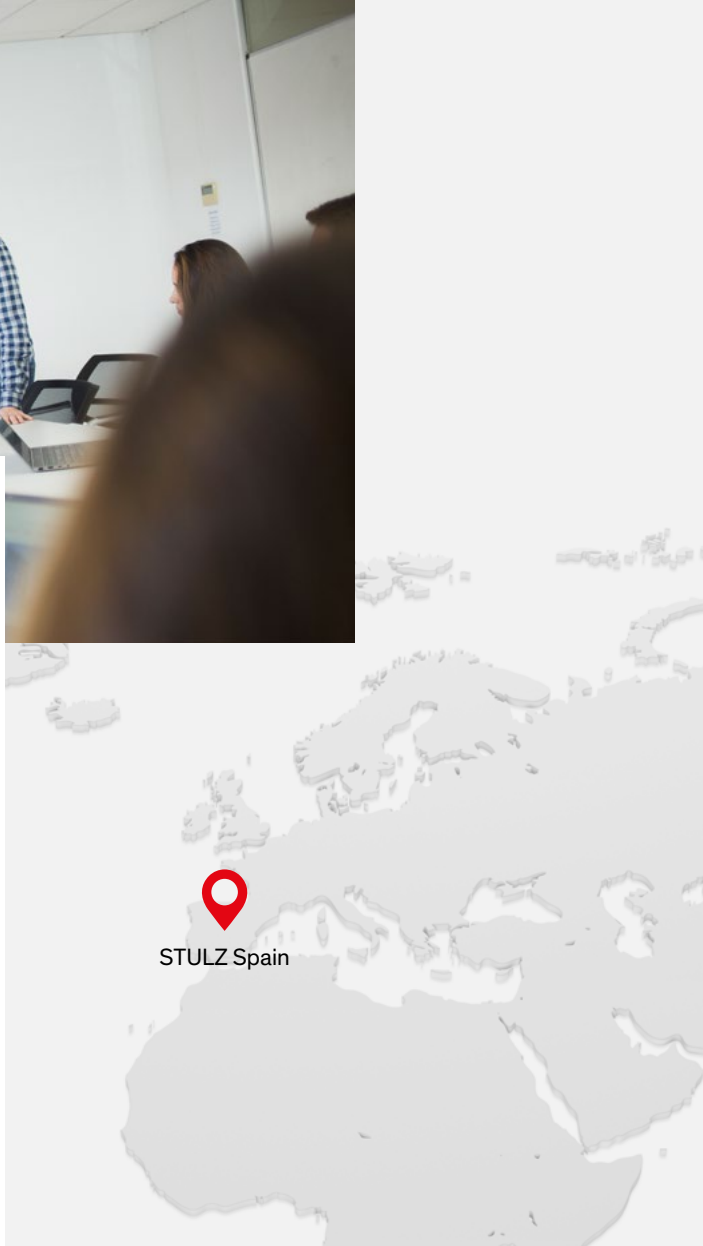
- Business Information Systems
- Business & Engineering Studies
- Business Administration
- International Management
- Mechatronics
- Air Conditioning Technology



PROVIDING EMPLOYMENT OPPORTUNITIES

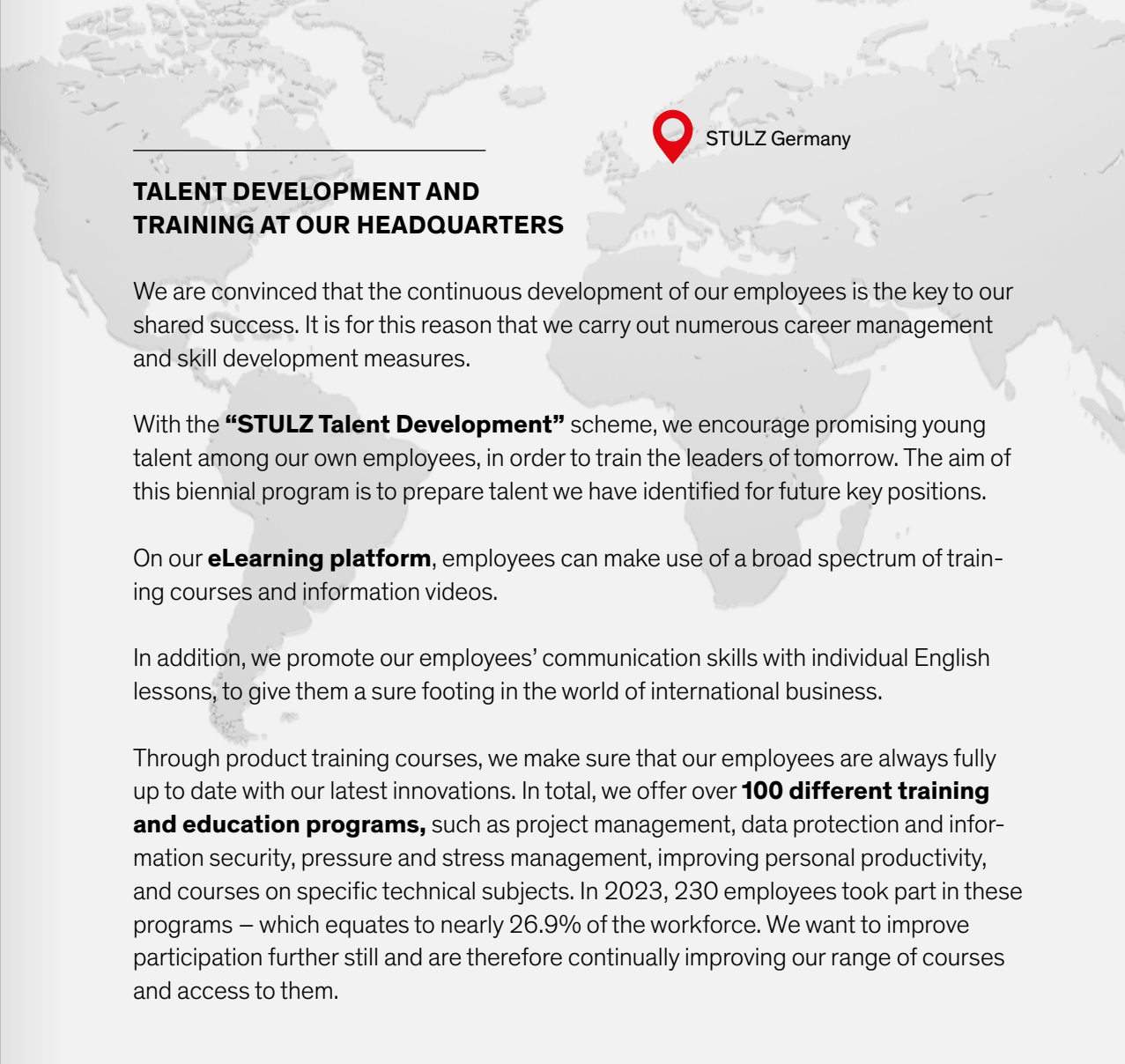
STULZ Spain is collaborating with training institutes to provide internships at the company. This gives students a great opportunity to gain experience and potentially be recruited by STULZ after completing their initial training.

Given the difficulty in finding certain job profiles at the factory’s location, an agreement has been reached with several training organizations for unemployed individuals. These organizations provide training for the unemployed, which includes a module on basic training and a specific part focused on the manufacturing of our air conditioning units. These students then complete their internships at the company.



CARING FOR EMPLOYEES

STULZ Modular in the UK creates a workplace culture that is fun and vibrant, and staff well-being is always at the forefront of our minds. The majority of staff there receive external training to broaden and improve their knowledge and skills. Other benefits provided include, for example, an employee assistance program for personal matters. Recently, a will writer and financial pension adviser visited the office and gave a talk about the importance of these areas, providing free consultations with each of the staff. During 2024, an anonymous survey will be conducted regarding employee satisfaction to gauge staff’s happiness and well-being.



TALENT DEVELOPMENT AND TRAINING AT OUR HEADQUARTERS

We are convinced that the continuous development of our employees is the key to our shared success. It is for this reason that we carry out numerous career management and skill development measures.

With the “**STULZ Talent Development**” scheme, we encourage promising young talent among our own employees, in order to train the leaders of tomorrow. The aim of this biennial program is to prepare talent we have identified for future key positions.

On our **eLearning platform**, employees can make use of a broad spectrum of training courses and information videos.

In addition, we promote our employees’ communication skills with individual English lessons, to give them a sure footing in the world of international business.

Through product training courses, we make sure that our employees are always fully up to date with our latest innovations. In total, we offer over **100 different training and education programs**, such as project management, data protection and information security, pressure and stress management, improving personal productivity, and courses on specific technical subjects. In 2023, 230 employees took part in these programs – which equates to nearly 26.9% of the workforce. We want to improve participation further still and are therefore continually improving our range of courses and access to them.

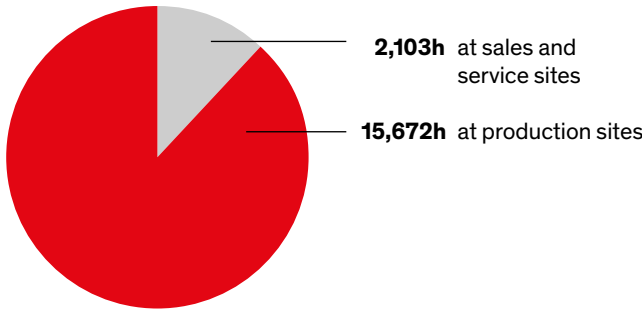


Good Employer



2023 STULZ Training, by hours

Global total: 17,775h



Not including Brazil, UK, Benelux, Indonesia, Nordics.

“**WE ARE STRONGLY COMMITTED TO PROMOTING WELL-BEING AND PERSONAL SAFETY, INDIVIDUAL PROFESSIONAL DEVELOPMENT, DIVERSITY, EQUAL OPPORTUNITIES AND A MODERN WORKING ENVIRONMENT FOR OUR STAFF.**

Grace Tsai, Chief Financial Officer STULZ China



OUR EXTENSIVE EMPLOYER PROGRAM IN CHINA

STULZ China employs 311 employees in Hangzhou, Shanghai and regional offices throughout the country. The company pursues a wide range of activities to maintain a “Good employer” status and to adhere to high standards and a satisfactory working environment.

In occupational health and safety, supplementary medical insurance is provided on top of the statutory social insurance, which includes life and disability, critical illness, maternity leave for female employees, and inpatient and outpatient medical expenses both for employees and their children. Additionally, each employee receives a comprehensive health check every year. Healthy lunches and fresh fruit are provided free to factory employees. STULZ China provides targeted stress management support to employees during key stages of their careers, such as onboarding adaptation, departmental transfer, major project pressures, and retirement preparation. This includes in-house counseling and mindfulness stress reduction to help maintain emotional well-being in various situations.

In training and career development, a variety of training courses and resources is provided through the internal Online Learning Platform, such as general training, professional training on products and technical features, and self-im-

provement and career development opportunities among employees. Additionally, trainee and orientation programs provide comprehensive training for interns and new employees, to accelerate their development through hands-on learning and project involvement. STULZ China is committed to providing fair and objective promotion and career development opportunities to all employees. An employees’ skill competition is held every year as a showcase of skills, but is also an opportunity for exchange and learning as well as awarding prizes to exceptional employees.

With regard to equality, STULZ China complies with all applicable labor and employment laws and is committed to providing equal employment opportunities to all qualified personnel regardless of race, color, religion, nationality of origin, disability, gender, age, marital status, etc. The company is dedicated to fostering a corporate culture that supports and recognizes outstanding performance. It strives to provide a fair working environment for employees, sets challenging work goals, and incentivizes employees based on actual performance results. STULZ China balances internal and external compensation levels based on employees’ job responsibility, performance, ability and value, ensuring a competitive yet equitable reward system both externally and internally.

The company advocates and provides an open communication environment, encouraging every employee to freely communicate with their de-



STULZ China

partment managers and other members of the management. This communication encompasses specific requests, suggestions, answers to questions, resolution of misunderstandings, and complaints. The company takes communication seriously and provides timely and fair feedback. Additionally, STULZ China offers complaint and grievance channels for employees to ensure fairness and equality.

In its drive to achieve a modern working environment, STULZ China offers hybrid work opportunities once a week, also to reduce employee commuting costs, improve job satisfaction, and achieve a better work-life balance. In addition to the holidays prescribed by law, the company provides additional paid annual leave and sick leave, and also provides additional holidays during Chinese New Year and National Day. The company always prepares and distributes a variety of gifts to employees on different holidays to express their appreciation to employees at these times.

The team organizes a range of employee activities, such as team building, celebrations, festival activities and sports events to enhance teamwork and improve employees’ well-being. A company book corner in the STULZ China Minhang office consists of a collection of books from employees to be shared with others.

STULZ China launched an official social media HR Recruitment Account to establish a good employer brand and share information on company culture and job opportunities.



STULZ Oceania

GOOD WORKING ENVIRONMENT

STULZ Oceania maintains the focus on creating a good working environment for employees and has previously been awarded the “Great Place to Work” award.

The site actively recruits and trains apprentice refrigeration mechanics. Training for employees is provided, including a master-class at STULZ Oceania’s Sales and Service Conference 2023, run by a well-regarded industry expert. Brand values fostered among employees include open communication and long-term thinking.



Diversity, equality and inclusion

For us, the diversity of our workforce and the creation of an inclusive working environment is not just ethically correct, but also indispensable for our innovative spirit and competitiveness.

Our team is made up of 643 female and 2,660 male creative thinkers. While we are open to all genders, we currently have no employees who openly identify as non-binary. People from 89 different nations work across all global subsidiaries. Everyone shares a common passion and the drive to shape STULZ's future with commitment and ambition.

Our obligation to equality ensures that all our employees are treated fairly – regardless of gender, origin, religion, or any other characteristics. This way, we create a working environment free from discrimination and we actively strive for an inclusive culture. Discrimination of any kind is not tolerated and will be punished accordingly. We also strictly reject sexual harassment and bullying. Every single employee should feel respected, valued, and an integral part of our team.



In Germany, we have introduced a works agreement that promotes equal rights and aims to counter discrimination. Moreover, there are special points of contact to ensure that cases of discrimination are appropriately dealt with. Our Works Council and the Executive Management work closely together to prevent employees in our company from feeling disadvantaged in any way. Our whistleblower system is publicly accessible to everyone. For more, see: [→ STULZ: Due Diligence Obligations in Supply Chains](#)

Our disability representative on the German Works Council ensures that the interests of people with disabilities are also represented in the company. During 2023, we employed 37 people with disabilities in Germany.

Also in Germany, our employees receive training on topics such as diversity, discrimination and harassment. We provide relevant information on these subjects via in-house channels, such as our intranet.

37 female employees in managerial positions.

COMMUNITY ENGAGEMENT

STULZ S.p.A. in Italy sponsored the event “Ferite Invisibili”, a conference with the aim of raising awareness and promoting action in the fight against gender-based violence. The company is also engaged in other social activities: In 2023, Stulz S.p.A. sponsored “La Corsa Rosa”, for example – a running event and an initiative linked to the important issue of prevention and early diagnosis of female cancers.

STULZ Italy

ESTABLISHING EQUALITY

STULZ UK is committed to encouraging equality and diversity among our workforce and eliminating unlawful discrimination. Our aim is for our workforce to truly represent all parts of society and our customers, and for each employee to feel respected and able to give their best. The organization is also committed to opposing the unlawful discrimination of customers or the public. To enforce this, several policy measures have been implemented, among them an equality policy and a bullying and harassment policy.

STULZ UK

STULZ FOUNDATION: EMPOWERING LIVES

Via the STULZ Foundation, STULZ India contributes to the well-being of local communities with the slogan: “Empowering Lives Through Healthcare, Education, Nutrition, and Animal Welfare”. The STULZ Foundation is dedicated to addressing critical needs striving to create a more inclusive and supportive society for both people and animals.

Over 300 individuals benefit daily from essential healthcare services, providing much-needed medical care, in collaboration with partners, in areas where access is limited.

Primary school and higher education schemes help students from marginalized communities to achieve educational milestones and pave their way for future success.

Nutritious meals are provided at identified slum clusters, aiming to contribute towards the eradication of hunger and ensuring access to wholesome food for vulnerable populations.

Animal welfare is another key area of focus, with ongoing efforts to care for stray dogs and cows. This includes providing shelter, medical attention, and nourishment, promoting a compassionate environment for animal protection and rehabilitation.

[→ STULZ-CHSPL Foundation](#)

STULZ India



Modern work environment

At STULZ, we recognize the importance of the modern work environment and actively incorporate various aspects into the design of our workstations, working hours and commuting, and also in our communication methods. The work environments at our global sites are maintained individually by local management.

We understand the importance of a harmonious work-life balance. That's why we support flexible working time models such as flexitime and part-time models in Germany: Flexitime accounts enable people to organize their hours individually. For many years now, our late shift in Hamburg has run over a 4-day week. Other subsidiaries, such as STULZ Italy, provide similar options. In Mexico, 70% of employees work partly from home. STULZ Nordics has established a policy aiming to minimize travel and focus instead on online meetings.



In 2023,
87 employees
in 9 countries
took parental
leave.

FLEXIBLE WORKING HOURS

STULZ S.p.A. in Italy offers a smart working contract, allowing office employees to work remotely from home for two days a week with flexible working hours between 7 a.m. and 8 p.m. The company has equipped employees with the relevant IT infrastructure to ensure the success of this working model. This reduces the CO₂ emissions caused by commuting to the factory and saves the employees time.

Good Employer



STULZ Italy



STULZ Singapore

GOOD EMPLOYER

STULZ Singapore commits to employee welfare and sustainability practices. The company ensures compliance with local employment laws and regulations while prioritizing the safety and well-being of its workforce. It operates a certified Occupational Health and Safety management system (ISO 45001).

STULZ Singapore invests in continuous training and development opportunities, fostering career growth and skill enhancement for its employees. Work-life balance is promoted through flexible work arrangements and support initiatives that enhance employee satisfaction and productivity, including team-building events. These efforts establish a positive workplace culture and contribute to sustainable development in Singapore.



Key Performance Indicators

Company	Unit	2023
Sales (approx.)	€ million	800
Production sites	total	8
Sales and service sites	total	19
Software development sites	total	1

Environment	Unit	2023
Energy		
Energy consumption, total	kWh	16,648,087
Production sites	kWh	16,021,970
Sales and service sites	kWh	626,117
Electricity	kWh	11,161,360
Electricity from fossil-fuel-based tariffs	kWh	8,384,868
Electricity from 100% renewable energy tariffs	kWh	2,776,492
Gas	kWh	4,662,928
Heating oil	kWh	780,955
District heating	kWh	42,843
Energy intensity per employee of included sites	kWh	5,085
Water		
Water withdrawal, total	m³	31,240
Production sites	m³	30,113
Sales and service sites	m³	1,127
Water discharge, total	m³	22,461
Production sites	m³	21,657
Sales and service sites	m³	804
Production sites with waste water treatment in place	total	1
Waste (production sites only)		
Waste generated at production sites, total	kg	3,083,096
Hazardous waste	kg	34,736
Non-hazardous waste	kg	3,048,361
Recycled waste	kg	2,645,023
Disposed waste	kg	438,074
Waste generated at production sites, by origin	kg	1,715,381
Metal waste	kg	574,487
Packaging wood	kg	462,349
Paper and cardboard	kg	361,091
Refrigerants	kg	5,372
Residual waste	kg	115,985
Other	kg	196,097

Exclusions

[illegible]

Environment	Unit	2023
Refrigerants		
R1234ze	kg	8,426
R134a	kg	14,871
R22	kg	59
R32	kg	104
R404	kg	40
R407A	kg	259
R407C	kg	39,351
R410A	kg	29,439
R422D	kg	33
R438A	kg	87
R449A	kg	11
R513A	kg	6,935
R454C	kg	40
with GWP of		
≤ 150	%	8.5
151–1,000	%	7.1
1,001–1,500	%	14.9
≥ 1,501	%	69.5
Company fleet		
Company vehicles, total	total	688
With combustion engine	total	610
With alternative engine	total	78

Governance and supply chain	Unit	2023
Governance		
Employees trained in business ethics	total	2,114
Percentage of included employees trained in business ethics	%	66.8
Sites with whistleblowing procedure in place	total	8
Reports from whistleblower procedures	total	0
Violations of environmental protection laws and directives	total	0
Confirmed cases of corruption	total	0
Materials (production sites only)		
Total purchase volume	tonnes	44,421
Mechanical components	tonnes	18,438
Raw materials	tonnes	10,804
Trade goods	tonnes	9,473
Electrical components	tonnes	4,853
Maintenance and repair operations	tonnes	853
Suppliers (production sites only)		
Suppliers, total	total	3,984
Europe	total	2,509
Asia	total	725
America	total	747
Other	total	3
Share of suppliers in same country as sourcing site	%	91.3

[illegible]

Exclusions
Asia Hub, Indonesia, Mexico, Nordics, South Africa, UK
Asia Hub, Indonesia, Mexico, Nordics, South Africa, UK
Modular (UK), Asia Hub, Indonesia, Mexico, Nordics, UK
Modular (UK), Asia Hub, Indonesia, Mexico, Nordics, UK
Brazil
Brazil
Brazil
Brazil
Brazil
Brazil

For technical reasons, the data from the production sites and independent sales and service sites in Brazil, China and Spain was in this report consolidated. In this report, the operations of STULZ Digital Solutions GmbH, our software development site in Germany, are covered by the data for STULZ GmbH, Germany.

Exclusions
Data covers our subsidiaries in Brazil, Germany, Italy, Spain, Benelux and South Africa only, representing a total of 1,479 employees.
Brazil, Benelux, Indonesia, Nordics, UK
Brazil, Benelux, Indonesia, Nordics, UK
Brazil, Benelux, Indonesia, Nordics, UK
USA

GRI Standard	Disclosure	Reference and omissions
GRI 2: General Disclosures		
1. The organization and its reporting practices		
2-1	Organizational details	3, 14–15, 76
2-2	Entities included in the organization's sustainability reporting	14–15, 76
2-3	Reporting period, frequency and contact point	76–77
2-4	Restatements of information	77
2-5	External assurance	76
2. Activities and workers		
2-6	Activities, value chain and other business relationships	7–13, 49, 51
2-7	Employees	57, 72
2-8	Workers who are not employees	59, 72; total workers only
3. Governance		
2-11	Chair of the highest governance body	The Executive Management is functioning as the highest governance body.
2-12	Role of the highest governance body in overseeing the management of impacts	16
2-13	Delegation of responsibility for managing impacts	16
2-14	Role of the highest governance body in sustainability reporting	16
2-16	Communication of critical concerns	16; communication process only
2-17	Collective knowledge of the highest governance body	16
4. Strategy, policies and practices		
2-22	Statement on sustainable development strategy	4–5
2-23	Policy commitments	17, 20–21, 50; without precautionary principle
2-24	Embedding policy commitments	20, 37, 50–54; without trainings
2-25	Processes to remediate negative impacts	20, 53, 65; examples and future targets
2-26	Mechanisms for seeking advice and raising concerns	54; raising concerns mechanism only
2-27	Compliance with laws and regulations	71; none known
2-28	Membership associations	22–23; exemplary selection
5. Stakeholder engagement		
2-29	Approach to stakeholder engagement	17
2-30	Collective bargaining agreement	72; share of covered employees only

GRI Standard	Disclosure	Reference and omissions
GRI 3: Material Topics 2021		
Material Topics 2021		
3-1	Process to determine material topics	18
3-2	List of material topics	19

Material Topic: Sustainable Products			
GRI 3-3: Management of material topics			25–26
GRI 301: Materials 2016	301-1	Materials used by weight or volume	49, 71; total weight by type used in production sites
	301-3	Reclaimed products and their packaging materials	35, 45; exemplary for production sites only
GRI 302: Energy 2016	302-5	Reductions in energy requirements of products and services	27–28, 30–32; exemplary product features only
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	26–27, 46
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	None known
GRI 417: Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling	26, 46
GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	50; Germany only

Material Topic: Resource-Efficient Production			
GRI 3-3: Management of material topics			37
GRI 302: Energy 2016	302-1	Energy consumption within the organization	38, 70
	302-3	Energy intensity	70
	302-4	Reduction of energy consumption	38–40, 42–43; examples and actions only
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	44; role of water and actions only
	303-3	Water withdrawal	44, 70; total withdrawal only; no analysis of water stress areas
	303-4	Water discharge	70; total discharge only
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	41; Germany only
	305-2	Energy indirect (Scope 2) GHG emissions	41; Germany only
	305-3	Other indirect (Scope 3) GHG emissions	41–42; Germany only
	305-4	GHG emissions intensity	41; exemplary for Germany only
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	44
	306-2	Management of significant waste-related impacts	44–45
	306-3	Waste generated	44–45, 70; production sites only
	306-4	Waste diverted from disposal	44, 70; total diverted waste of production sites only
	306-5	Waste directed to disposal	44, 70; total directed waste of production sites only

GRI Standard	Disclosure		Reference and omissions
Material Topic: Responsible Supply Chain			
GRI 3-3: Management of material topics			49
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	49, 71; production sites only; local means same country as sourcing subsidiary
GRI 205: Anti-corruption 2016	205-2	Communication and training about anti-corruption policies and procedures	50, 72; total permanent employees trained only
	205-3	Confirmed incidents of corruption and actions taken	None known
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	52, 53; overall approach and exemplary for China
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	52, 53; overall approach and exemplary for China

Material Topic: Good Employer			
GRI 3-3: Management of material topics			59, 61, 66, 68
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	72; total turnover by gender only
	401-3	Parental leave	72; total employees with parental leave by gender only
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	58–59, 72
	403-2	Hazard identification, risk assessment, and incident investigation	46, 52–53, 59; detailed reporting for Germany only
	403-3	Occupational health services	59; reporting for Germany only
	403-4	Worker participation, consultation, and communication on occupational health and safety	59; reporting for Germany only
	403-5	Worker training on occupational health and safety	46, 58–59, 64; examples at production sites only
	403-6	Promotion of worker health	58–60, 64; examples at production sites only
	403-8	Workers covered by an occupational health and safety management system	59; Germany only
	403-9	Work-related injuries	58, 72, 77; total injuries according to local law; production sites only
	404-1	Average hours of training per year per employee	63, 72
GRI 404: Training and Education 2016	404-2	Programs for upgrading employee skills and transition assistance programs	61–65; examples for programs
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	57, 66, 72; total employees by gender, age and region only
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	None known

About the Report

This is the second Sustainability Report by STULZ, based in Hamburg, Germany. It covers the operations of STULZ Air Technology worldwide. The report applies to the 2023 fiscal year (January 1, 2023 to December 31, 2023) and was published on November 4, 2024. The editorial deadline was October 28, 2024. The previous Sustainability Report was published on November 17, 2023 for the 2022 fiscal year and covered the operations of STULZ GmbH in Germany.

SCOPE OF CONSOLIDATION

This Sustainability Report covers 28 legal entities as subsidiaries, eight production sites (with integrated sales and services), one software development site and 19 sales and service sites.

Production sites ¹	KPI coverage
STULZ Brasil Ar Condicionado Ltda.	Brazil
STULZ Air Technology and Services Hangzhou Co., Ltd., P.R.	China
STULZ GmbH, Germany (Headquarters) ²	Germany
STULZ-CHSPL (India) Pvt. Ltd.	India
STULZ S.p.A., Italy	Italy
STULZ TECNIVEL, S.L.U., Spain	Spain
STULZ Modular Ltd., UK	UK (Modular)
STULZ Air Technology Systems Inc., USA	USA

The 28 subsidiaries come under the scope of the consolidated financial statements of Stulz Verwaltungs GmbH & Co. KG. They represent our worldwide operating entities under one of the STULZ Group's business units, STULZ Air Technology. Thus, the scope of this Sustainability Report differs from the scope of the consolidated financial statement of STULZ Verwaltungs GmbH & Co. KG for 2023 fiscal year.

Our reporting is voluntary; external auditing has not taken place. Our aim is to transparently disclose to our stakeholders how STULZ manages sustainability in a comprehensive and future-oriented way. We present key areas and approaches, selected strategies, goals, actions, progress, and key performance indicators. We thereby demonstrate how STULZ deals with economic, environmental, social and governance concerns.

Sales and service sites	KPI coverage
STULZ Oceania Pty Ltd., Australia	Oceania
STULZ AUSTRIA GmbH	Austria
STULZ Belgium BVBA	Benelux
Dala Service AR Conditionada, Ltda., Brazil ¹	Brazil
STULZ Air Technology and Services Shanghai Co., Ltd., P.R. China ¹	China
STULZ France S.a.r.l.	France
PT STULZ Air Technology, Indonesia	Indonesia
STULZ Malaysia SDN., BHB	Singapore
STULZ México S.A. de C.V.	Mexico
STULZ Groep B.V., Netherlands	Benelux
STULZ Oceania Ltd., New Zealand	Oceania
STULZ Polska Sp. z o.o., Poland	Poland
STULZ ASIA HUB PTE. LTD., Singapore	Asia Hub
STULZ Singapore Pte Ltd.	Singapore
STULZ South Africa Pty. Ltd.	South Africa
STULZ Espa.a S.A., Spain ¹	Spain
STULZ Nordics AB, Sweden	Nordics
STULZ Siam Co., Ltd., Thailand	Thailand
STULZ UK Ltd.	UK

DATA COLLECTION AND METHODOLOGY

Data for this Sustainability Report was collected in collaboration with the relevant departments of STULZ and our international site representatives. Whilst we strive to provide a full picture of our non-financial activities on a

global scale, some data is still not available at all of our subsidiaries. It is important to know that environmental indicators are most relevant for our production sites. In general, the data covers the following subsidiaries or sites; omissions from that are shown in the report:

Key Performance Indicator data	Covered subsidiaries / sites
Company	All subsidiaries
Environment	
Energy, water, refrigerants, company fleet	All subsidiaries
Waste	Production sites ¹
Social	
Employees, training and education	All subsidiaries
Health and safety	Production sites ¹
Governance and supply chain	
Governance	All subsidiaries
Materials, suppliers	Production sites ¹

As regards our health and safety data, we have gathered information on how many accidents had to be reported to authorities according to local laws and regulations as well as how many accidents resulted in a work absence of more than six weeks.

SIGNIFICANT CHANGES AND FURTHER INFORMATION

As we expanded the scope of consolidation, the data of this Sustainability Report is not directly comparable with our previous report. However, we maintained the structure of the first Sustainability Report and have not indicated any other significant changes compared with the last report.

Deviations due to rounding may occur in individual cases. We use metric tonnes.

This report is publicly available on our website as a PDF file. → [STULZ: Our Sustainability Report](#)



CONTACT
For questions about sustainability at STULZ and our sustainability reporting, contact our team:
Mr. Ludger Ecke and
Mr. Jan-Lucas Kinne
sustainability@stulz.de

¹ For technical reasons, the data from the production sites and independent sales and service sites in Brazil, China and Spain is in this report consolidated.
² In this report, the operations of STULZ Digital Solutions GmbH, our software development site in Germany, are covered by the data for STULZ GmbH, Germany.



Publisher

STULZ GmbH – Corporate Headquarters
Holsteiner Chaussee 283
22457 Hamburg, Germany
Tel. +49 40 5585 0
sustainability@stulz.de

Sustainability consulting, content and editing

STEINBACH STRATEGIEN Hamburg, Germany

Design, layout and typesetting

Cash Cow Farmers Hamburg, Germany

Picture credits

All images contained in this Report are the property of STULZ Group or have been approved by the proprietor. Reproduction in whole or in part of graphics, images and text without the written permission of STULZ GmbH is prohibited.

Note

Content from these brochures may be used only with STULZ's written consent.

Exclusion of liability

All disclosures in the Sustainability Report 2023 are based on information that was collected and processed with the greatest of care. Nevertheless, errors cannot be completely excluded. All statements relating to the future were based on assumptions and estimates made at the time of publication.

Date

November 2024

Close to you all over the world

With expert business partners in subsidiaries with production plants and sales and service partners all over the globe.

For more information, visit our website at www.stulz.com
or download our **STULZ Products and Services** app.