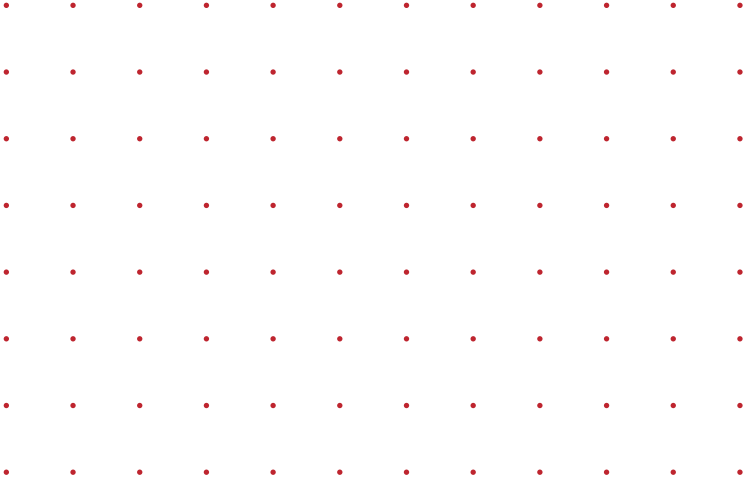


—  
OUR PATH  
TO A  
SUSTAINABLE  
FUTURE



# FOREWORD

## OUR PATH TO A SUSTAINABLE FUTURE

GRI 2-22

DEAR READERS,

The 28<sup>th</sup> Climate Conference of the United Nations, also known as the Conference of the Parties (COP28) was held in Dubai from November 30 to December 12, 2023. COPs are the world's highest decision-making body on climate issues and with around 70,000 participants, among the largest meetings on our planet. This year's COP was particularly significant for our sector as it addressed the topic of clean cooling for the first time. A-HEAT and I were personally invited by the Ozone Secretariat of the UN Environment Programme (UNEP) to present to experts from all over the world our solutions for more sustainable refrigeration and air conditioning technology based on natural refrigerants. The invitation was an honor and a recognition of our pioneering role in the process of decarbonization.

Interestingly, many participants were unaware just how far this technology has advanced. Modern products and solutions in the area of refrigeration and air conditioning technology are significantly more efficient than their preceding generations and can be operated using refrigerants that do not harm the atmosphere. Nonetheless, many users remain reticent when it comes to replacing their devices. My business partners believe that it will probably take a combination

of more education and political tailwind to help these innovations to become established around the world.

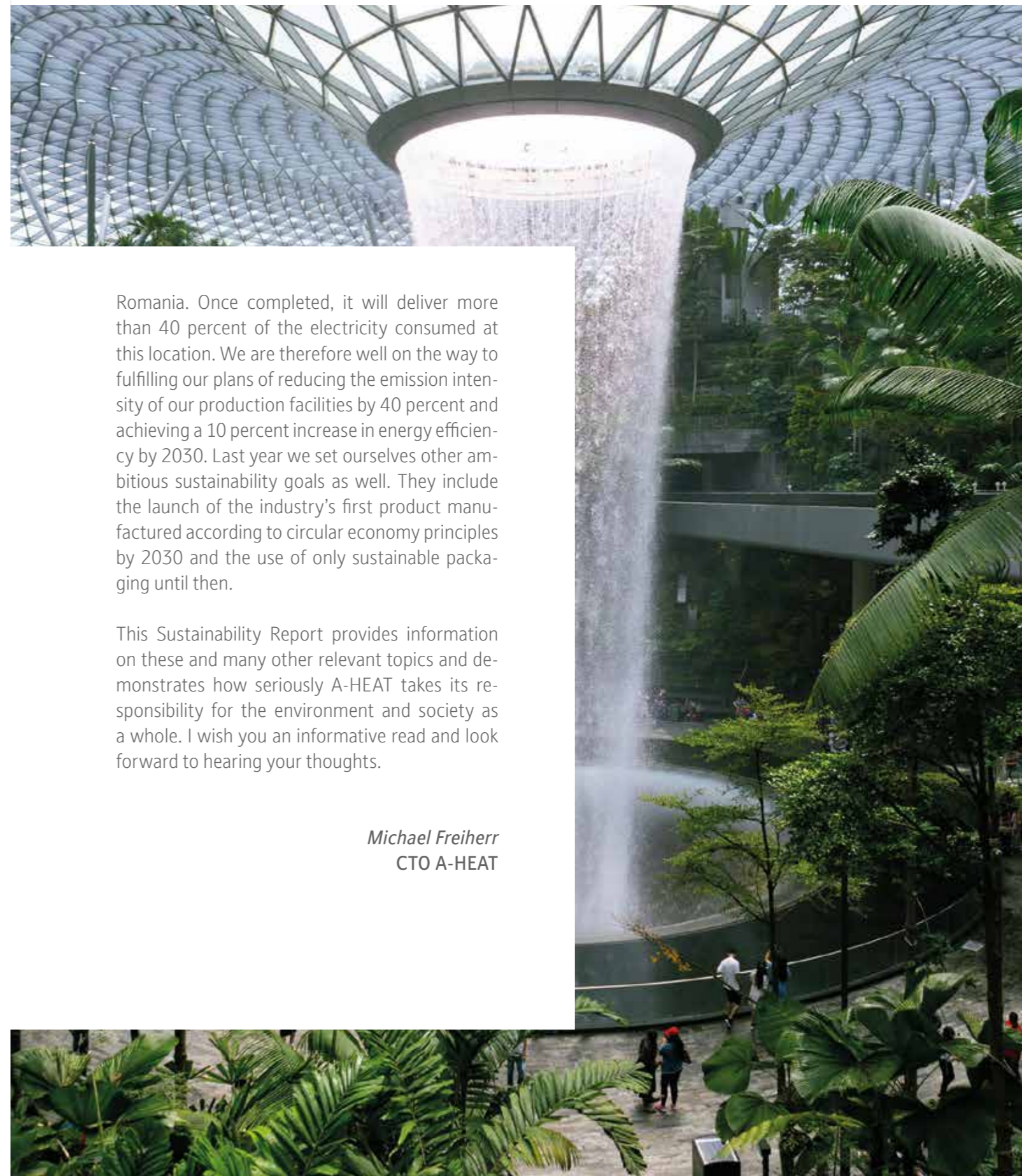
Our first Product Carbon Footprint Study from last year demonstrates the importance of widespread education. It states that more than 90 percent of a device's carbon footprint is produced during its operation, depending on the product type. We draw two conclusions on this basis: Firstly, the key goals of our Innovation Department include a continuous increase in the energy efficiency of our product portfolio and in doing so to reduce associated emissions. A prime example of this is the modified V-shape VARIO series, which was placed on the market last year. Secondly, we are seeking to team up with our customers and train them to maximize the efficiency of our state-of-the-art air conditioning and refrigerated equipment and to encourage them to select natural refrigerants. We made progress in this area on all continents in 2023.

In 2023, we also continued our efforts to reduce emissions, energy consumption and the use of other valuable resources within the company. We have already started electrifying our vehicle fleet and installing a solar power system at the site in

Romania. Once completed, it will deliver more than 40 percent of the electricity consumed at this location. We are therefore well on the way to fulfilling our plans of reducing the emission intensity of our production facilities by 40 percent and achieving a 10 percent increase in energy efficiency by 2030. Last year we set ourselves other ambitious sustainability goals as well. They include the launch of the industry's first product manufactured according to circular economy principles by 2030 and the use of only sustainable packaging until then.

This Sustainability Report provides information on these and many other relevant topics and demonstrates how seriously A-HEAT takes its responsibility for the environment and society as a whole. I wish you an informative read and look forward to hearing your thoughts.

*Michael Freiherr*  
CTO A-HEAT



# TABLE OF CONTENTS

Foreword	02	<b>3</b>	
<b>HIGHLIGHTS IN 2023</b>	<b>06</b>	<b>VALUE CHAIN</b>	<b>40</b>
		<b>Integration of key stakeholders</b>	
		3.1 Procurement	43
		Effective multiple source strategy	
<b>1</b>	<b>10</b>	3.2 Customers and end users	45
<b>A-HEAT</b>		Optimized support	
<b>A global player in the refrigeration and air conditioning industry</b>		3.3 Other stakeholders	46
1.1 Business model	13	Important for the circular economy	
Comprehensive expertise in refrigeration and air conditioning		3.4 Stakeholder dialogue	47
1.2 Industry	14	Encourages sustainable development	
Significant responsibility for successful decarbonization		<b>4</b>	
1.3 Materiality and strategy	15	<b>ENVIRONMENT</b>	<b>49</b>
Four key issues		<b>Efficient use of valuable resources</b>	
1.4 Sustainability goals	18	4.1 Materials	51
Significant reduction in emissions by 2030		Successful reduction in input volumes	
1.5 Organization	20	4.2 Energy consumption	53
Sustainability as staff function		Reduction in the use of fossil fuels	
<b>2</b>	<b>24</b>	4.3 Water	58
<b>PRODUCT SOLUTIONS</b>		Careful Management of a scarce resource	
<b>Innovations for greater sustainability</b>		4.4 Emissions	62
2.1 Quality and safety	27	Avoid, reduce, offset	
at the highest level		4.5 Waste management	68
2.2 Sustainable product solutions and continuous innovation	30	Moving towards closed-loop systems	

## ACTING TOGETHER

**In the A-HEAT Group, we are bound together by shared values.**

Sustainability is a key element of our strategy. It is deeply embedded in our daily business, investment decisions and corporate governance. Only together can we move towards a sustainable future.

<b>5</b>	<b>70</b>	<b>7</b>	<b>94</b>
<b>THE TEAM</b>		<b>SOCIAL RESPONSIBILITY</b>	
<b>Shapers of change and a key resource</b>		<b>Acting locally, communicating globally</b>	
5.1 Strategy	73	7.1 CSR projects	97
A focus on increasing attractiveness as an employer		Global engagement	
5.2 Employees	75	7.2 Discussing sustainability in the network	98
Addressing the Skills Challenge		ECONSENSE	
5.3 Promoting diversity, equity and inclusion	78	<b>8</b>	
5.4 Health and safety at the workplace	80	<b>ABOUT THIS REPORT</b>	<b>100</b>
our top priority		Notes	103
5.5 Professional Development	83	Imprint	109
Global approach, local structures			
<b>6</b>	<b>86</b>		
<b>ETHICAL BUSINESS PRACTICES</b>			
<b>Committed to high standards</b>			
6.1 Compliance management	89		
Code of Conduct provides the framework			
6.2 Anti-corruption and whistleblower policy – clear rules	91		
6.3 Political influence	93		

The pronouns they/them/their are used in this report to refer to single and multiple individuals.

# HIGHLIGHTS IN 2023

## ADDITIONAL SUSTAINABILITY GOALS EMPHASIZE COMMITMENT

We work with sustainability experts to achieve maximum results in all areas. While sharing our own innovations and initiatives, we also incorporate external expertise from our customers, universities, suppliers, and users into our projects.

A-HEAT already set itself a number of ambitious sustainability targets in 2022. Among other things, the Group intends to increase the efficiency of energy and water use, reduce the intensity of emissions and to make greater use of regenerative energy sources. The Group expanded its goals in 2023 and now aims to launch the industry's first product manufactured according to circular economy principles and to use only sustainable packaging by 2030.

## RAISING STAFF AWARENESS AROUND THE WORLD TO PROMOTE SUSTAINABILITY

Last year, A-HEAT launched a global marketing campaign to improve communication of its sustainability goals to employees at all locations.

Posters, online information and training courses brought home to the A-HEAT team the importance of sustainability and what each individual can do to accept responsibility for the environment and society as a whole.

## GLOBAL DECLINE IN EMISSIONS AND ENERGY CONSUMPTION

A-HEAT's global energy consumption fell by 12 percent in the past financial year, while Scope 1 emissions dropped by 11 percent. This progress is based on the growing efficiency of energy utilization and the rising deployment of renewable energy sources, especially at the European locations.

## THE FIRST SITE WILL DRAW ON SOLAR POWER FROM 2024

Installation of a solar power system at the Romanian site in Sibiu got underway in 2023.

Going forward, it will cover around 40 percent of the energy consumption at this location. Other photovoltaic projects are currently in the pipeline. A-HEAT intends to use proprietary systems to generate 15 percent of its total energy requirements by 2030.



## PROGRESS ALSO IN WATER CONSUMPTION: DROP IN INTENSITY

The water consumption per manufactured unit – aka water intensity – fell by just under 20 percent within just one year. Optimization of production processes had a positive impact, especially at the two locations in Latin America. A-HEAT draws on these best practice examples to modernize comparable production facilities around the world.

## STRONG INNOVATIVE DRIVE: REVISED PRODUCT SERIES REDUCES ENERGY CONSUMPTION

The Product Carbon Footprint Study from 2023 demonstrated that in some cases, over 90 percent of emissions from air conditioning and refrigerated equipment are generated during the use phase. With this in mind, A-HEAT is working flat out to optimize the performance of its own products. Among others, the V-shape VARIO series was modernized last year. The new devices deliver more power, while energy consumption and emissions remain unchanged.



**GLOBAL  
COLLABORATION**

THE MAIN LOCATIONS WITHIN THE A-HEAT GROUP

GRI 2-1



# A-HEAT

A GLOBAL PLAYER IN THE REFRIGERATION AND AIR CONDITIONING INDUSTRY

A-HEAT IS ONE OF THE WORLD'S LEADING COMPANIES IN HEAT TRANSFER TECHNOLOGY.



A-HEAT's energy - and resource-efficient solutions are already making important contributions to decarbonizing the economy and society. The plan is to achieve an even greater reduction in resource consumption by 2030. The company extended its sustainability goals last year.

# 1.1 BUSINESS MODEL

## COMPREHENSIVE EXPERTISE IN REFRIGERATION AND AIR CONDITIONING

GRI 2-1, GRI 2-6

A-HEAT Allied Heat Exchange Technology AG headquartered in Fürstfeldbruck, Germany (hereinafter referred to as A-HEAT or the Group) is an internationally active technology group specializing in refrigeration, air-conditioning, and process technology. With its key product brands Güntner, JAEGGI Hybridtechnologie, and basetec, A-HEAT is one of the world's leading companies in the field of heat transfer technologies. These brands epitomize high-quality, service-oriented product and application solutions based on more than 90 years of company tradition. The solutions are used in a wide range of industries. The spectrum of customers ranges from the automotive, food, and pharmaceutical industries to the IT and renewable energy sectors.

A-HEAT's service spectrum includes research, procurement, production, logistics, product management, distribution, and service. In addition to heat exchangers, A-HEAT is increasingly producing electronic components such as controllers and interfaces. The decoupling of logistics and production is creating new opportunities,

and the logistics business is being expanded. In addition, A-HEAT's subsidiaries are driving the development of innovations in building design and technology as well as digitalization. The plan is to offer this know-how to third parties in the future.

The organizational structure is based on segments and regions. There are three segments: fin, plate, and hybrid heat exchanger technologies, and three regions: Europe, North and Latin America (NLA), and Asia. The Group manufactures at sites in Europe, Asia, and America, and it has a global distribution and service network. The manufacturing network includes production sites in Germany, Hungary, Romania, Indonesia, Brazil, and Mexico. These sites are operationally autonomous, but their process organization is coordinated between sites. This allows the Group to leverage synergies and respond flexibly to the individual market requirements at the same time.



# 1.2 INDUSTRY

## SIGNIFICANT RESPONSIBILITY FOR SUCCESSFUL DECARBONIZATION

GRI-2-6

A-HEAT operates in the refrigeration, air-conditioning, and process technology sector, which bears a significant responsibility in the ongoing decarbonization of the economy and society. Refrigeration and air-conditioning currently account for 16% of global energy demand. Electricity consumption is expected to increase by one third to 6,000 TWh by 2030. If we extrapolate the current state of technology and take into account rising prosperity across all continents, consumption might increase by another 58% to 9500 TWh by 2050.<sup>1</sup> This in itself would require considerable action.

But our industry is already grappling with a second issue: using natural refrigerants to replace the synthetic ones. After all, synthetic refrigerants have a very considerable impact on the atmosphere, and estimates even suggest that they have contributed to 10%<sup>2</sup> of global warming to date.

A-HEAT has been addressing these issues for years. The Group works tirelessly to increase the efficiency of its equipment and to reduce their energy consumption. At the same time, more and more equipment is able to use natural refrigerants. A-HEAT will lead the way and set standards for the entire sector in the years ahead. The goal is to develop resource-efficient and environmentally friendly products for a world that is increasingly dependent on functioning cooling and state-of-the-art heat exchangers. This is essential to cope with the consequences of global warming and extreme weather events, as well as to operate the growing number of refrigeration, hydrogen, and biogas plants and heat pumps. Another important aspect must not be overlooked, either. Functional and continuous cold chains are crucial for reducing waste in the food production sector. Viewed globally, an average of 14% of food still becomes inedible before reaching the consumer.<sup>3</sup>

# 1.3 MATERIALITY AND STRATEGY

## FOUR KEY ISSUES

GRI 2-14, GRI 2-22, GRI 3-1

Sustainability has long been a focus for A-HEAT. Across all its subsidiaries and business units, A-HEAT has always strived to provide its customers with innovative and energy- and resource-efficient solutions. As far back as the early 2000s, A-HEAT became one of the first companies to draw on natural refrigerants and to restore CO<sub>2</sub> air coolers to its portfolio. A-HEAT was originally a family business, so social responsibility is firmly embedded in its DNA as well. The Group sponsors sports programs and offers regular health screenings to ensure that its employees remain healthy in the long term. What is more, the Group also strengthens well-being and promotes social cohesion by involving families and sponsoring local sports and cultural clubs.

The materiality analysis first conducted in 2022 made a significant contribution to establishing a systematic structure for all sustainability activities. The analysis identified the most relevant sustainability topics for the Group and its business model, as well as those with the greatest impact. The process began with the organization of several workshops with experts from various departments. Their approaches were then validated using internal data and

calculations. Step by step, this produced a list of material sustainability issues with specific relevance to A-HEAT.

At the same time, the company took stock of all sustainability-related measures and projects that had already been implemented. They were also validated in regard to their environmental and social impacts, as well as their relevance to the A-HEAT business model. These findings were also included in the materiality analysis. They produced a list of four core issues and six other material issues, which are comprehensively covered in this report.

<sup>1</sup> Source: Toby Peters: A cool world – defining the energy conundrum of cooling for all; University of Birmingham; 2018

<sup>2</sup> Source: Sustaining the Future – Inspiring a Generation, Graeme Maidment, IOR, January 2014

<sup>3</sup> Source: Keisha Rukikaire: Amid food and climate crises, investing in sustainable food cold chains crucial; UN environment programme; 2022

This Sustainability Report highlights our core issues in order to improve clarity.



## MATERIAL ISSUES

GRI 3-2

### CORE ISSUE

<b>ENVIRONMENT</b>	<b>Energy consumption and production</b>	2. Products 4. Energy consumption	p. 24 p. 53
	<b>Climate change</b>	2. Products 4.4 Emissions	p. 24 p. 62
	<b>Water consumption and pollution</b>	2. Products 4.3 Water	p. 24 p. 58
<b>SOCIETY</b>	<b>Demographic change and lack of skilled labour</b>	5.2 Employees	p. 75

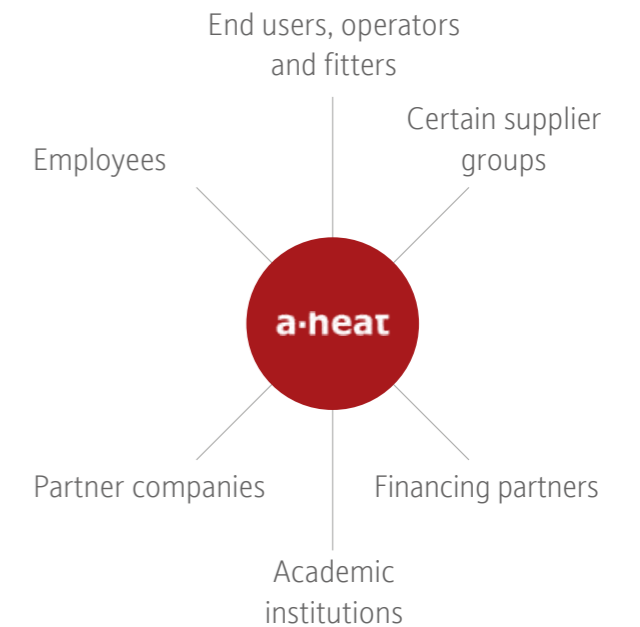
### WEITERE WESENTLICHE THEMEN

<b>ENVIRONMENT</b>	<b>Waste and the circular economy</b>	4.1 Materials 4.5 Waste management	p. 51 p. 68
<b>GOVERNANCE</b>	<b>Human rights in the supply chain</b>	3.1 Procurement 6.1 Compliance management	p. 43 p. 89
<b>SOCIETY</b>	<b>Diversity, equity and inclusion</b>	5.3 Promoting diversity and equity	p. 78
	<b>Health and safety at the workplace</b>	5.4 Health and safety at the workplace	p. 80
	<b>Professional development</b>	5.5 Further training	p. 83
	<b>Communities</b>	7. Social responsibility	p. 94

A-HEAT will conduct another materiality analysis in 2024. It will consider the requirements enshrined in the CSRD (Corporate Sustainability Reporting Directive) adopted by the European Union in 2023. A-HEAT will not be required to publish a report under the resulting European Sustainability Reporting Standards (ESRS) until 2027 due to the different financial year, but the company is still making efforts to implement the requirements as soon as possible and adapt or expand existing processes accordingly. The company assumes that its core issues until now will retain their significant relevance and is hence continuing to work on them with undiminished effort. Irrespective, there are also plans to use the latest materiality analysis as a foundation for developing a more extensive sustainability strategy.

Three of the four core issues center on environmental topics. A-HEAT has always been focused on delivering innovative and sustainable refrigeration solutions. The sustainability impact for A-HEAT, its customers and all other users rises with an increase in efficiency and reduction in emissions. Moreover, the company is ensuring a steady decline in energy and resource consumption throughout the production processes. Management of demographic change is an additional factor. There were also activities in this area during 2023, which are explained in more detail under the chapter heading The Team.

A-HEAT acknowledges that making progress even beyond the core issues will require collaborative partnerships with various stakeholders. The new CSRD recommends that a materiality analysis should include the opinions of partners and interest groups. A-HEAT is well prepared in this regard as well. The company conducted a stakeholder analysis in 2022 that reveals the interest groups with a particular relevance to the success of the Group and its sustainable development. They are:



This report, Chapter 3 in particular, describes the process of dialogue with these stakeholders and highlights the importance of communication on an equal footing for A-HEAT.

# 1.4 SUSTAINABILITY GOALS

## SIGNIFICANT REDUCTION IN EMISSIONS BY 2030

GRI 2-22

A-HEAT has already formulated clear goals for the year 2030 in the four core issues of energy, climate, water and demographic change. Additional goals were added in 2023, most notably in the areas of waste and the circular economy. The following overview sets out the sustainability goals.

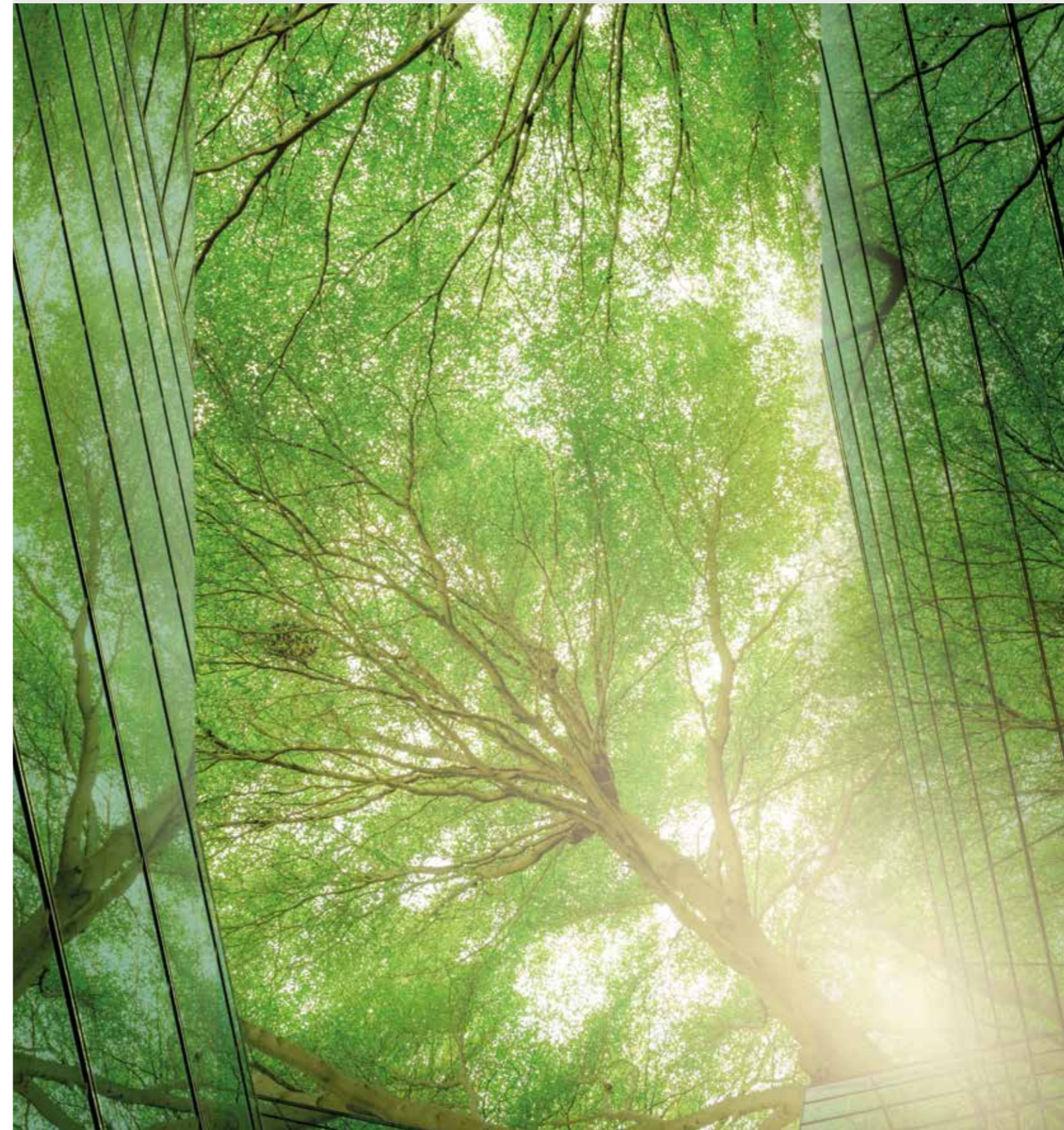
### SUSTAINABILITY GOALS

Material issue	Goal by 2030 (base year 2021)
Climate change	Reduction in Scope 1 and Scope 2 emission intensity at the production sites by up to 40%*
	100% of the product portfolio can be operated using green materials
Energy consumption and generation	Integration of sustainability criteria to help with decision-making in product selection
	Increase in energy efficiency at the production sites by up to 10%
Water consumption and pollution	Company systems are used to generate up to 15% of total energy requirements
	Increase in water efficiency at the production sites by up to 30%
Demographic change and lack of skilled labour	Creation of transparency in regard to implications of demographic change at global level
	Introduction of the industry's first product manufactured according to circular economy principles
Waste and the circular economy	Use of exclusively sustainable packaging

Tables and figures 1: Sustainability goals

In the coming years, we also plan to formulate measurable goals for social aspects as well. Doing so will be predicated on the availability of suitable data – one of the priorities of our current work. The following chapters provide more detailed information about the status quo, the individual goals and our recent progress.

\* The calculation of emission intensity does not take into account the purchase of green electricity (site-specific calculation method).



# 1.5 ORGANIZATION

## SUSTAINABILITY AS STAFF FUNCTION

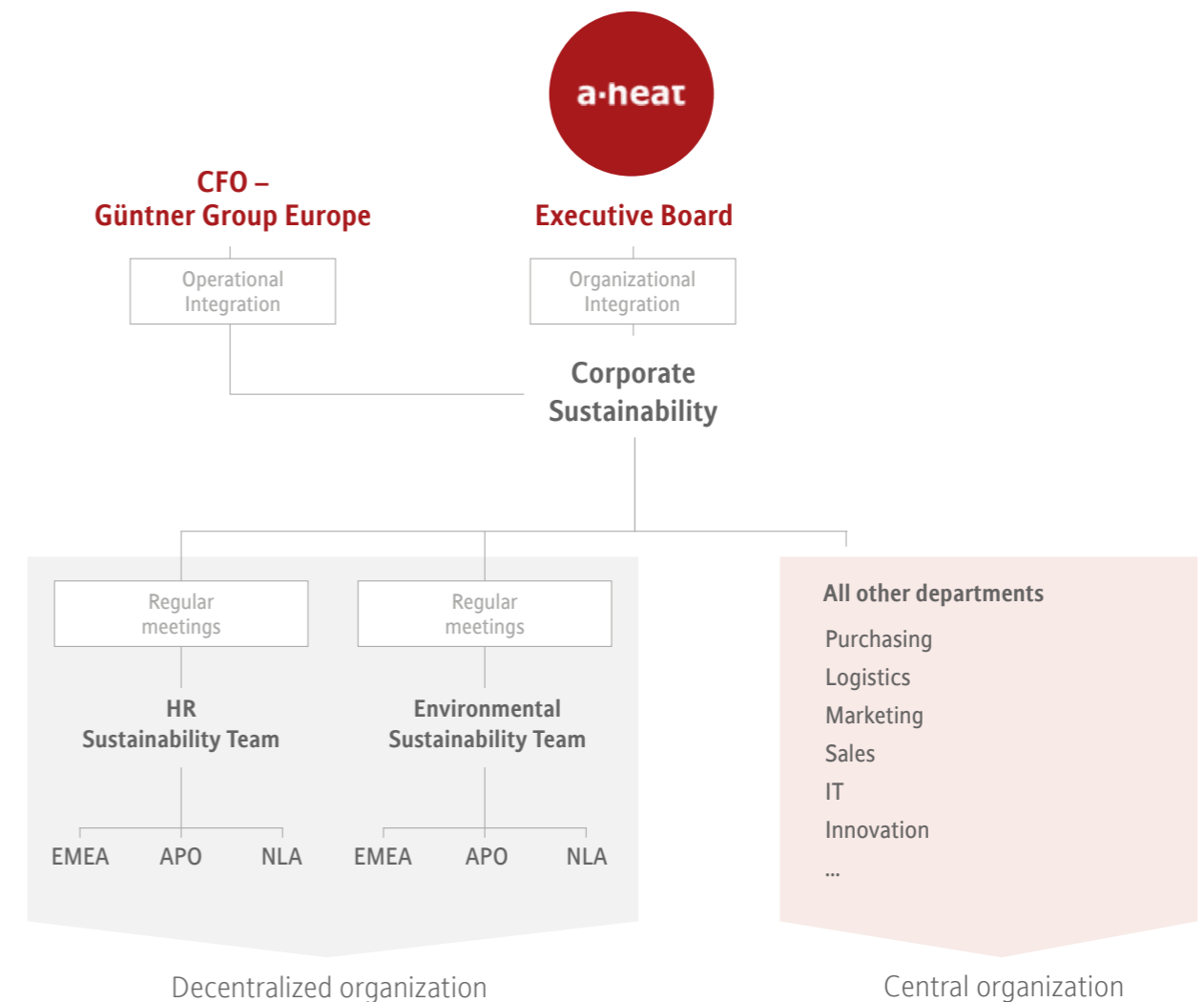
GRI 2-13, GRI 2-22

The importance A-HEAT attaches to the issue of sustainability is demonstrated by the organizational positioning of the newly created Department for Corporate Sustainability. It reports directly to the Executive Board. Regular virtual and face-to-face meetings are held to discuss the sustainability strategy, current developments, challenges, and future measures.

In line with the organization of the Group, the operational integration of the Sustainability department is partly decentralized and partly centralized. As a result, it works closely with three sustainability teams organized at the various sites. The Environmental Team includes representatives from production sites in all regions and works on measures to mitigate the environmental impact of the production processes.

The members transfer the information to the respective sites and implement all the agreed measures on a local level. The Department of Occupational Health and Safety is coordinated by global Lean Management. As usual, the HR Sustainability Team deals with sustainability issues relating to recruitment processes and employees.

Sustainability is directly integrated into centrally organized business units such as Purchasing, Innovation, IT, Logistics, and Legal. Until now, regular dialogue has taken place primarily with the Purchasing and Innovation Departments, as they have the greatest impact on the company's sustainable development. Collaboration has also been intensified with the Marketing Department, which involved the launch of a sustainability campaign. Refer to chapter 5 for more information. It is still the company's declared goal to extend this dialogue to other departments and to raise awareness for environmental and social issues within the organization.



Tables and figures 2: Enshrining sustainability in the organizational structure

## EXECUTIVE BOARD AND SUPERVISORY BOARD: A-HEAT MAINTAINS A DUAL GOVERNANCE STRUCTURE

GRI 2-9

A-HEAT is a company under German stock corporation law. It therefore has a dual governance system consisting of an Executive Board and a Supervisory Board. The Group is not publicly listed, and its shareholder base consists mainly of private-sector, long-term investors.

The task of the Executive Board is to pursue a long-term strategy to increase the value of the Group for customers, suppliers, employees, and shareholders. The Supervisory Board is tasked with overseeing and monitoring the Executive Board. It meets for this purpose at least four times a year.

The Executive Board is in regular contact with the regional managing directors to safeguard the continuity of business activities and ensure adherence to the corporate strategy at local level. Coordination also takes place between the sites.

A task force is convened if a site requires additional capacities. This task force can draw on resources from other sites and is usually able to overcome challenges in a short period of time.

## RISK MANAGEMENT: CLEAR STRUCTURES AND PROCESSES

GRI 201-2

Risk management is an integral part of A-HEAT's corporate strategy and aims to identify and categorize strategic and operational risks at an early stage and to initiate and implement countermeasures. Risks are defined as significant deviations from the corporate planning. Where economically feasible, insurance and financial transactions are entered into to reduce or avoid risks.

The identification, assessment, and management of opportunities and risks are the responsibility of each subsidiary. There is a regular exchange of information with the Executive Board, and immediate information is provided in the case of risks that endanger the company's status as a going concern. All material risks of the A-HEAT Group are monitored on an ongoing basis and are part of the Group Management Report.

The individual risks are grouped into categories such as market risks, technological risks, procurement risks, and legal risks. These categories also include sustainability-related risks such as personnel risks that may arise from demographic changes, lack of qualified personnel, fluctuation of knowledge carriers, and qualifications. A-HEAT tries to counteract these risks through various personnel policy measures such as increasing employee commitment and providing training and professional development for specialists (see also chapter 5. Further Training).

## COMPLIANCE: GLOBAL CODE OF CONDUCT

A-HEAT complies with applicable laws as a matter of course and observes its own ethical standards. In order to ensure compliance, the

Compliance Management team worked with external experts to develop a Code of Conduct (CoC).

For detailed information on compliance, see chapter 6. Ethical Business Practices.

# PRODUCT SOLUTIONS

INNOVATIONS FOR GREATER SUSTAINABILITY

A-HEAT'S PRIORITY IS THE DEVELOPMENT OF DURABLE EQUIPMENT, OPERATED WITH ENVIRONMENTAL FRIENDLY SUBSTANCES SUCH AS NATURAL REFRIGERANTS PAIRED WITH THE HIGHEST ENERGY EFFICIENCY.





A-HEAT operates in the refrigeration, air-conditioning, and process technology sector, which causes significant carbon emissions, as shown in the first part of this report. But in some cases, well over 90 percent of the carbon footprint associated with the devices is generated during the use phase, depending on the product type. This is revealed by internal investigations and a new product carbon footprint (PCF) study, which was commissioned in 2023. Therefore, focusing solely on reducing emissions in our operations would not be sufficient. Instead, we aim to develop long-lasting, highly efficient equipment that uses environmentally friendly substances. This is A-HEAT's priority.

## 2.1 QUALITY AND SAFETY AT THE HIGHEST LEVEL

Producing high-quality products requires certified processes and comprehensive instructions for all parties involved. A-HEAT has had these capabilities for many years, contributing to its leading position in the global market.

### PRODUCT SAFETY: CLEAR PROCESSES MINIMIZE RISKS

*GRI 403 -7, GRI 416 -1*

A-HEAT pays the utmost attention to the safety of its products. To achieve this, a process is in place to identify all possible risks and hazards associated with the handling and use of the products, down to components such as fans. All research and development projects have to go through this process of risk assessment conducted by the Engineering Department. At the beginning of the process, a software system comprehensively documents the parts used and the potential risks associated with them. The latter are assessed and rated according to their impact and the severity of consequences. At the same time, measures are determined to either avoid or to minimize each risk. This

documentation forms the basis of the assembly and construction manual that accompanies each device.

Based on evaluations of products in use and the complaint management system, internal departments address identified issues and take appropriate action. Any resulting adjustments to the manual are made by technical editors, ensuring that all users have access to up-to-date information at all times. This process ensures continuous optimization of safety during operation and contributes to the high quality of A-HEAT products.

### QUALITY: CERTIFIED AND MONITORED

*GRI 403 -7, GRI 416 -1*

The quality assurance of the Group's products is based on structured processes; all production sites are ISO 9001-certified. Additional certifications such as Pressure Equipment Directive 2014/68/EU up to category 4 or Hazard Analysis of Critical Control Points (HACCP) support A-HEAT's efforts to produce safe and reliable products. HACCP validates the

correct selection of materials suitable for use in the food industry, as well as hygienic design (accessibility and cleanability).

In a “Process House,” all work steps in production, quality control, and many other areas are documented and made available to all employees worldwide. Process management enables the timely global visibility of any adjustments and ensures the optimization of each process.

Internally defined technical standards are implemented and monitored worldwide, covering the entire internal value chain. This begins with the initial sample inspection of raw materials and supplied parts, followed by incoming goods inspection. Quality controls are performed during production and final acceptance of finished products. Post-processing and scrap levels are also continuously monitored.

Within the manufacturing process, a self-checking concept and so-called quality gates ensure that only flawless semifinished products proceed to the next stage of manufacturing. This prevents costly reworking and allows the early detection of any process errors. Customer-oriented complaint management and continuous dialogue with users are additional tools for early

detection and resolution of any potential quality problems.

Furthermore, global CAQ software is used to document and analyze internal defects as well as supplier defects and customer complaints according to a ‘zero-defect strategy’. The right corrective, remediation and preventive measures are then implemented.

### IT SECURITY: COMPLETE PROTECTION OF PERSONAL DATA

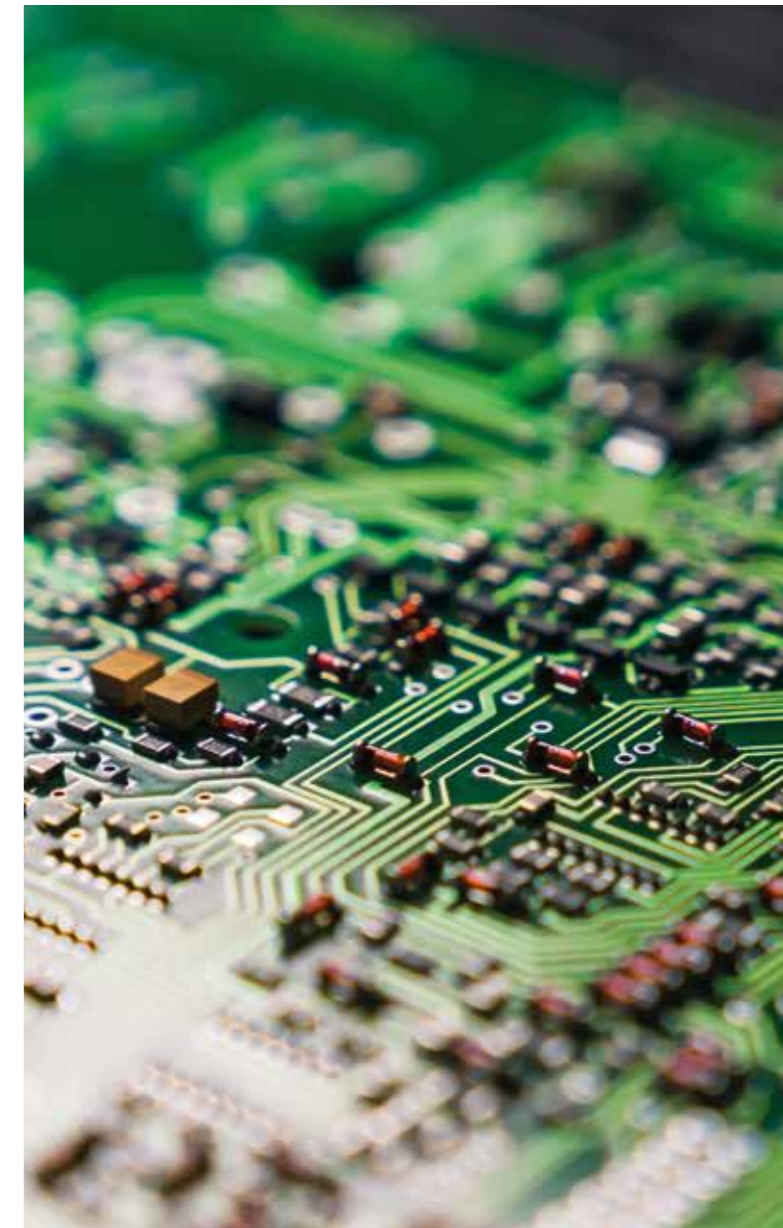
*GRI 418 -1*

Digital technologies are increasingly used in the Group’s products (see page 38 IoT Control Solutions). The subsidiary SparkRadiance was established in order to ensure the highest possible security of these solutions and to consolidate digitalization know-how. The company provides all IT-related services within A-HEAT.

One of the central tasks with which SparkRadiance is entrusted is to protect personal data from unauthorized access. This is achieved through a series of technical and organizational measures

such as clear input, access, and authorization concepts. Making employees aware of the necessary care in handling personal data begins with joining the organization and going through training. This is followed by mandatory annual refresher training.

In order to identify and eliminate any vulnerabilities in IT systems at an early stage, A-HEAT relies not only on internal IT audits and reporting systems but also on regular support from external IT security companies.



## 2.2 SUSTAINABLE PRODUCT SOLUTIONS AND CONTINUOUS INNOVATION

A-HEAT has defined two clear objectives for its product portfolio: First, to further increase the energy efficiency of its equipment in the coming years, for example, through innovative defrosting methods and IoT solutions. Second, by 2030, the entire product portfolio should be able to operate at 100% capacity using environmentally friendly substances such as natural refrigerants. If successful, this will significantly reduce the environmental impact and emissions associated with the use of the Group's equipment – a milestone for customers on the path to carbon neutrality.

### INNOVATION PROCESS: STRENGTHENING GLOBAL COLLABORATION

Structured innovation and development processes provide a solid foundation for achieving these ambitious goals. The Innovation and Development Departments in Fürstenfeldbruck and Monterrey are hubs in this process. In 2022, A-HEAT set itself the goal of intensifying cooperation between these sites to improve the utilization of available expertise. The experts have collaborated on various projects ever since. International training courses on

the development tools used in the area of thermodynamics are an integral part of these efforts. They ensure that employees at both sites are aware of the latest available opportunities. A process audit was also performed to standardize development processes as an additional means of facilitating collaboration. Job descriptions were harmonized as well to ensure that global requirements are addressed appropriately.

A newly established Global Innovation Team promotes dialogue between developers and all production sites. It consists of 1-2 people per region and ensures that ideas and experience from all branches are incorporated into new developments. Global SharePoint provides additional support to this worldwide dialogue and knowledge transfer in the area of development. It allows each employee to access relevant information relating to innovation, products, and technologies.

The Innovation and Development Department at A-HEAT works closely with suppliers, manufacturers, customers, and end users from the brainchild to the finished product. Always a priority: Resource efficiency in the use of materials and minimization of energy consumption.

The innovation departments are open to input from all employees and have established a transparent process for this purpose. An innovation platform gives each employee access to a questionnaire, which they can use to concretize their idea based on structured guidelines. The innovator then gathers information on the idea's technical maturity, market potential, profitability, and contribution to sustainability. This is mandatory in order to facilitate the experts' assessment and evaluation of the proposal in the next step. The evaluation is critical to derive compliant actions and allocate appropriate resources.

To motivate employees to submit new ideas, A-HEAT deliberately does not rely on monetary incentives. Instead, it focuses on the concept of lifelong learning and the freedom to work on and develop one's own ideas. Employees are also empowered to take ownership of their own ideas.



FLAGSHIP PROJECT  
**THINKIT –  
ESTABLISHED  
PROGRAM  
TO ENCOURAGE  
INNOVATION**



A-HEAT established ThinkIt in 2022 in the firm belief that every employee has bright ideas. ThinkIt is an innovation program in which employees learn how to systematically generate innovations. It also gives them the opportunity to present their own concepts. The program starts with the handover of a 'green box' containing the idea generation methodology, as well as time and expert vouchers. The process kicks off with a workshop that teaches participants how to make optimum use of the content and how to design the processes.

In the following weeks, workshop graduates can spend part of their time at work developing their own ideas. These ideas are then presented to company management. They are evaluated in terms of viability, feasibility, appropriateness, and sustainability, similar to the established innovation process. Those who pass this test receive a 'blue box' and the necessary support for continued development. The other ideas are not dropped; they become part of the so-called 'innovation backlog'.

In 2023, three innovations from the first iteration of the ThinkIt program achieved the goals set out in the 'blue box phase'. These ideas will now be developed and monitored in a second phase. Another small ThinkIt workshop was held in 2023 and dedicated to the issue of sustainable packaging.

There are plans to continue the program in 2024. It will feature workshops in Asia, Europe, and Latin America, and applications from all Group locations are welcome. Sustainability will be the priority issue this year. The working groups are tasked with producing ideas that will help the Group to achieve its ambitious sustainability goals.

The workshops on three continents will strengthen international collaboration, raise awareness for sustainable management and encourage creative thinking and change management.



**VARIOUS MEASURES TO IMPROVE ENERGY EFFICIENCY**  
*GRI 305-5*

A-HEAT manufactures heat exchangers. The greater their energy-efficiency, the lower the carbon footprint during the use phase, which enables customers to mitigate their climate impact. Significant progress has been made in this area over recent years.

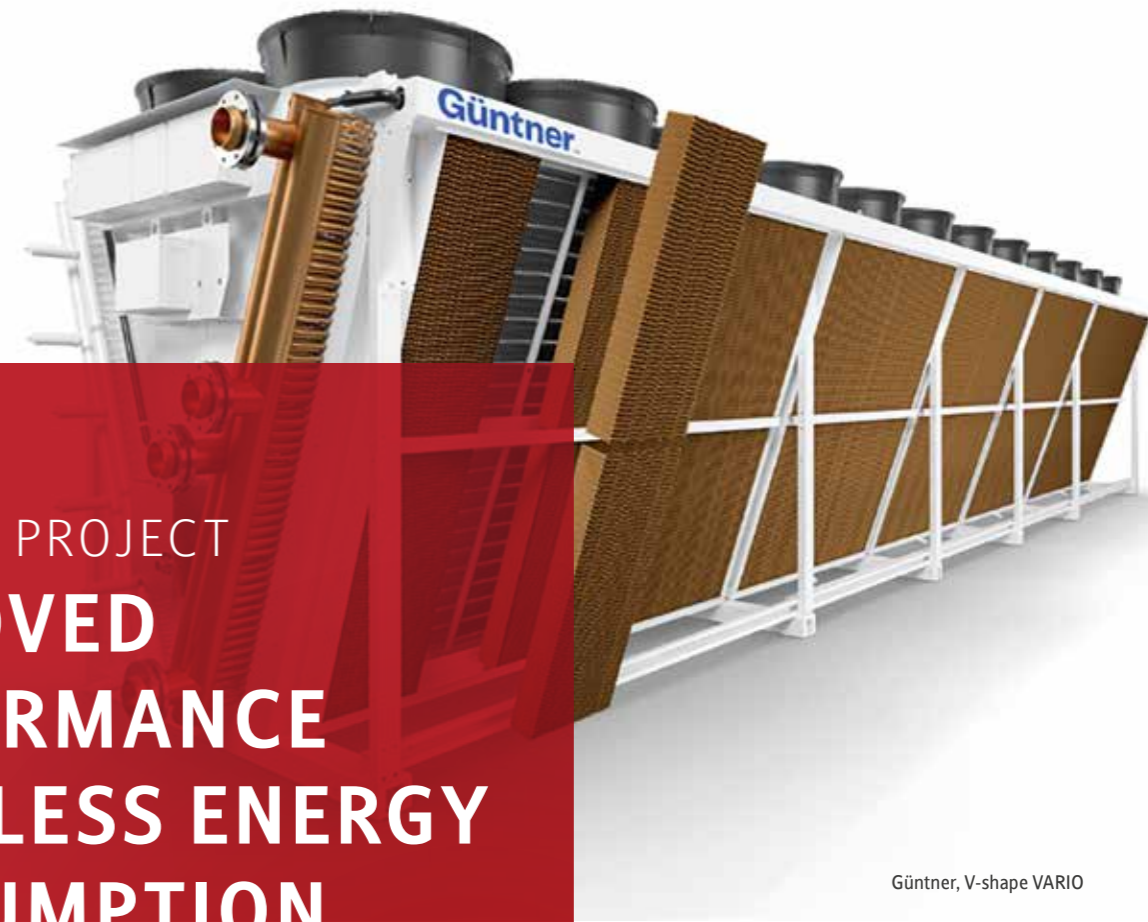
The use of natural rather than synthetic refrigerants and fluids is also essential in order to reduce greenhouse gas emissions. They place special demands on products and solutions that persist throughout the life cycle – from the idea, through development and production, to the utilization phase and beyond. By taking these requirements into account, A-HEAT ensures efficient and sustainable use of cooling and refrigeration systems in the long term, even with natural refrigerants.

A-HEAT exploits its innovative drive to boost the energy efficiency and environmental compatibility of its devices in various areas. This includes product optimization in regard to energy consumption – during defrosting, for instance – as well as reducing refrigerant and fluid filling quantities thanks to new manufacturing technologies. Continuous

improvements have also been achieved in the area of control technology. The comprehensively modernized GMMnext control system has regulated and monitored the good working order of all fans, dry cooling, adiabatic cooling, heat recovery and free cooling systems since 2023. This ensures smooth operation, cuts associated costs and reduces the consumption of energy and resources. Air coolers maintain perfect temperatures and ensure sustainable cooling in the cold stores.

We support the industry and (end) consumers with application know-how, application-specific publications, technical presentations, and training to make efficient cooling systems a reality.

When it comes to air coolers, selecting the right product for each application and efficient defrosting are critical factors that have a significant impact on the energy balance of the equipment and the overall application throughout its life cycle. A-HEAT laboratories and test benches simulate various real-life scenarios. The knowledge gained from these simulations is used to continuously develop equipment, introduce innovative technologies and products, and make A-HEAT's know-how in the refrigeration and air-conditioning sector in a comprehensible manner available.



Güntner, V-shape VARIO

**FLAGSHIP PROJECT**  
**IMPROVED PERFORMANCE WITH LESS ENERGY CONSUMPTION**

In the last financial year, the A-HEAT subsidiary Güntner modified and expanded its successful V-shape VARIO series of condensers, fluid coolers, and gas coolers. The company decided to rethink the development of the product from scratch in order to accommodate future customer requirements. The new series optimizes value for money and places a clear focus on sustainability.

Among its main hallmarks are improved performance, accompanied by reduced energy consumption. The series now features an even broader range, including efficient models for a wide variety of use cases, for example in the air conditioning of buildings, server room cooling and process or industrial refrigeration.

Series devices come with a capacity of up to 2,600 kW in dry operation. The integration of

fan chambers improved performance by 20%. Optional incorporation of the Güntner GMM controller and hydroBLU™ technology improves performance even more. The hydroBLU™ system from Güntner has been revised and now comes with a new mat thickness that significantly increases the efficiency of adiabatic pre-cooling. The humidification system has also been optimized to make access to all components even easier. This simplifies assembly and maintenance.

These performance increases enable the operation of large systems with fewer devices, resulting in a number of savings. The required set-up space and the installation and maintenance workload are also reduced. What is more, material consumption and CO<sub>2</sub> emissions during transport are also reduced.



### IOT CONTROLS SOLUTION EXPANSION OF DIGITAL COMPETENCY

GRI 302-5

The IoT Controls Solution Department is making an increasingly important contribution to innovation activities. Aside from the continuous development of control systems, it used the past financial year in particular to drive progress in the area of data-driven technologies such as data analysis and artificial intelligence (AI) that can be harnessed for use in the applications and products by A-HEAT. The Group is venturing into uncharted terrain in both of these areas, as the refrigeration and air conditioning industry has largely neglected modern data analysis and AI to improve the energy efficiency of its systems thus far. Data-driven technologies, starting with development and on to production and operation of the devices, are intended to minimize resource consumption to the greatest possible extent. For this purpose, the company engaged in a process of systematic knowledge building in the areas of data analysis and artificial intelligence. The combination of in-depth knowledge of the generation and use of data with established expertise in systems engineering is, in the opinion of the Group, crucial to the delivery of even more efficient solutions to end customers going forward.

In 2023, IoT Controls Solution therefore focused, among other things, on improved connectivity of the products. An innovative IoT aicore™ gateway link was developed. At the same time, the controller software was expanded to enable continuous logging, pre-processing and transfer of structured system data to a cloud via the gateway.

Also newly developed, the aicore™ cloud will be used going forward as an IoT platform to process this data and use it for analyses. It also enables graphic modelling of information and the generation of notifications. This web-based IoT platform is available to customers, their end customers and, of course, A-HEAT itself.

The company can now use this expanded infrastructure to perform data-driven optimizations of its solutions without outside assistance or delays. Moreover, the findings of the analyses can be used to improve systems settings and enable their highly efficient operation.

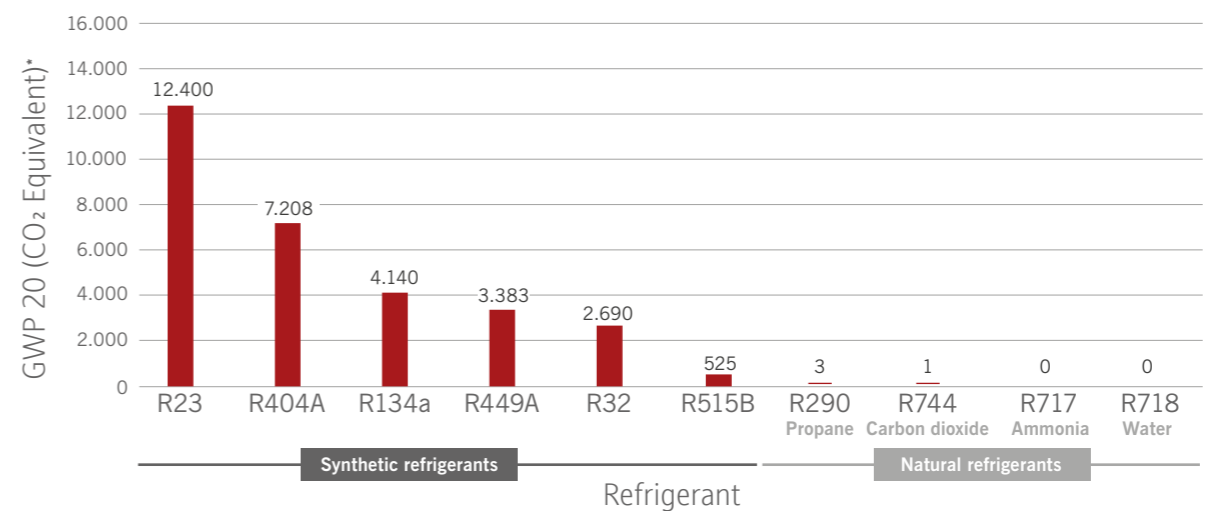
The IoT platform also gives A-HEAT customers entirely new options for the uninterrupted monitoring and efficient operation of their systems. To receive real-time information on where there is room for improvement, as well as maintenance alerts: The IoT platform aicore™ cloud is scheduled to go live in early 2024.

### NATURAL REFRIGERANTS PROTECT THE ENVIRONMENT

GRI 305 -5, GRI 2-28

Besides energy efficiency, the use of natural refrigerants is another important parameter to increase the sustainability of A-HEAT products. Traditionally, heat exchangers use synthetic refrigerants.

They significantly promote the greenhouse effect when they escape. In some cases, their global warming potential over a 20-year timeframe is 1,000 times higher than that of the greenhouse gas CO<sub>2</sub>, as evidenced in the table below.



Tables and figures 3: Comparison of refrigerants and their global warming potential (GWP)

\* Source: IPCC: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change; Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA; 2021

In addition, these substances react in the atmosphere, which can lead to the formation of highly polluting trifluoroacetic acid (TFA). A-HEAT got an early start on converting its heat exchangers to use natural refrigerants such as ammonia, carbon dioxide, and propane. The goal is to have 100% of the refrigerant-operated equipment able to use these substances. Almost two thirds of the solutions sold across Europe in 2023 already run on natural refrigerants and glycol.

A dedicated test lab for CO<sub>2</sub> and ammonia solutions is driving innovation. Extensive tests are conducted to gather reliable application data and further optimize the use of natural refrigerants. A-HEAT also collaborates with eurammon, a consortium of numerous companies and institutions focused on raising awareness among customers, consumers, and the general public about the opportunities and benefits of sustainable cooling. In addition, A-HEAT is using its own means to increase the visibility of this issue. At COP-28 in Dubai, for example, A-HEAT was invited by the UN Environment Programme's (UNEP) Ozone Secretariat to showcase its solutions for more sustainable refrigeration and air conditioning technology using natural refrigerants.



The progress made in the use of natural refrigerants is documented by an award received by the subsidiary Guntner. It was conferred with the "ATMOsphere" label for natural refrigerants. ATMOsphere, formerly known as Shecco, is a global, independent market observer for environmentally friendly cooling and solutions with natural refrigerants.



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# VALUE CHAIN

## INTEGRATION OF KEY STAKEHOLDERS

PROACTIVE PARTNERSHIPS  
ESPECIALLY WITH CUSTOMERS AND  
SUPPLIERS ARE A MAINSTAY  
OF THE SUSTAINABILITY STRATEGY  
AT A-HEAT.





A-HEAT's responsibility for the environment and society extends beyond its own doors. The Group actively involves key stakeholders throughout the value chain in its sustainability strategy. This starts with suppliers committing to sustainable practices and extends, as shown in the Products chapter, to helping customers achieve the most efficient and environmentally friendly use of heat exchangers. Consequently, the importance of ongoing dialogue with key stakeholders is growing.

## 3.1 PROCUREMENT

### EFFECTIVE MULTIPLE SOURCE STRATEGY

*GRI 204-1*

A-HEAT has production facilities in the Americas, Asia, and Europe. The Purchasing department is organized into local teams and responsibilities with central coordination. A multiple sourcing strategy is pursued across all sites to ensure a high level of supply security. The involvement of local suppliers reduces transportation routes and minimizes risks in the procurement process. Suppliers are therefore qualified for production facilities located in all regions.

This strategy proved effective during the COVID-19 pandemic from 2020 to 2022. As European suppliers faced supply shortages and prices increased significantly in some cases, A-HEAT temporarily increased the use of Asian-based suppliers for its European operations. Material availability has since returned to good levels in Europe, so procurement volumes in Asia for European sites was reduced to complementary quantities in 2023. The purpose of ordering these 'supplementary' quantities is to maintain contact between the European plants and the Asian suppliers and hence ensure that A-HEAT is well prepared for any procurement bottlenecks going forward.

A-HEAT refrains from setting targets for the proportion of local or regional procurements, as geopolitical tensions and the associated temporary fragility of global supply chains may continue to occur. The primary objective of purchasing remains to ensure an optimal flow of materials to all facilities and to guarantee smooth delivery to customers.

What is more, sustainability regulations are increasingly affecting procurement activities at A-HEAT. Although not directly affected by the German Supply Due Diligence Act (LkSG), the Group is still working to fulfill the requirements enshrined in this legislation. Among them is to ensure that suppliers fulfill certain sustainability criteria and that risks are minimized.

Starting 2026, the Carbon Border Adjustment Mechanism (CBAM) introduced this year will impose a CO<sub>2</sub> tax on steel and aluminum provided and imported from outside the EU (as well as on other goods that do not affect A-HEAT). A-HEAT's efforts to source regional materials whenever possible minimize the impact of this legislation on the Group.

### CODE OF CONDUCT DUTIES FOR SUPPLIERS

A Code of Conduct (CoC) is an integral part of the framework agreements with all suppliers. It is based on the Ten Principles of the UN Global Compact and thus contains the four main points of labor rights, human rights, environment, and anti-corruption. The Code of Conduct requires suppliers to comply with the law, uphold human rights, respect labor and safety standards, and protect the environment. A-HEAT has the right to conduct audits of suppliers, either independently or with the assistance of third parties, to ensure compliance with the Code. Alternatively, suppliers have the option to submit their own Code of Conduct, which is reviewed and approved by the Purchasing department if it is in line with the A-HEAT Code of Conduct.

In the past financial year, A-HEAT launched a project to implement a sustainability assessment of its suppliers. In addition to quality criteria and ISO certifications that have already been included, it also contains other sustainability aspects. It provides A-HEAT with a clearer impression of the efforts undertaken by suppliers and can hence include them in the decision-making process.

### QUALITY ASSURANCE IN THE VALUE CHAIN

*GRI 416 -1*

In addition to a framework agreement, A-HEAT enters into a quality assurance agreement with the majority of its suppliers. Its purpose is to ensure compliance with agreed standards in a cooperative, timely, and resource-efficient manner. Comprehensive initial sample inspections, regular audits, and detailed incoming goods inspections are used to continuously monitor compliance during ongoing operations. This enables the early detection of noncompliance, which can be corrected promptly in coordination with the respective manufacturer. In the event of repeated noncompliance, an alternative supplier is engaged. In addition, quarterly discussions are held with manufacturers of key components of the Group's products. These meetings focus on ongoing continuous improvement efforts.

This type of quality control conserves internal manufacturing resources, resulting in reduced material requirements and waste. Quality assurance along the value chain thus contributes to sustainable manufacturing at A-HEAT.

## 3.2 CUSTOMERS AND END USERS

### OPTIMIZED SUPPORT

*GRI 416-1*

A-HEAT works closely with customers around the world to achieve greater sustainability. For example, the more they use natural refrigerants and operate heat exchangers in an energy-efficient manner, the greater the opportunity to reduce emissions from the Group's equipment throughout its entire life cycle. The Group takes a holistic approach to this responsibility, advising customers on the selection of suitable equipment, its installation, and proper operation, with a focus on the most efficient use of resources. Comprehensive services ensure the longevity of equipment in the field, and the provision of spare parts prevents the premature disposal of heat exchangers that are still in good working order.

In the event of a complaint, the Group always acts in the best interests of the customer, whose satisfaction is the highest priority. A-HEAT works first and foremost to solve the problem so that the customer can quickly return to normal operations. Only then does the investigation into the root cause begin. A structured process ensures that potential shortcomings in existing equipment and measures to eliminate them are documented and addressed. Every failure report is an opportunity to further improve product

quality. This mindset is deeply ingrained in all A-HEAT subsidiaries, ensuring that the risk of consequential damage is minimized. If it is determined during this work that the customer is responsible for the failure of the equipment, A-HEAT will assist them in improving their processes, either as a gesture of goodwill or for a fee.

## 3.3 OTHER STAKEHOLDERS IMPORTANT FOR THE CIRCULAR ECONOMY

GRI 2-29

In addition to suppliers and customers, A-HEAT considers service providers of all kinds to be important stakeholders. These range from logistics companies to tool suppliers. A-HEAT aims to establish long-term relationships with these partners to ensure best practices and consistency. All stakeholder relationships are continuously developed and complemented by other partnerships, not least to promote the sustainable development of the Group. Proactive partnerships are therefore one of the pillars of A-HEAT's sustainability strategy. The Group believes that SDG 17 Partnerships for the goals is one of the most important SDGs, as other sustainability goals cannot be achieved without efficient cooperation and the sharing of knowledge.

The creation of closed material cycles is a good example of this. Such cycles will only succeed if all stakeholders, from raw material suppliers to end users, work together, whether it ultimately involves recycling, reprocessing used materials, repairing equipment, or reusing it. Anyone seeking to maximize the potential of existing resources requires expertise and a willingness to work with a wide range of stakeholders.



## 3.4 STAKEHOLDER DIALOGUE ENCOURAGES SUSTAINABLE DEVELOPMENT

GRI 2-29

As the example of closed material cycles shows, regular dialogue with stakeholders is crucial for sustainable development. A-HEAT has been communicating with key stakeholders along the value chain for some time. Opportunities arise through industry meetings and, more importantly, through direct dialogue, especially with suppliers, customers, and financial partners. The Group will expand this dialogue in the years ahead. A-HEAT has laid the foundation for regular communication with relevant stakeholders by conducting a stakeholder analysis as described in the Materiality Analysis section.

New rules and guidelines will make it easier for employees to systematically maintain this dialogue in the coming years. There are plans to include dialogue elements in every project and to document their results. This will improve efficiency and increase knowledge of the needs of key stakeholders.



# ENVIRONMENT

## EFFICIENT USE OF VALUABLE RESOURCES

A-HEAT APPLIES A DIVERSITY OF MEASURES TO REDUCE ITS ENERGY AND WATER CONSUMPTION AS WELL AS ITS EMISSIONS, LEADING TO MEASURABLE PROGRESS ON THE ROAD TO GREATER SUSTAINABILITY





Güntner, Sibiu

For A-HEAT, the efficient management of the resources used is not only important from an economic point of view but also from an environmental one. The materiality analysis on pages 15 et seq. highlights the central importance of reducing energy consumption, emissions, and water consumption on the path to greater sustainability. With the resources of a medium-sized company, concepts and action plans are now being implemented worldwide that increase resource efficiency. A-HEAT has set ambitious goals for the coming years:

A-HEAT IS SEEKING AN INCREASE IN ENERGY EFFICIENCY OF UP TO 10% BY 2030.

A-HEAT INTENDS TO INCREASE WATER EFFICIENCY BY UP TO 30% BY 2030.

A-HEAT INTENDS TO REDUCE SCOPE 1 AND SCOPE 2 EMISSION INTENSITY BY UP TO 40% BY 2030.

A-HEAT INTENDS TO COVER UP TO 15% OF ITS ENERGY REQUIREMENTS WITH ITS OWN SYSTEMS

A-HEAT PLANS TO INTRODUCE THE INDUSTRY'S FIRST PRODUCT MANUFACTURED ACCORDING TO CIRCULAR ECONOMY PRINCIPLES BY 2030.

A-HEAT PLANS TO USE EXCLUSIVELY SUSTAINABLE PACKAGING BY 2030

\* The calculation of emission intensity does not take into account the purchase of green electricity (site-specific calculation method).

## 4.1 MATERIALS

### SUCCESSFUL REDUCTION IN INPUT VOLUMES

GRI 301-1

The main materials used in the production of heat exchangers are aluminum, copper, stainless steel, and steel. Supplied parts such as fans, electrical components, and plastic components are also required. On average, these four metals account for 70% of the weight of heat exchangers and are therefore the focus of this report.

#### Trend in the volume of processed metals

	Development since 2021	Year-on-year
Change in the volume of processed metals	-17,2%	- 12,9%
Change in consumption per manufactured device	+4,2%	+4,5%

Tables and figures 4: Trend in material consumption

A-HEAT also managed to reduce the total volume of metals processed this year. This success is partly due to projects in the area of material thickness; for instance, sheet metal and fin thickness was reduced in some device series' in Asia and Europe. A-HEAT also drove projects to reduce material consumption in NLA. Included in this are measures such as the reduction of fin thicknesses and the optimization of core tube arrangements, as well as the associated reduction in core tube size – while maintaining the same output. In addition, a 'multi-nesting project' was also initiated to minimize production rejects. Its purpose is to arrange molds in such a way as to maximize the number of parts that can be cut from a single metal sheet. There was an increase in material consumption per device produced due to a drop in small device output, primarily in Europe and Asia. Furthermore, increased demand for very large devices in other business

areas, for instance data centers, amplified this effect.

A-HEAT will continue its efforts to reduce material consumption. Other global projects to optimize the use of copper and stainless steel in core tubes will be completed in the course of this year.

#### HAZARDOUS SUBSTANCES

GRI 403-7

In addition to the materials and components mentioned above, chemical substances are also used in manufacturing. Appropriate health and safety training is provided at all production sites to ensure proper handling and to reduce the risk of occupational accidents and diseases. All employees who come into contact with

hazardous substances are required to attend this training.

The training sessions teach employees about the classification of chemical substances and what possible physical dangers like explosiveness, flammability, or toxicity can occur. They learn how to handle and store these substances, and what to do in case of exposure. In addition to this instruction, all employees who handle hazardous substances are trained according to

internal planning quarterly or whenever needed, for example, when a new team member is hired or a new substance introduced.

A-HEAT is committed to continuously reducing the use of hazardous substances to improve employee safety and minimize the environmental impact of our manufacturing processes.



## 4.2 ENERGY DEMAND REDUCTION IN THE USE OF FOSSIL FUELS

GRI 302-4

For economic and ecological reasons, A-HEAT aims to systematically reduce energy consumption. The focus is on the energy sources of natural gas and electricity, which account for more than 70% of total consumption (see figure 'Distribution of energy consumption by source').

A-HEAT's investments over the past financial year focused in particular on additional efficiency measures, particularly in Europe, which enabled the company to reduce its energy consumption in this region by another 23%.

Furthermore, all sites are implementing additional measures to reduce on-site natural gas consumption. The local conditions determine whether maintenance, plant, or production management is responsible, and they work in cooperation with the ISO 14001-certified environmental management team. Communication between sites is facilitated by a dedicated Environment and Sustainability Team, which presents planned measures and their implementation. The responsible parties at each factory can then assess the feasibility of adopting these approaches for their site.

Regular inspections of the compressed air systems, ongoing conversion of the lighting

system to LEDs, and the optimization of lighting times and intensity also help to further increase energy efficiency at the plants.

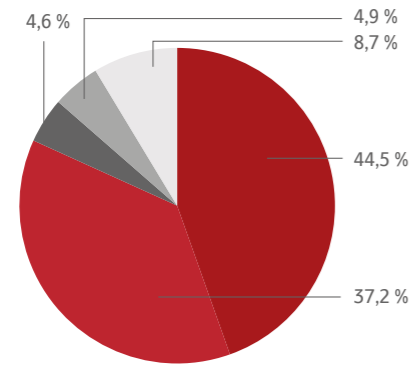
A-HEAT is working to reduce energy consumption in IT as well. The company uses continuous analyses of software and data flows to identify the various load states of systems and applications. In turn, this creates a good basis to continuously optimize the IT systems or to create more energy-efficient ones by using new or generally overhauled systems. The IT Team is also working to move capacities to sustainability-certified cloud centers.

### ENERGY CONSUMPTION: DROP PRIMARILY IN EUROPE

GRI 302-1

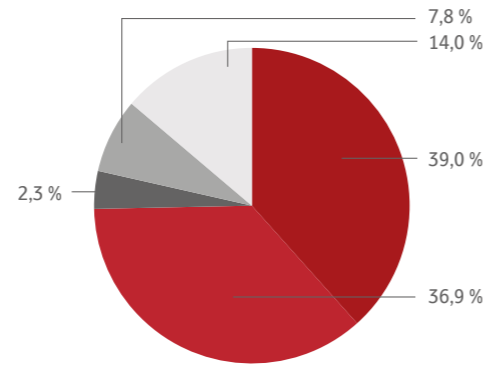
Global energy consumption, measured in megajoules, fell by almost 13% last year. This achievement is largely due to progress at the European sites, where energy consumption fell by almost a quarter within a year. Accounting for the most significant contribution to this were powder coating installations, which experienced a sharp drop in gas consumption (see the

### DISTRIBUTION OF ENERGY CONSUMPTION BY SOURCE IN 2022



● Electricity ● Natural gas ● Diesel (production) ● Liquid gas ● Diesel & gasoline (fleet)

### DISTRIBUTION OF ENERGY CONSUMPTION BY SOURCE IN 2023



Tables and figures 5: Distribution of energy consumption by source

Flagship Project on p. 56 et seq.). The metering infrastructure was expanded; in some cases, electricity and gas consumption have been recorded directly at the machines since then. This facilitates the process of identifying further opportunities for optimization. Following the success at European sites, special project teams are now driving the introduction of similar measures in other regions.

This factor also dropped at the Asian locations – although this was primarily caused by reduced production volumes due to the economic situation. By contrast, an expansion of production in Latin America led to an increase in energy consumption in this region. Another powder coating installation was put into operation in Mexico over 2023.

### Energy consumption in the 2023 financial year

	Absolute numbers in FY	Year-on-year	Development since 2021
Energy consumption in FY	189.569	-13,5%	-22,0%

Tables and figures 6: Trend in energy consumption

### Energy intensity\* GRI 302-3

	2021	2022	2023
MJ per kg of processed metal	7,61	7,21	7,16

Tables and figures 7: Energy intensity



Güntner HydroBLU™ in Anwendung



JAEGGI ADC in Anwendung



FLAGSHIP PROJECT  
**SHARP DROP IN  
RESOURCE INPUT  
IN POWDER  
COATING**

Powder coating installations are among the largest energy consumers in production. For both economic and environmental reasons, A-HEAT is therefore determined to increase their efficiency as quickly and significantly as possible. Notable progress was made in this area over 2023. A number of measures managed to reduce resource input at the two locations in Romania and Hungary.

Gas, electricity, and water consumption all declined in Romania. This achievement is primarily due to an adjustment of the chemical process in the pre-treatment tanks, which enabled a reduction in the required temperature by 14°C. As a result, it became possible to decommission one of the two degreasing tanks and hence halve the consumption of cleaning water. Four pumps were therefore shut down, leading to a drop in electricity consumption. It also led to a 30% reduction in the chemicals needed to clean the parts.

As in Romania, A-HEAT renewed the pre-treatment line and modified the chemical process in Hungary. Moreover, several machines and plant sections were replaced with more efficient technologies. Among them was new equipment for vacuum distillation. In addition, the pre-treatment line was equipped with measuring sensors to log precise consumption data, identify necessary maintenance at an early stage and determine efficiency potential going forward. Phase 2 of this efficiency project will get underway in 2024 and will involve optimization of additional plant components.

Lessons learned from Romania and Hungary are now also being used to optimize the plants at the sites in Asia and Latin America as a means of continuing the reduction in resource consumption worldwide.

# 4.3 WATER

## CAREFUL MANAGEMENT OF A SCARCE RESOURCE

GRI 303-1

Drinking water is a scarce resource, and A-HEAT uses it responsibly. Water consumption and water quality are core issues in the sustainability strategy. The company has already developed an A-HEAT Water Policy, which is based on the key messages of the National Water Dialogue of the Federal Ministry.

The following priorities are derived from it:

- Greater appreciation of the resource water
- Investments in water infrastructure to increase resilience and reduce consumption
- Definition of usage priorities for drought periods (risk of usage conflicts)
- Avoidance and mitigation of substance inputs
- Continued development of organizational structures in water management
- Establishment of data and knowledge bases
- Raising awareness among customers and users to recognize their joint responsibility for environmental protection
- Development and dissemination of technologies to reduce water consumption and pollution



### WATER WITHDRAWAL: EFFICIENT USE OF GROUNDWATER

GRI 303 -3

Almost 99% of the water used by A-HEAT comes from groundwater sources as we have our own wells in most factories. The Group extracted around 17% less fresh water in a year-on-year comparison. The recycling projects launched in 2022 are bearing fruit. One of the processes that accounts for the largest water projects was modernized in Brazil, namely block cleaning. The water used there is collected, filtered in a treatment process, and then reused. There has also been progress at the site in Mexico, where water is used in the pressure testing process for adiabatic devices. This water is now collected, purified, and then reused multiple times. These measures led to a reduction in water extraction in Latin America, despite an additional powder coating installation being put into operation.

Last year, the progress contributed to A-HEAT reducing water intensity in its production processes – measured in cubic meters per ton of processed metal. The initiatives to optimize use of water as a valuable resource are working. The company is therefore gradually approaching its goal of achieving an up to 30% increase in water efficiency by 2030.

### Water extraction in the 2023 financial year

	Absolute numbers in m <sup>3</sup>	Year-on-year	Development since 2021
Total extraction	210.324	-16,7% <sup>1</sup>	-18,1%
Extraction from water-stressed regions	87.600	-5,7%	-2,2%

Tables and figures 8: Trends in water extraction

### Water intensity\*

	2021	2022	2023
m <sup>3</sup> per t of processed metal	8,04	8,31 <sup>1</sup>	7,95

<sup>1</sup> Data from previous years has been adjusted. Refer to chapter 8 for explanations

Tables and figures 9: Water intensity

### WATER QUALITY: EXTERNAL AUDIT OF PROCESSES

GRI 303 -2

The water used in A-HEAT's production facilities is mainly contaminated with slag and oils. Water treatment facilities are used to improve wastewater quality. Regular inspections by external companies ensure consistent water

quality. If threshold values are exceeded, the auditors inform A-HEAT so that appropriate measures can be taken to ensure the best possible wastewater quality.

FLAGSHIP PROJECT  
**BRAZILIAN SITE  
AS A MODEL  
FOR AN OPTIMIZED  
WATER CYCLE**

Culture often plays a role in the management of specific resources. This is particularly evident for water at the Brazilian site in Caixas do Sul. Limited availability of clean drinking water means that local people are far more careful in using this resource than they are, for example, in Europe.

Fresh water use for production processes has already been minimized thanks to numerous projects. Water in the pressure test tanks at this location is changed very rarely. Instead, various methods are used to purify the water, which

keeps it clean enough to perform pressure tests on produced devices. Even the water used to clean the systems is not discarded after production, but is recycled, purified, and reused. Rainwater is collected and then added to replace water lost during production, which also contributes to a very low overall consumption of fresh water. The manufacturing site in Brazil is therefore a paradigm for the entire Group and inspires projects with the same objective at all other locations.

# 4.4 EMISSIONS

## AVOID, REDUCE, OFFSET

GRI 305-5



A-HEAT aims to significantly reduce its company-related carbon emissions (Scope 1 and 2) in the coming years. The underlying concept follows a three-step approach: avoid, reduce, offset. The first step is to determine whether emissions can be completely avoided by eliminating or substituting the relevant processes. The unavoidable emissions are then reduced as much as possible through efficient processes. A-HEAT intends to offset the remaining emissions by investing in meaningful and long-term climate protection projects, following the recommendations of the Federal Environmental Agency in the selection of such projects.

The materiality analysis shows that the most significant climate-friendly effects occur in downstream processes and in the use of products. For years, A-HEAT has advocated the use of natural refrigerants, which can help avoid emissions. The company is also continuously working to improve the energy efficiency of its equipment, as described in the Products chapter.

The necessity of integrating downstream value chains is emphasized by the PCF analysis

(Product Carbon Footprint) of a heat exchanger, which was conducted for the first time in the past financial year. This analysis calculates emissions during the entire lifecycle of a device. It became apparent that well over 90% of greenhouse gases are emitted during the phase in which the heat exchangers are used. The greater the efficiency of device operation, the lower the emissions. A-HEAT believes that it is vindicated in its opinion that correct planning and prudent use of air conditioning and refrigeration systems are crucial factors in minimizing the carbon footprint and will hence continue to make every effort to support its customers in the ideal use of these devices.

Internally, A-HEAT aims to reduce Scope 1 and 2 emissions from its operations by 40% by 2030, based on site-specific Scope 2 emissions. In a first step, the company set itself this narrower target, as it can exercise significant control over the extent of these emissions and hence make its own contribution to curbing climate change. Suitable targets for Scope 3 emissions will follow in the years ahead.

### TREND IN CO<sub>2</sub> EMISSIONS<sup>1,2</sup>

GRI 305-1, GRI 305-2

in t CO <sub>2</sub> e	2023	Year-on-year	Development since 2021
Scope 1	9.246	-13,7%	-22,9%
Scope 2 (location based)	9.697	-5,7%	-5,8%
Scope 2 (market based)	6.464	+0,4%	-20,4%

Tables and figures 10: Trend in CO<sub>2</sub> emissions

Scope 1 emissions in particular continued to fall over the past financial year. The European sites played a crucial role in this trend. The positive development of CO<sub>2</sub> emissions in Europe as well as their increase on the American continent is primarily due to the changes in energy consumption described in chapter 4.2. In particular, the increased efficiency of the powder coating installations has significantly reduced energy consumption and, as a result, Scope 1 emissions. Moreover, the decline in CO<sub>2</sub> emissions is also attributable to the reduced consumption of liquid gas in production. This is

firstly due to the lower production figures and secondly to the replacement of gas-powered forklift trucks with electric models.

Unlike emissions themselves, emission intensity rose over the past financial year – a setback on the road to achieving a 40% reduction in these performance indicators by 2030. The temporary increase is due to the lower production volume as a result of the economic situation and the comparatively emissions-intensive electricity mix at the sites in Mexico and Indonesia. Electricity consumption in Mexico rose due

<sup>1</sup> Figures for 2023 are preliminary calculations, as not all data was fully available at the time this report was prepared.

<sup>2</sup> Greenhouse gas emissions were calculated according to the principles of the GHG protocol for Scope 1 and Scope 2 emissions. The calculations were made without external validation.

**EMISSION INTENSITY\***  
GRI 305-4

	2021	2022	2023
kgCO <sub>2</sub> e pro per ton of processed metal	0,70	0,69	0,72

Tables and figures 11: Emission intensity

to last year’s commissioning of an additional powder coating line last year. Meanwhile, electricity consumption in Indonesia experienced a disproportionately lower downturn relative to the number of devices produced.

Projects to optimize the use of energy and therefore cut emissions are underway or planned at these and other locations. In Sibiu, Romania, work has begun on the installation of a solar power system with an annual production capacity of 3,400 MWh, which will go into operation in early 2024. This will significantly reduce the site’s dependence on traditional energy sources.

When combined with a storage system, it is expected that the new system will cover around 40% of total electricity consumption at the site.

Other photovoltaic projects are currently in the pipeline. Together with the ongoing electrification of the vehicle fleet, this will lead to a reduction in emissions and hence to a decline in emission intensity in the coming years. With these and numerous other measures, A-HEAT is approaching its goal of significantly advancing decarbonization by 2030 and in doing so fulfilling its responsibility towards the environment and society.



FLAGSHIP PROJECT  
**ELECTRIFICATION  
OF THE VEHICLE  
FLEET IS  
PROGRESSING**

Electrification of the vehicle fleet is an important component of A-HEAT's climate strategy. The operation of company buses, fleet vehicles and company vehicles assigned to employees accounts for around a quarter of the Group's direct greenhouse gas emissions worldwide.

With this in mind, A-HEAT has decided to procure zero-emission vehicles for the DACH region and has revised its vehicle policy accordingly. The vehicle fleet – which has been almost exclusively diesel-powered until now – will be gradually electrified over years ahead; five electric vehicles are currently in use.

Suitable infrastructure will be needed to charge these vehicles. Its construction has already begun at the headquarters in Fürstenfeldbruck. Seven charging stations, each with two charging

points and a charging capacity of up to 22kW, were installed here in the fall of 2023. These wall boxes – like the entire Fürstenfeldbruck site – are supplied with electricity from renewable energy sources.

The first wall box was also put into operation at the site in Hungary last year. But there are no plans to revise the vehicle policy for the time being, as the expansion of public charging infrastructure in the region remains inadequate. This applies equally to all other regions in which A-HEAT production facilities are located. The project owners are monitoring developments in the public charging infrastructure and technological possibilities and regularly discuss when and to what extent electrification of the vehicle fleet can begin.

## 4.5 WASTE MANAGEMENT

### MOVING TOWARDS CLOSED-LOOP SYSTEMS

GRI 306-2

The European Union has developed a Circular Economy Action Plan to expand the circular economy as part of the EU Green Deal. It has two goals: Climate neutrality and decoupling economic growth from resource consumption. In line with this EU strategy, A-HEAT aims to minimize waste and redesign processes so that each output can later become an input in closed-loop systems.

A-HEAT is prioritizing technological cycles in view of its industrial processes. This includes the reuse and recycling of used raw materials, consumables, and supplies, intelligent recycling, maintenance of products and machinery, and, where possible, the sharing of systems.

Innovative concepts have already been introduced in various areas. These include the multiple use of packaging and load carriers, separated collection of production waste for recycling, and maintenance and repair by service teams to ensure the longevity of devices. A-HEAT has set itself the goal of launching the industry's first product manufactured according to circular economy principles (see chapter 1.4.). 'Design for recycling' will be a crucial factor in this regard; this process includes downstream

recycling of devices and packaging right from the development stage. Moreover, coordination with key stakeholders along the value chain will be intensified in the future to enable the establishment of closed-loop systems. Where necessary, this may also lead to more advanced business models. In the long term, A-HEAT aims to reduce resource consumption and ultimately greenhouse gas emissions through closed-loop systems wherever possible.

A-HEAT is also determined to reduce waste at its production sites and intends to define ambitious targets in this area as well. Prior to this, though, the company will focus on progress in the standardization of waste reporting. The status quo has already been logged for all locations and the waste codes used have been assigned, compared and standardized in accordance with the European Waste Catalogue. Preliminary steps that have already been completed include a review of whether all waste flows are actually mapped and their downstream processing is documented. In the next step, the data will be used to establish a waste reporting system and, at the same time, implement closed loops and reduce the overall volume of waste produced.

Some elements of a suitable close-loop system already exist in manufacturing. Here, production waste is systematically recorded, categorized into aluminum, copper, stainless steel, and galvanized steel, and collected separately at the sites. The raw materials are sold to recycling companies and reused. Targets for the quantity of waste as a percentage of total consumption are set for the factories and must be met. They are regularly measured and reviewed. If the targets are not met, measures are defined and implemented to achieve them.



# THE TEAM

SHAPERS OF CHANGE  
AND A KEY RESOURCE

WITH THEIR DAILY COMMITMENT, THE APPROXIMATELY 5,000 EMPLOYEES AT A-HEAT LAY THE FOUNDATION FOR OUR ECONOMIC SUCCESS.





About 5,000 employees work at the A-HEAT Group and lay the foundation for our economic success with their daily commitment. At the same time, they are the driving force behind progress, using their innovation and ideas to improve products and processes. Therefore, the A-HEAT Group strives to provide a good working environment for all employees and is aware of its social responsibility. Diversity within the company is highly valued as different perspectives, cultural backgrounds, and personal qualities contribute to better quality innovations and solutions.

With chronic skills shortages in many countries, the challenge of recruiting enough staff with the right education and expertise is growing. Dealing with demographic change and attracting skilled professionals and managers are core issues in A-HEAT's sustainability strategy.

## 5.1 STRATEGY

### A FOCUS ON INCREASING ATTRACTIVENESS AS AN EMPLOYER

GRI 401

The A-HEAT Group has a long history of global operations and in recent years has developed an appropriate HR strategy with cross-country processes and teams. Their motto is:

*MAKE OUR ORGANIZATION GLOBAL,  
ONE HR ONE MISSION.*

This mission takes into account the fact that A-HEAT is now a global group of companies, while at the same time wanting to retain the character of a family business. This can only work if the HR strategy focuses on employees, their experiences, needs, and performance across countries. This idea is symbolized by a four-legged table. It is stable if the strategy is equally based on four pillars and answers the following questions:

'For whom?': Any HR strategy begins with the people, their expectations, and skills.

'Who?': It is up to managers to respond appropriately, thereby increasing the commitment and performance of all employees.

'How?': This work requires the systematic use of appropriate tools and channels.

'What?': In addition, the right messages must be disseminated through these channels.

Efforts were made in 2023 to incorporate sustainability aspects into the current HR strategy. The following areas of action were defined in meetings between the HR managers of the individual locations and the Sustainability Team:

- Increasing attractiveness as an employer
- Guaranteeing fair payment
- Promoting diversity, equity, and inclusion
- Preventing discrimination
- Establishing knowledge management and know-how transfer
- Expanding the training and development programs
- Embracing corporate social responsibility (CSR)

A major challenge was to decide whether a global or a local approach would be more purposeful for the individual fields of action. Ultimately, the topics of 'Employer attractiveness' and 'Corporate social responsibility' were classified as local fields of action, as the requirements

differ greatly depending on the region. This approach means that the company's actions can be better tailored to the needs of the site and the local community. What matters now is to identify target-oriented approaches for implementing these fields of action in the individual structures and processes.

The first projects are already underway in the global sustainability topic of 'Knowledge management'. With an approach to handling international job advertisements that is standardized at global level, the company is in a better position to recruit people from all over the world for each location – externally and internally.

Another project is aimed at developing a management approach for succession planning that is the same at each location. Faced with the challenges of demographic change, it is more important than ever to create transparency about the skills that are required today and in the future. This level of transparency is the only way for the company to identify which know-how

is lacking or available in particular regions and respond appropriately by reassigning employees or hiring new staff.

Establishing links between the sustainability and HR strategies will contribute to promoting loyalty to A-HEAT among current employees and to making the company more attractive to applicants. Once in place, the company will then be in a stronger position to address demographic change.

## 5.2 EMPLOYEES ADDRESSING THE SKILLS CHALLENGE

GRI 401-1

4,601 people were employed at A-HEAT's production sites at the end of the 2023 financial year. This is 1.6% fewer than in the year before. Employee numbers refer to the end of the reporting period and are based on head count. GRI 2-7

The decrease in employee numbers mainly affects the European sites, where almost 60% of the total A-HEAT team is employed. It is attributable to declining production volumes as a result of the economic situation. Employee numbers in the Americas experienced a slight uptick accompanied by rising volumes.

### Number of employees by region

	Europe	APO	NLA	Overall
Number of employees	2,574	410	1,617	4,601
Year-on-year change (%)	-3,4%	-0,7%	1,3%	-1,6%
Change compared to 2021 (%)	-8,2%	-0,5%	3,7%	-3,6%

Tables and figures 12: Number of employees by region

In all three regions, nearly 70% of employees work in production and perform predominantly manual tasks. This explains why A-HEAT employs relatively few women. More information can be found in the 'Diversity' section below.

The large proportion of young skilled workers in America is particularly noteworthy, while A-HEAT employs a relatively sizeable number of older workers, especially in Europe. This will pose special challenges to the Group in the years to come, as demographic change means that relatively few young workers will be available in the market. A-HEAT is addressing this challenge at its main sites in Germany and Hungary through systematic succession planning. It will prevent the loss of know-how from long-standing employees.

The growing shortage of specialist staff at global level is accompanied by another challenge: increasing turnover. At present, this is mainly affecting A-HEAT's production facilities in Brazil and Mexico, where cultural factors traditionally favor accelerated job changes. Especially at the



Mexican site in the state of Nuevo Leon, A-HEAT also faces high competitive pressure, as a rapidly growing number of large companies are setting up operations there.

A-HEAT is taking several internal measures to address this situation on a local level. Monthly surveys have been conducted to analyze why employees are leaving the company so quickly. In addition, training programs for supervisors and team leaders have been implemented, as well as a mentoring program for new hires. In addition to these internal measures, recruiting efforts were intensified in southern Mexico. Tourism is a major employer there, and many would find a move to manufacturing facility an attractive option. These measures have already reduced the fluctuation rate over the past financial year.

As in Mexico, we are also implementing measures adapted to the specific local conditions to counter turnover at the other sites. In Romania, we have found it particularly effective to respond flexibly and quickly to emerging employee needs. This enables us to compete with other large companies, such as those in the automotive industry, and ensure a smooth production process.



## 5.3 PROMOTING DIVERSITY, EQUITY AND INCLUSION

GRI 405, GRI 406

A-HEAT is a global company with employees from all over the world. The company values this diversity and believes that different cultural backgrounds, experiences, and perspectives add value to the daily work.

The binding Code of Conduct for all employees includes tolerance and respect for the human dignity, privacy, and personal rights of each individual irrespective of ethnic origin, culture, religion, age, disability, skin color, sexual identity, world view, and gender. Incidents of discrimination are reported to either the supervisor or the Human Resources department. After consultation, the next course of action and how best to handle the situation are discussed in confidence. Appropriate measures are then taken, including penalties against the discriminating person, to prevent such incidents in the future. As the organization is still partly under development, there is no consistent data on any incidents across all sites.

A-HEAT promotes diversity to the extent possible for a medium-sized company. However, the company deliberately refrains from setting binding quotas, for example, for the employment of women in management positions. The experience of the last few years has shown how difficult it is to inspire women to work in this production- and technology-intensive industry. However, this will change in the medium and long term. A-HEAT is convinced that by living the company’s values in combination with raising awareness through special initiatives such as Women Empowerment Weeks and through structural changes in the labor market and society, the overall percentage of women, including at management level, will increase in the coming years.



Compared to 16.8% in 2022, the proportion of women in the company as a whole reached a new high of 18% in 2023. There were no changes in top management positions in Europe, whereas the number of female managers in Asia and Mexico, and therefore in the company as a whole, fell slightly.

### Percentage of women in the total workforce

	Europe	APO	NLA	Overall
2023	16,5%	7,6%	23,0%	18,0%
2022	15,8%	8,0%	20,8%	16,8%
2021	15,5%	7,5%	15,3%	14,9%

Tables and figures 13: Percentage of women in the total workforce

### Percentage of women in top management at Group companies

	Europe	APO	NLA	Overall
2023	24,5%	14,3%	23,9%	22,4%
2022	24,5%	16,7%	26,1%	23,3%
2021	31,3%	11,8%	15,4%	22,1%

Tables and figures 14: Proportion of women in top management

# 5.4 HEALTH AND SAFETY AT THE WORKPLACE

## OUR TOP PRIORITY

### MANAGEMENT APPROACH: COMPREHENSIVE PROCESSES ENSURE OCCUPATIONAL HEALTH AND SAFETY

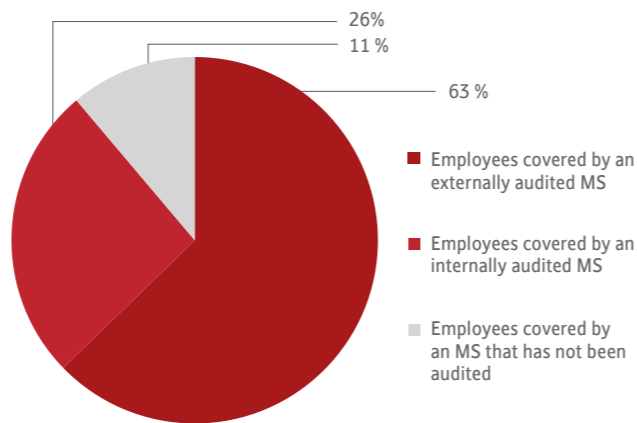
GRI 403-1, GRI 403-5

A-HEAT does not compromise when it comes to occupational health and safety. Occupational health and safety policies and regulations are consistently implemented and reinforced through regular mandatory training for all employees. The company takes its responsibility very seriously and therefore took early measures to ensure the best possible protection for employees during the pandemic.

All work instructions contain all relevant information regarding protective clothing, hazard warnings, and hazardous substances. Protective equipment such as protective headgear, safety goggles, safety footwear, noise protection, and arm protectors must be worn in all production facilities worldwide and are also defined in all operating instructions. Regular reviews of the work instructions and, if necessary, adaptations to new legal requirements, for example, in the handling of hazardous substances are defined as a process and are subject to regular audits.

Ongoing inspections of production facilities identify potential safety risks, document them, and define measures to minimize them.

Employees covered by an OHS MS in 2023



Tables and figures 15: Employees covered by an OHS MS

Three of the four largest production sites have DIN ISO 45001 certification, which means that 63% of employees and workers are covered by an externally audited occupational health and safety management system (OHS MS). Other employees are covered by management systems, most of which have been audited. This indicator covers all

employees in our factories. Workers who are not employees were only included if they are directly involved in the value creation process. This means, for example, external security or cleaning personnel are left out in these figures although they are covered by the OHS MS in most cases.

GRI 403-8

### WORK-RELATED INJURIES (LTIR)

GRI 403-9

	Europa	APO	NLA	Total
2023	3,60	2,12	2,83	3,08
2022	5,30	2,91	4,35	4,56
2021	6,55	5,30	2,22	4,75

Tables and figures 16: Work-related injuries

Despite all protective measures and training, work-related injuries and illnesses cannot be entirely prevented. The most common incidents in manufacturing facilities are cuts and bruises. The number of serious injuries that lead in loss of working time is much lower. Among other things, they result from work in elevations

of over two meters, falling materials, lack of protective equipment and improper use of machinery. Especially the failure to wear protective equipment contributes to or causes injuries with significant consequences. A-HEAT strives to make employees aware of these hazards through regular training and safety discussions in order to minimize the number of occupational accidents. Employees are particularly vulnerable to work-related accidents in the first few weeks after joining the company. A-HEAT deals with this risk by organizing more frequent safety training and a larger number of

on-site inspections. The effectiveness of these measures has been demonstrated in the past at the Asian sites especially, where the number of accidents at work had already fallen significantly by 2022 and continued its downward trajectory this year. This was due in part to daily safety checks.

All production employees undergo regular medical examinations by company physicians. Due to A-HEAT's medium-sized structure, this process has not yet been standardized, so no global data can be provided at this time. However, it is ensured locally that health problems caused by noise and vibration exposure, herniated discs, arthrosis, or burnout are documented and treated. *GRI 403-10*



## 5.5 PROFESSIONAL DEVELOPMENT GLOBAL APPROACH, LOCAL STRUCTURES

*GRI 404*

### COMPETENCE CENTER AND TRAINING PROGRAM

Employees are A-HEAT's most valuable resource, and their regular training and professional development is a guarantee for success. The company has traditionally offered a wide range of training programs, and in recent years it has begun to coordinate these activities across different countries.

In 2022, a Global Competence Center was established with the aim of defining the competencies required for each function in the company to achieve the company's goals. Currently, there are 20 competencies aligned with A-HEAT's values, which are already being used in various areas such as succession planning and performance evaluation.

The goal for the future is to identify the discrepancy between the actual know-how of employees and the required competencies in order to derive the necessary training program that will equip employees with the skills

necessary to make the best possible contribution to the corporate objective.

The issue of sustainability is becoming increasingly important in the area of further training. A-HEAT launched a sustainability campaign across all sites in 2023. Its purpose is to raise awareness among employees and motivate them to adopt environmentally and socially responsible practices. Among other things, the sustainability goals were presented as posters and pictures in the production halls, while information material was shared by email and in the global SharePoint, and online and classroom training sessions were held. On-site training focused on showing production employees how each and every one of them can contribute to the company's sustainable development.

In addition to internal seminars, employees have the opportunity to take part in external training courses on a range of topics, for which they require approval from their line manager. Each department manages its own budget and content.

The current training programs already address several of these competencies:

- .. Languages (mainly English)
- .. MS Office
- .. IT awareness & data security
- .. Refrigeration technology
- .. Quality management
- .. Occupational health and safety
- .. Code of conduct

*GRI 404-2*



FLAGSHIP PROJECT  
**DISCOVERY**  
PROJECT ENGAGES  
AND DEVELOPS  
TALENT

In 2022, as part of the company's ongoing globalization, A-HEAT took the next step and launched a pilot project called Discovery with 15 participants from around the world. Its purpose is to retain talented young managers and ensure smooth succession in leadership positions.

The project is under the direct auspices of the Management Board and is divided into two phases. The central element of the first phase involves monthly training on topics essential to understanding A-HEAT's global presence and medium-sized structure. This includes the corporate strategy as well as HR activities, procurement, digitalization, and sustainability. Discovery encourages teamwork through personal meetings, including ones with the Executive Board. At the same time, participants have the opportunity to work with a coach to create an individual development plan and improve their skills.

*„This project has given me a better understanding of how different departments can work together to amplify and spread a message.“*

- Alex Schafer, USA

The second project phase started in 2023. This section asked participants to work on a project by themselves. The budding talents selected their desired project from a list of topics prepared by management and cooperated with their department heads to bring progress.

Participants acquired valuable experience and expanded their interdisciplinary knowledge by working independently on a project outside of their own professional field. They brought the first Discovery project to a close with a presentation of their results.

The successor began in 2024. The second Discovery project also gave promising talents the opportunity to become more familiar with the company, build networks and expand their expertise.

—  
**ETHICAL  
BUSINESS  
PRACTICES**  
COMMITTED TO HIGH  
STANDARDS

6





For A-HEAT, it is a matter of course to act responsibly towards all stakeholders, such as customers and employees, and to comply with all legal regulations. The Group has a zero-tolerance policy in this regard and will penalize any potential violations, with a whistleblower system to facilitate reporting. All employees are bound by a Code of Conduct whose implementation is monitored by Compliance Management.

## 6.1 COMPLIANCE MANAGEMENT CODE OF CONDUCT PROVIDES THE FRAMEWORK

*GRI 2-23, GRI 2-24, GRI 2-27, GRI 205-2*

Central Compliance Management has a dual role. First, it ensures compliance with applicable laws within the Group, provides information on changes in the law, and adapts corporate policies accordingly. Second, it serves as a point of contact for all questions related to ethical business practices.

Compliance Management works on the basis of a Code of Conduct (CoC). It contains all the values on which A-HEAT's business activities are based and provides employees with a guide for consistently correct and ethical behavior. The corporate values are based on the UN Global Compact and subdivided into the areas of Human Rights, Labor Rights, Environment, Value Chain, and Anti-Corruption:

### HUMAN RIGHTS

**Principle 1:** A-HEAT supports and respects the protection of internationally proclaimed human rights and ensures that it does not contribute to human rights violations.

### LABOR RIGHTS

**Principle 2:** A-HEAT supports the elimination of discrimination at the workplace and in employment.

**Principle 3:** A-HEAT promotes equality in all its forms by addressing the factors that cause inequality, especially with regard to gender, ethnicity, sexual orientation, nationality, and religion.

**Principle 4:** A-HEAT creates conditions for freedom and dignity, economic security, and equity.

### ENVIRONMENT

**Principle 5:** A-HEAT follows the precautionary principle in dealing with environmental issues and risks.

**Principle 6:** A-HEAT takes initiatives to promote maximum environmental responsibility.

**Principle 7:** A-HEAT supports the development and propagation of environmentally friendly technologies.

## VALUE CHAIN

**Principle 8:** A-HEAT will pursue its commitment throughout the value chain, both upstream and downstream, to collectively develop and exercise responsible influence.

**Principle 9:** A-HEAT will apply social and environmental criteria in selecting and establishing business relationships.

## ANTI-CORRUPTION

**Principle 10:** A-HEAT fights against all forms of corruption, including extortion and fraud.

The Code of Conduct also contains guidelines for all employees. Important topics such as antidiscrimination, export control, data protection, and user security, as well as health and environmental protection, are explained in detail and the expected behavior is clarified.

# 6.2 ANTI-CORRUPTION AND WHISTLEBLOWER POLICY

## CLEAR RULES

*GRI 205-3*

Ethical business conduct includes the rejection of any form of undue advantage. All A-HEAT employees are prohibited from offering, promising, or granting personal benefits to domestic or foreign officials, as well as to employees or representatives of domestic or foreign companies (active corruption). This prohibition also applies by analogy to corrupt conduct by service providers acting as intermediaries or by partners in bidding and working groups, as well as in joint ventures. These prohibitions apply to all countries in which A-HEAT and its subsidiaries operate and to all employees, regardless of their nationality. They apply even if corrupt behavior is common in a country and is not considered unethical by local business partners.

When dealing with business partners, A-HEAT employees must always make it clear that the company acts in compliance with applicable law, will not tolerate corrupt or otherwise unlawful conduct, and will terminate business relationships with any business partner if cases of corruption or other unlawful conduct occur. If there is evidence of corrupt behavior or other serious violations of law by a business partner, employees must inform the local managing

director and the local law enforcement authorities.

A-HEAT employees and managers may not solicit or accept benefits from current or potential business partners for themselves or for their close associates, such as spouses, relatives, and friends (passive corruption). This applies even if the benefit has no effect on business conduct. In particular, the prohibition of passive corruption applies to the acceptance of benefits in return for the award of contracts or other favorable conduct on behalf of the supplier (e.g. not pursuing claims for damages against a supplier for defective products).

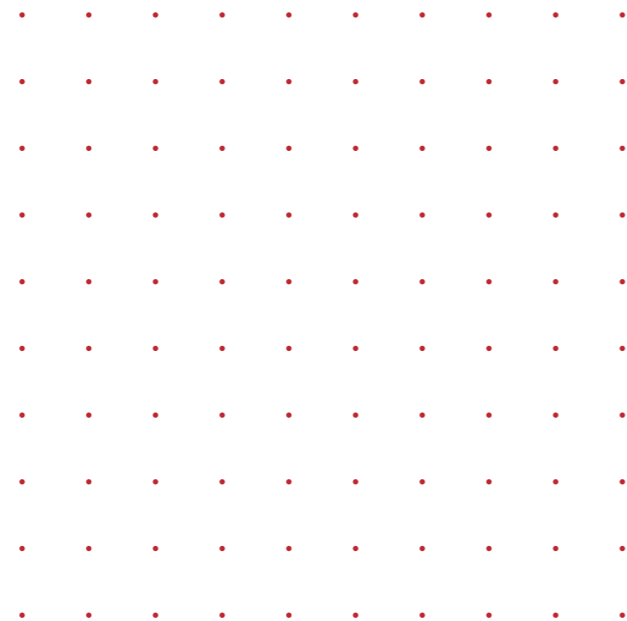
Each employee is expected to comply with the applicable reporting and approval procedures for each business transaction and to remain abreast of the current status of compliance through regular participation in compliance training.

The managing directors of A-HEAT subsidiaries are responsible for compliance with these rules in their division or company. A-HEAT's management will have compliance reviewed by Group audit, both as part of regular audits and, if necessary, through special audits. However, these measures

do not relieve A-HEAT employees and managers of their individual responsibilities and obligations within the framework of their company's policies and applicable legal regulations. In 2023, there were no confirmed incidents of corruption. GRI 205 -3

The fight against corruption in all its manifestations is a crucial element in ensuring integrity. The foundation of any business activity means compliance with applicable laws and regulations as well as A-HEAT's own policies. In order to be able to detect any violations, A-HEAT uses an external whistleblower system, thus implementing the requirements of the EU Whistleblower Directive.

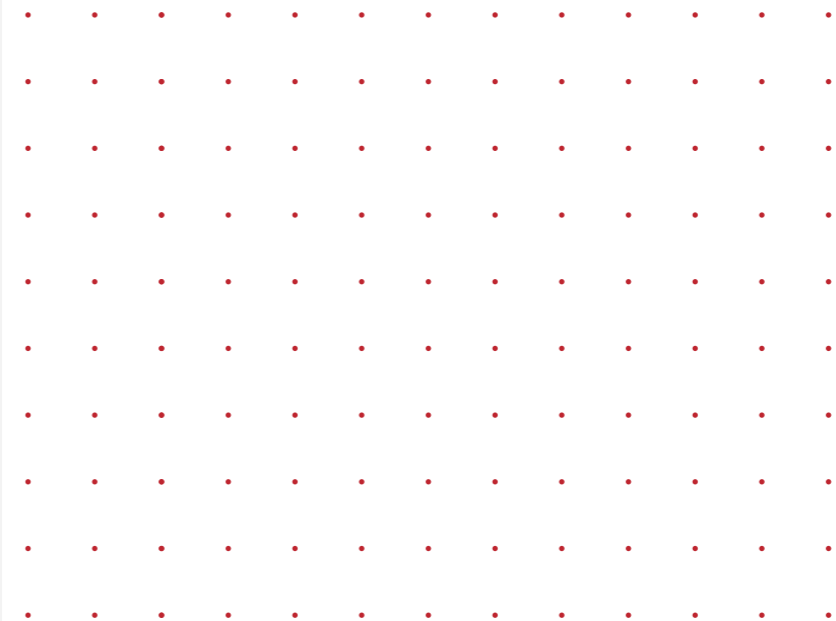
The system enables quick and easy reporting with just a few clicks. In doing so, it protects the Group not only from economic and reputational damage but preserves the anonymity of the whistleblower. The whistleblower system is part of compliance management.



## 6.3 POLITICAL INFLUENCE

GRI 415

The A-HEAT Group operates independently of political institutions. In accordance with the Code of Conduct, no financial or material benefits are provided. Furthermore, the Group has not received any contributions from political parties or organizations. A-HEAT is not listed in the European Union Transparency Register.



—  
**SOCIAL  
RESPONSIBILITY**  
ACTING LOCALLY  
COMMUNICATING GLOBALLY





A-HEAT has its roots in a family business with nearly 100 years of tradition. As a result, it has traditionally been committed to social responsibility at its locations and actively supports local initiatives. In addition, the Group is involved in initiatives that promote sustainability within its own industry and incorporates these principles in its own appearances at trade fairs, for example.

## 7.1 CSR PROJECTS

### GLOBAL ENGAGEMENT

*GRI 413*

As described in chapter 5, A-HEAT leaves it up to the local companies to decide how they want to contribute to corporate social responsibility (CSR) issues.

Here, various locations in Germany, Mexico and Brazil focus on close cooperation with local universities and institutions of higher education. They provide students and pupils with insight into the company and give them an understanding of the practical side of things. This makes it easier for young people to acquire an impression of the working world. Ideally, this will result in points of contact for more extended involvement.

The site in Romania combines team building with social support. Last year, participating employees cooperated with the non-profit organization Viitor Plus to plant trees and build compost patches on a site outside the city of Sibiu. A public education center for environmental protection and biodiversity is currently being built there. By engaging in these initiatives, the company underscores its commitment to the region and emphasizes its status as an active member of civil society.

In Hungary, the A-HEAT subsidiary Gntner is the largest employer in the region. This standing

is associated with a particular responsibility. The company supports various local and regional institutions. For instance, Gntner sponsors the construction and operation of a covered ice rink in winter, which enables people of all ages in the region to enjoy ice skating. The company also sponsors other sporting disciplines such as track and field athletics, as well as kayaking and canoeing, which are all very popular in the region. Charitable associations in the region also receive funding. These include an animal welfare organization, a children's aid organization and a facility for assisted living for orphans and children with disabilities.

Other locations support local organizations as well. Among them is the Brazilian subsidiary, which distributes winter clothing and food baskets to people in need from local communities. Last year, around 30 employees in Mexico spent Christmas together with vulnerable girls in a women's shelter and distributed gifts. These 'small' initiatives are indicative of A-HEAT's concerns at global level: The Group is keen to invest the resources of a medium-sized enterprise to support specific local initiatives. Wherever possible, it also seeks to involve its employees in them and create added value for the respective community.

## 7.2 DISCUSSING SUSTAINABILITY IN THE NETWORK ECONSENSE

Econsense is the sustainability network of German business and has been active as a non-profit organization for over 20 years. Since this year, A-HEAT has been participating in the “Sustainability Competence Program,” which aims to network medium-sized companies across industries and create space for open dialogue and practical exchange on the challenges of sustainable development.

In monthly calls on relevant economic and political developments, as well as in quarterly deep dive workshops, specific sustainability topics such as

the Due Diligence Act (Sorgfaltspflichtengesetz), sustainability reporting, or ratings are addressed, and best practice approaches and practical experiences are discussed. The competence program thus helps A-HEAT experts to stay up to date on current sustainability issues and enables them to engage in a lively exchange with colleagues from other companies so that we can master the tasks and challenges we face in the future on our way to greater sustainability in the global economy together and as efficiently as possible.



# — ABOUT THIS REPORT



## SYSTEM LIMITS AND REPORTING PERIOD

*GRI 2-2, GRI 2-3, GRI 2-5*

This report covers the activities within A-HEAT's production sites in Germany, Hungary, Romania, Indonesia, Brazil, and Mexico. Other entities and sites are not included in this report, which makes the system limits differ from those in the management report. This is because the lion's share of added value is generated at our production sites, which therefore have by far the biggest impact on sustainability issues. More than 90% of Group employees work at these sites, and almost 100% of the procured materials are processed there. The reporting period is similar to the 2023 financial year, which means the time frame is from December 1, 2022 to November 30, 2023. A-HEAT continuously works on the quality and amount of data to constantly improve its sustainability documentation and share its activities in the most solid and transparent way. The Sustainability Report is an annual publication.

## CHANGES COMPARED TO LAST YEAR'S REPORT

*GRI 2-4*

The calculation of CO<sub>2</sub> emissions was updated compared to the 2022 Sustainability Report. Provisional figures used in the calculation of the 2022 emissions were replaced with actual figures and the emission factors for site-based calculation of electricity emissions were homogenized by using a uniform data source.

Furthermore, the figures for the percentage of employees covered by a health and safety management system have been corrected.

The water consumption figures for 2021 and 2022 were adjusted for leakages. This prevents any distorted impression of consumption and ensures that the actual improvements due to efficiency measures are reported.

## EXTERNAL AUDIT AND GRI STANDARDS

*GRI 2-5*

An external audit of this report was not conducted.

The GRI standards were drawn on as a framework for the report. The GRI index can be found on the following pages.

## APPENDIX

### LIST OF TABLES AND FIGURES

Tables and figures 1: Sustainability goals	18
Tables and figures 2: Enshrining sustainability in the organizational structure	21
Tables and figures 3: Comparison of refrigerants and their global warming potential (GWP)	37
Tables and figures 4: Trend in material consumption	51
Tables and figures 5: Distribution of energy consumption by source	54
Tables and figures 6: Trend in energy consumption	54
Tables and figures 7: Energy intensity	54
Tables and figures 8: Trends in water extraction	59
Tables and figures 9: Water Intensity	59
Tables and figures 10: Trend in CO <sub>2</sub> emissions	63
Tables and figures 11: Emission intensity	64
Tables and figures 12: Number of employees by region	75
Tables and figures 13: Proportion of women in the total workforce	79
Tables and figures 14: Proportion of women in top management	79
Tables and figures 15: Employees covered by an OHS MS	80
Tables and figures 16: Work-related injuries	81

## GRI INDEX

### EXPLANATION OF APPLICATION:

A-HEAT Allied Heat Exchange Technology AG has reported the information mentioned in this GRI index for the period from December 1, 2022 to November 30, 2023 in accordance with the GRI standards. The GRI 1 standard GRI 1: Foundation 2021 was drawn on for preparing the report.

GRI Standard	Information	Location	Page
<b>GRI 2: General Disclosures 2021</b>	2-1 Organizational details	Global collaboration 1.1 Business model	p. 8 p. 13
	2-2 Entities included in the organization's sustainability reporting	About this report	p. 100
	2-3 Reporting period, frequency, and contact point	About this report	p. 100
	2-5 External assurance	About this report	p. 100
	2-6 Activities, value chain and other business relationships	1.1 Business model 1.2 Industry	p. 13 p. 14
	2-7 Employees	5.2 Employees	p. 75
	2-9 Governance structure and composition	1.5 Organization	p. 22
	2-13 Delegation of responsibility for managing impacts	1.5 Organization	p. 20
	2-14 Role of the highest governance body in sustainability reporting	1.3 Materiality and strategy	p. 15
	2-22 Statement on sustainable development strategy	Declaration by the Executive Board 1.3 Materiality and strategy 1.4 Sustainability goals 1.5 Organization	p. 2 p. 15 p. 18 p. 20
	2-23 Policy commitments	6.1 Compliance management	p. 89
	2-24 Embedding policy commitments	6.1 Compliance management	p. 89
	2-27 Compliance with laws and regulations	6.1 Compliance management	p. 89
	2-28 Membership associations	2.2 Sustainable product solutions and continuous innovation	p. 37
	2-29 Approach to stakeholder engagement	3.3 Other stakeholders	p. 46 f.
	<b>GRI 3: Material Topics 2021</b>	3-1 Process to determine material topics	1.3 Materiality and strategy
3-2 List of material topics		1.3 Materiality and strategy	p. 16
<b>GRI 201: Economic Performance 2016</b>	201-2 Financial implications and other risks and opportunities due to climate change	1.5 Organization	p. 22
<b>GRI 204: Procurement Practices 2016</b>	204 Topic management disclosures	3.1 Procurement	p. 43
<b>GRI 205: Anti-corruption 2016</b>	205-2 Communication and training about anti-corruption policies and procedures	6.1 Compliance management	p. 89
	205-3 Confirmed incidents of corruption and action taken	6.2 Anti-corruption and whistleblower policy	p. 91

## GRI-INDEX

GRI Standard	Information	Location	Page
GRI 301: Materials 2016	301-1 Materials used by weight or volume	4.1 Materials	p. 51
GRI 301: Energy 2016	302-1 Energy consumption within the organization	4.2 Energy consumption	p. 53
	302-3 Energy intensity	4.2 Energy consumption	p. 54
	302-4 Reduction of energy consumption	4.2 Energy consumption	p. 53 f.
	302-5 Reduction in energy demand of products and services	2.2 Sustainable product solutions and continuous innovation	p. 34, p. 36
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	4.3 Water	p. 58
	303-2 Management of water discharge-related impacts	4.3 Water	p. 59
	303-3 Water withdrawal	4.3 Water	p. 58
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	4.4 Emissions	p. 63
	305-2 Energy indirect (Scope 2) GHG emissions	4.4 Emissions	p. 63
	305-4 GHG emissions intensity	4.4 Emissions	p. 64
	305-5 Reduction of GHG emissions	2.2 Sustainable product solutions and continuous innovations	p. 37
		4.4 Emissions	p. 62
GRI 306: Waste 2020	306-2 Management of significant waste-related impacts	4.5 Waste management	p. 68
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	5.2 Employees	p. 75
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	5.4 Health and safety at the workplace	p. 80
	403-5 Worker training on occupational health and safety	5.4 Health and safety at the workplace	p. 80
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	2.1 Quality and safety	p. 27
		4.1 Materials	p. 51
	403-8 Workers covered by an occupational health and safety management system	5.4 Health and safety at the workplace	p. 80 f.
	403-9 Work-related injuries	5.4 Health and safety at the workplace	p. 81
	403-10 Work-related ill health	5.4 Health and safety at the workplace	p. 81
GRI 404: Training and Education 2016	404 Topic management disclosures	5.5 Professional development	p. 83
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	5.3 Promoting diversity and equity	p. 79
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	5.3 Promoting diversity and equity	p. 79
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	7.1 CSR projects	p. 97
GRI 415: Public Policy 2016	415-1 Political contributions	6.3 Political influence	p. 93
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	2.1 Quality and safety	p. 27
		3.1 Procurement	p. 44
		3.2 Customers and end users	p. 45
GRI 418: Customer Privacy 2016	418 Topic management disclosures	2.1 Quality and safety	p. 28

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