



**AVK**  
SUSTAINABILITY REPORT  
2023/2024

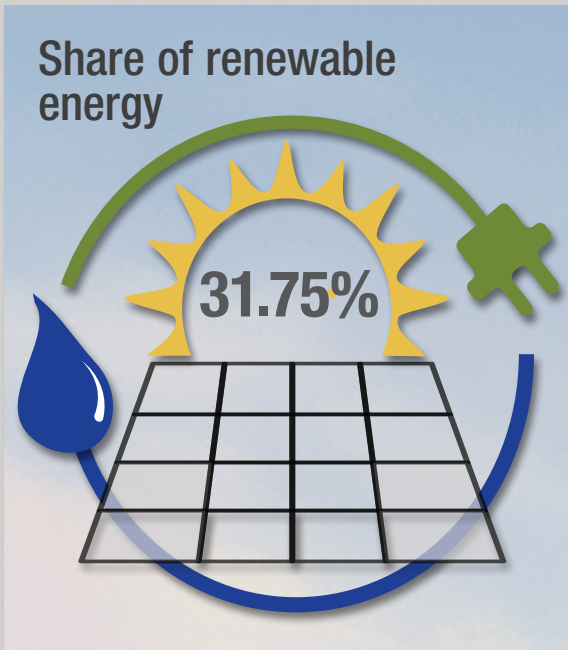




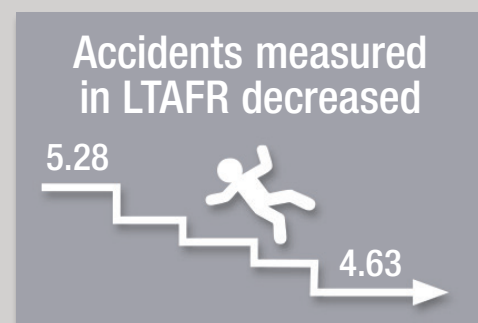
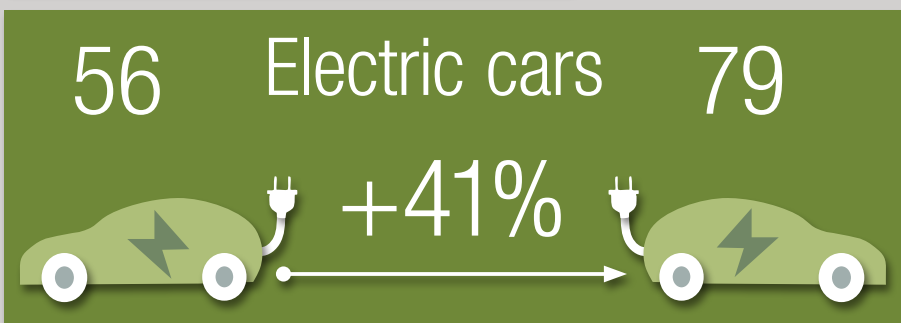
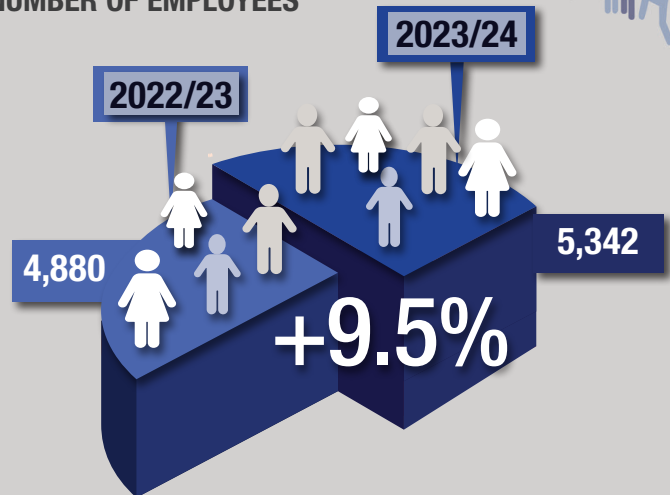
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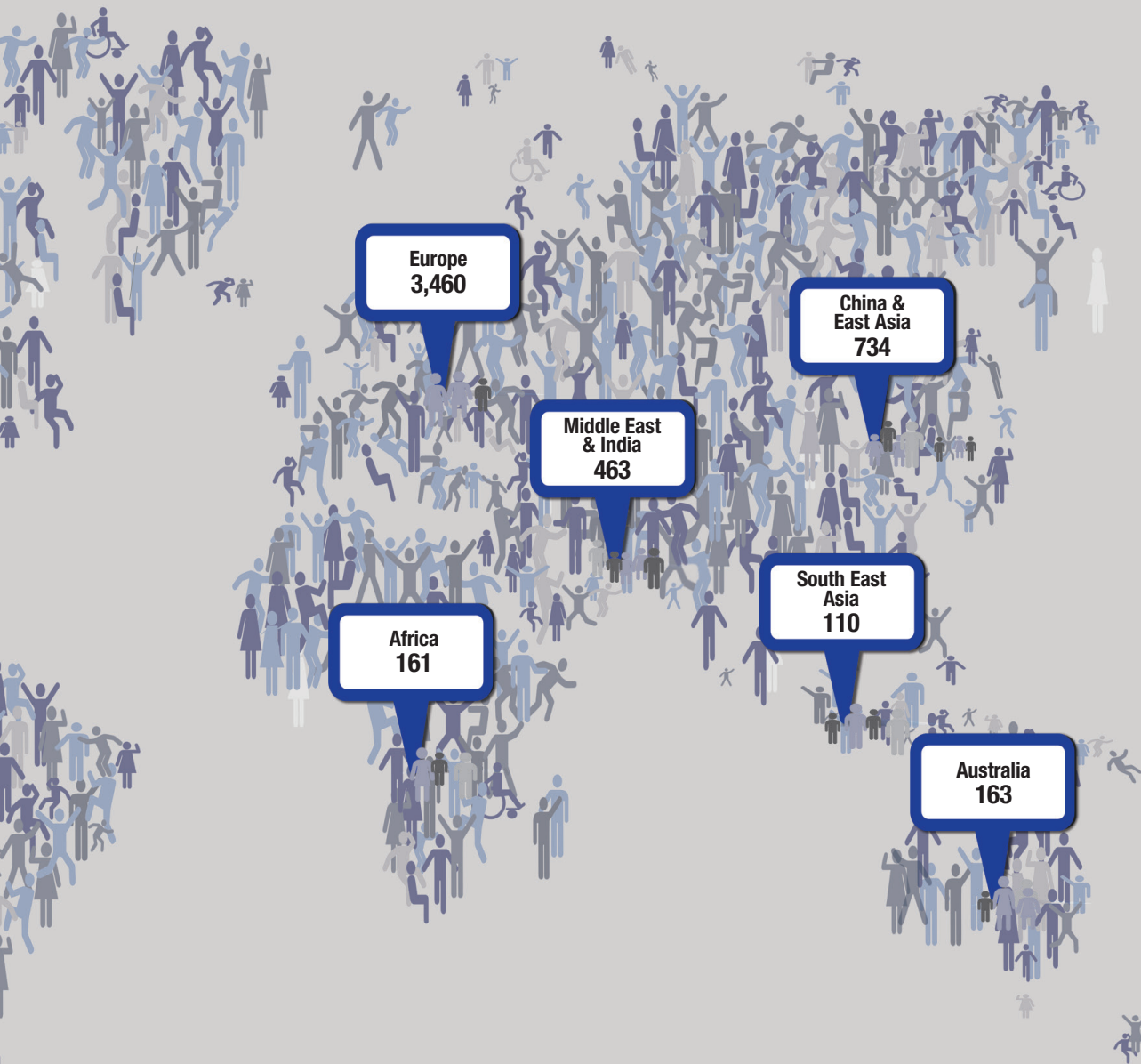
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# 2023/24 IN HIGHLIGHTS



### NUMBER OF EMPLOYEES





**EPD<sup>®</sup>**  
 Environmental Product Declaration

15

The logo features a horizontal bar with three segments in shades of green and white. To the right is a circular icon containing the number '15' and a checkmark.

2% TO 4%

**Self-produced electricity doubled**

The graphic shows a blue industrial building with a power plug icon. To its right are two green trees and two solar panels. The text '2% TO 4%' is positioned above the trees, and 'Self-produced electricity doubled' is in a dark blue box at the bottom.



Søren Kjær  
CTO, AVK Group

Lars Kudsk  
CFO, AVK Group

Bo Johansen  
COO, AVK Group

# INTRODUCTION BY THE EXECUTIVE DIRECTORS

We are pleased to present our latest sustainability report which reflects our commitment to sustainability and responsible governance. This report is a testament to our efforts to integrate environmental, social, and governance principles into our business strategy.

During the past year, the global economy has faced several challenges that have significantly impacted our business. Geopolitical tensions increased uncertainty and disrupted global supply chains, while persistent inflation in many countries has driven up raw materials and energy costs. Changes in interest rates have reduced investments, and regulatory shifts have affected our operations. Additionally, extreme climate events and a growing demand for sustainable practices have further complicated the landscape.

In response, we are investing in local production and supply chains to maintain a strong presence in key markets. Despite these challenges, we have achieved satisfactory results this year, focusing on long-term, sustainable investments that benefit our company, employees, customers, and the environment.

Founded in 1941, AVK is built on the core values: quality, innovation, reliability, sustainability, and customer service. Thus, sustainable development is a cornerstone of our business strategy.

In October 2023, Niels Aage Kjær stepped down as CEO of the AVK Group after 53 years, passing the leadership to the new Executive Directors. At the same time, a Group Executive Board was established, with the overall responsibility for the Group. Here the Chairman of the three business units along with AVK Holding directors and the Executive Directors are represented. Niels Aage Kjær has assumed the role as Chairman of the Board, ensuring our continued commitment to sustainable development.

Also in October 2023, we made our largest acquisition to date, welcoming over 500 new colleagues from the companies Bayard and Belgicast into the AVK Group.

AVK's purpose is to develop, produce, and market high-quality, long-lasting products essential for vital infrastructure, including water supply, wastewater management, and energy supply, as well as various industrial applications. These efforts contribute to a sustainable development, public health, and a better environment.

AVK operates globally through three business units: AVK Water, AVK Industrial, and AVK Advanced Manufacturing. Our companies provide diverse solutions, including innovative products like PolyAI, made from recycled drinking cartons, which we incorporate into our plastic pallets. This report highlights how our products support sustainable development across multiple sectors.

We are committed to optimising processes and reducing our environmental impact. Significant investments in automation across our manufacturing units have enhanced quality and productivity as well as work processes. This year, we were honoured with the DIRA Automation Award 2024, recognising our long-term commitment to advanced automation.

In the 2023/24 financial year, we have initiated a strategic implementation of the EU Corporate Sustainability Reporting Directive (CSRD). As part of the process, AVK has initiated a double materiality assessment. The purpose of the double materiality assessment is to identify and prioritise our most significant impacts, risks, and opportunities and highlight materiality topics and areas we need to focus on.

We are focused on environmental efforts, having obtained several Environmental Product Declarations (EPDs) that calculate CO<sub>2</sub>e emissions throughout our value chain for a given product, during the last year. We aim to minimise energy consumption while increasing our use of green energy sources through

investments in solar panels and low-energy solutions, and we are phasing out fossil fuel-powered passenger cars. In addition, we focus on waste management and the use of recycled materials in the production of high-quality products.

With operations in various countries, our diverse workforce is a strength that enhances our local and global development. We embrace this diversity, fostering a dynamic and enriching work environment. AVK is committed to being a healthy, professionally challenging, and safe workplace, actively working to reduce work-related accidents.

AVK operates in several business areas that are pivotal to driving sustainable development worldwide. In recent years, there has been an increasing focus on the management of drinking water and wastewater, which has an enormous impact on health and quality of life, as well as energy consumption and climate.

This past year, AVK has demonstrated resilience and a strong commitment to sustainability amid challenges. Our leadership transition and recent acquisition position us for future growth, enhancing our capabilities and market presence.

We remain dedicated to our core values, ensuring our products benefit both customers and the environment. By fostering a diverse and safe workplace, we empower our employees to drive innovation.

As we look ahead, we are excited about the opportunities to continue leading in sustainability and excellence. Thank you for your support as we move forward together.

Søren Kjær, Lars Kudsk and Bo Johansen, Executive Directors, AVK Holding.

# OUR HISTORY, PURPOSE, AND **BUSINESS UNITS**

AVK is a family-owned Group with headquarters in Galten, Denmark. It is built on the foundation of an 80+ year old machine shop founded in 1941 by Aage Valdemar Kjær, hence the name AVK. Today, the global Group employs 5,342 people and consists of 108 manufacturing and sales companies.

## **Our purpose**

It is our purpose to develop, manufacture, and market products of a high quality and with a long lifespan.

The products are used in vital infrastructure, including water supply, wastewater treatment, energy supply as well as a wide range of industrial applications that contribute to sustainable development, human health, and a better environment.

## **Business units**

AVK is divided into three business units: AVK Water, AVK Industrial, and AVK Advanced Manufacturing. All three units consist of companies with a strong product portfolio and competencies used in many different business segments around the world. To accommodate the needs of our customers, we design, manufacture, and market our products ourselves.

### **AVK Water**

AVK Water is a group of companies that develop, manufacture, and supply valves and solutions for water supply, wastewater treatment, natural gas supply and biogas, irrigation, fire protection, and HVAC (Heating, Ventilation, Air Conditioning), as well as AVK Smart Water.

We deliver to markets and customers all over the world, but that does not mean our solutions are universal. On the contrary, we always deliver unique solutions specifically tailored to meet local conditions and requirements according to local standards and approvals.

AVK Water accounts for most of the turnover in AVK.

### **AVK Industrial**

AVK Industrial is a group of companies that develop, manufacture, and sell a wide range of valves for industrial segments. Many of the products are components for applications that contribute to development in a variety of industries. Specific examples include water and air purification systems, remote cooling and heating, energy supply, mining, pulp and paper, process industry, dams and reservoirs, hydropower, and water management solutions for flood control.

AVK Industrial accounts for around a quarter of the turnover in AVK.

### **AVK Advanced Manufacturing**

AVK Advanced Manufacturing consists of companies that manufacture processed components made of steel, cast iron, aluminium, bronze, rubber, and plastic. As the components are partly included in the broad product range of AVK Water and AVK Industrial, the business units support each other.

In addition, the components are used in various industrial applications. Processed components made of steel, iron, aluminium, and bronze are used in the transportation and wind turbine industries, among others. Rubber components and solutions are used in equipment for the food and healthcare industries. Our plastics companies produce waste containers and pallets, among other products, with a focus on increasing the share of recycled plastic in products.

For more information, please refer to our financial report and overview of the companies in the AVK Group, which can be found under "Downloads" on our website.



# OUR VALUES

At the core of AVK's DNA is our five values that act as our guiding principles and set the direction for how we run our business. These values are the foundation for our growth and results.

The five core values ensure a healthy company and constantly commit us to remaining industry leaders by developing our business, solutions, and people continuously.

AVK is global in scale when it comes to manufacturing and design. We serve our customers locally, offering full-line partnership and a single-entry point to a world of products and solutions.

Because of our solid know-how and decades of experience, it is safe to expect more from us - now and in the years to come. We make a difference by assuring progress for our customers.

The five core values serve as guiding principles for all in the AVK Group.

The foundation  
we share



## Quality

We strive for quality in everything we do

## Innovation

We innovate to make a difference

## Reliability

We strive to be credible and consistent

## Sustainability

We have a long-term approach

## Customer Service

We strive to be our customers' preferred partner

# OUR BUSINESS MODEL

Our business model reflects our dedication to employee engagement, technological innovation, responsible sourcing and production, and stakeholder engagement.

## RESOURCES

### EMPLOYEES

We hire qualified employees who support the business with their knowledge and competences, and we focus on long-term relations, diversity, and development.

### INNOVATION AND DEVELOPMENT

We develop products with extended lifespan and are committed to continuous improvement and innovation in our processes, solutions, and business areas.

### SOURCING

We source materials and components responsibly from local as well as global suppliers and partners, and have high standards regarding people, the environment, and business ethics.

## ACTIVITIES



**AVK WATER**



**AVK INDUSTRIAL**



**AVK ADVANCED MANUFACTURING**



### SOCIETY

Our products are part of vital infrastructure including water supply, wastewater treatment, and energy supply as well as a variety of industrial applications, all contributing to the sustainable development of society, the health of people, and a better environment.

### CUSTOMERS

We deliver solutions, not just products. We aim to build long-term relationships and to continuously optimise our solutions to fulfil our customers' needs and requirements.

## VALUE CREATION

### PRODUCTION

We manufacture high-quality products and operate our production in a responsible way within the Lean framework, with care for the environment and our stakeholders.

### STAKEHOLDER ENGAGEMENT

Our relationships are built on trust and long-term relations - always with shared value creation in mind.



### FINANCIAL YEAR 2023/24

FINANCIAL YEAR 2023/24  
Turnover: DKK 9,027m  
Employees: 5,342  
Operational companies: 108  
Represented in 39 countries

## ACTIVITIES

### EMPLOYEES

We focus on being a healthy and safe workplace, providing attractive jobs and creating the best framework for employee development and well-being.

### SHAREHOLDER VALUE

We prioritise reinvestment and active ownership as well as creating value for our shareholders.

AVK is a global Group. We operate in various segments and under different conditions. As we will describe in the section “Our risks and opportunities”, we are very conscious of the risks that come with being a global Group. Therefore, we monitor our own and external manufacturing units to ensure that the specified criteria for the environment and human rights are complied with.

Our foundation is to act in a responsible manner towards employees, the environment, and the surrounding community.



**INNOVATION AND  
DEVELOPMENT WITHIN  
OUR BUSINESS AREAS**

Economic growth, social development, and climate action are heavily dependent on investments in infrastructure, sustainable industrial development, and technological progress. The global manufacturing industry is considered as a driver of overall economic growth. Source: UN

A stream of disruptive events like decarbonisation of energy systems, economic slowdown, political aspects, digitalisation, and AI is reshaping the business environment and the organisations. The effects of these trends will be uneven across markets and industries. For most companies, navigating the new landscape will require increased flexibility along with changes in strategy, financing, and talent.

The industrial market thus requires constant adaptability to ensure responsible and economic growth, while investing in green transformation, digitalisation of processes, and automation to ensure competitiveness. All these factors place great demands on innovation and development in AVK's manufacturing companies. As a result, we continuously invest in product development and optimisation of processes throughout the value chain, including automation and digitalisation of production.

### **Product development**

In the AVK Group, innovation and development of new and improved high-quality products with a long lifespan and recycling in mind play a crucial part. As described on the coming pages, our focus on innovation affects many industries. Our primary business area is the development, manufacturing, and sale of valves and solutions for clean drinking water supply, wastewater treatment, fire protection, and irrigation. In recent years, there has been an increased focus on expanding the product portfolio with intelligent valve products, defined and controlled by AVK Smart Water.

We are constantly working on optimising and developing our product range. AVK continues to invest in product portfolio for desalination applications as we expect the extraction of seawater for drinking water production to become an important business area in the years ahead.

An example of our continuous focus on product optimisation is the development of a range of 3D printed metal moulds for producing valves in plastic at AVK Plast A/S.

For the past 20 years, the components for the series 16 POM valve have been manufactured in the same way, a way that often required machining before assembling the valve. Additionally, the moulding process carried a

risk of voids forming in the valves, highlighting the need for product development. Metal 3D printing technology proved to be the solution, enabling us to create a moulding tool with a core featuring a precisely designed critical internal structure.

To regulate the temperature, the core was designed with built-in cooling channels running like a metro system under the part's surface. These channels allow us to blow cold air through the part, lowering the temperature. Additionally, an insulating layer surrounds the central inlet where the hot plastic flows, ensuring that the plastic in the inlet does not cool and solidify before reaching the mould.

Due to lack of space, metal 3D printing is a good solution as we can make very precise cooling channels as well as channels for sensors. In this way, we have complete control over the temperature and are able to get the right quality.

By the means of metal 3D printing, we can now control the heat development in the tool as we have complete control over the process. As a result, we can achieve a higher quality, reduce the number of discarded valves due to flaws, and as a natural benefit save energy and raw materials.

The new metal 3D printed moulds were developed in a collaboration between Danish Technological Institute, the Tech department in AVK Holding A/S, AVK International A/S, and AVK Plast A/S.

### **Stable and more efficient production with robots**

At AVK, we continuously work to optimise and develop our work processes. Robotics is one of the technologies we use to achieve a higher and more uniform quality of the products as well as a more efficient and stable production to secure future competitiveness.

Robotic solutions are often used for tasks where many similar products need to be produced. This means repetitive tasks, also known as unilateral-reciprocal work, which can be exhausting and demotivating for employees.

Robots have been a part of AVK's manufacturing for decades, and we now have

an advanced robotic system that handles multiple processes simultaneously. With high demands regarding the consistency of the components delivered to AVK, the installation of the robotic system has helped to strengthen the quality requirements throughout the process. There is zero tolerance for deviations which means that processes and tasks prior to the robotic system must be completed to ensure consistent quality of the components. At the same time, the process of implementing new technology and digitalisation makes us develop new workflows. We are continuously working on how the logistics process needs to be adapted and what system changes need to be implemented to ensure that the entire manufacturing works together in the best possible way.

The robotic system ensures stable production with a high level of quality and optimised work processes. At the same time, it frees up employee resources enabling us to increase productivity.

In September 2024, AVK International was honoured with the DIRA (Danish Industrial Robot Association) Automation Award for our innovative robotic solution, seamlessly integrating 16 processes into one solution.

### **Innovation in the Industrial Business Unit**

Likewise, in our Industrial Business Unit, there is a need for constant innovation and development to meet customer demands.

The global electrification of the automotive industry is generating high demands for microchips, an industry that has already been characterised by a lack of supply for several years. This, in combination with the political development requiring local microchip production, creates good business opportunities for AVK as our ball and butterfly valves are used in the production for cleaning microchips. A production process that puts high demands on all technical equipment.

The geopolitical conflicts have created new national standards and specifications for products used in shipbuilding. Therefore, we have adapted our butterfly valve product range to meet the new requirements.

Increased competition demands a higher level of automation in our production and digitalisation of our processes. Hence, we have initiated the development of a completely new design for our industrial knife gate valves to ensure the possibility of further automation in our production.



# INTRODUCTION TO AVK'S ESG ORGANISATION AND CORPORATE SUSTAINABILITY REPORTING DIRECTIVE

We see sustainability as an integrated part of our business, and it is one of the global focus areas for the Group supported by AVK Holding. Activities and requirements are coordinated across all the companies of the Group.

## ESG organisation

As a global Group, we are encountering increased demands related to sustainability initiatives which necessitates enhancing our data collection and documentation process across the organisation. To meet these challenges, we have allocated additional resources for the 2023/24 financial year to prepare and future-proof our operations, ensuring compliance with evolving ESG standards and reporting requirements driven by customer expectations and the EU Corporate Sustainability Reporting Directive (CSRD).

## Establishment of Sustainability & ESG function

From February 1, 2024, a dedicated central Group Sustainability & ESG function has been established with reference to AVK Holding's top management.

The function, which will ensure anchoring sustainability across the organisation, has access to resources from the other AVK Holding functions (Group Finance - Legal - Communications - Supply chain - IT) as well as staff from our global companies.

## Preparing for the CSRD

In the financial year 2023/24, AVK initiated a strategic implementation of the EU Corporate Sustainability Reporting Directive (CSRD). A significant focus area for AVK has been the

compilation of a double materiality assessment. The purpose of the double materiality assessment is to identify and prioritise the Group's most material impacts, risks, and opportunities and to guide our focus on key sustainability topics for further development in our effort.

In August 2024, we initiated the process of a double materiality assessment with a top-down focus from the AVK Holding organisation to underlying operating companies and their individual value chains.

As a part of the assessment, a detailed analysis of our companies and our value chains including global suppliers will be conducted.

Once the materiality assessment is completed, we will perform a gap assessment. The purpose of the gap assessment is to evaluate our current position in relation to the requirements of the Environmental, Social, and Governance Reporting Standards (ESRS) of the CSRD.

This evaluation is crucial to identify areas where we need to optimise and adjust our internal processes and reporting systems to ensure compliance with the ESRS. It also serves as the foundation for the preparation of the overall AVK Sustainability Roadmap which is expected to be completed in early 2025.

The work with the double materiality assessment and the gap assessment will continue in the financial year 2024/25.



# OUR VALUE CHAIN

The AVK Group is a global leader in valve manufacturing and operates across a range of industries such as water supply, wastewater management, energy, and industrial applications. In our value chain, we emphasise sustainable practices, including using recycled materials, enhancing production efficiency, and focusing on the environmental impact throughout the manufacturing processes.

## Raw materials and procurement

AVK sources a wide range of raw materials, including metals, plastics, rubber, and other components essential for our product lines like valves, hydrants, and fittings. Purchases are made from global suppliers based on our material specifications.

The use of recycled materials, particularly in cast iron and plastic products, is a focus area to minimise environmental impact.

## Manufacturing

Our global manufacturing facilities are operated in an advanced and energy-efficient manner that utilise modern technologies and automation to improve manufacturing efficiency and product quality.

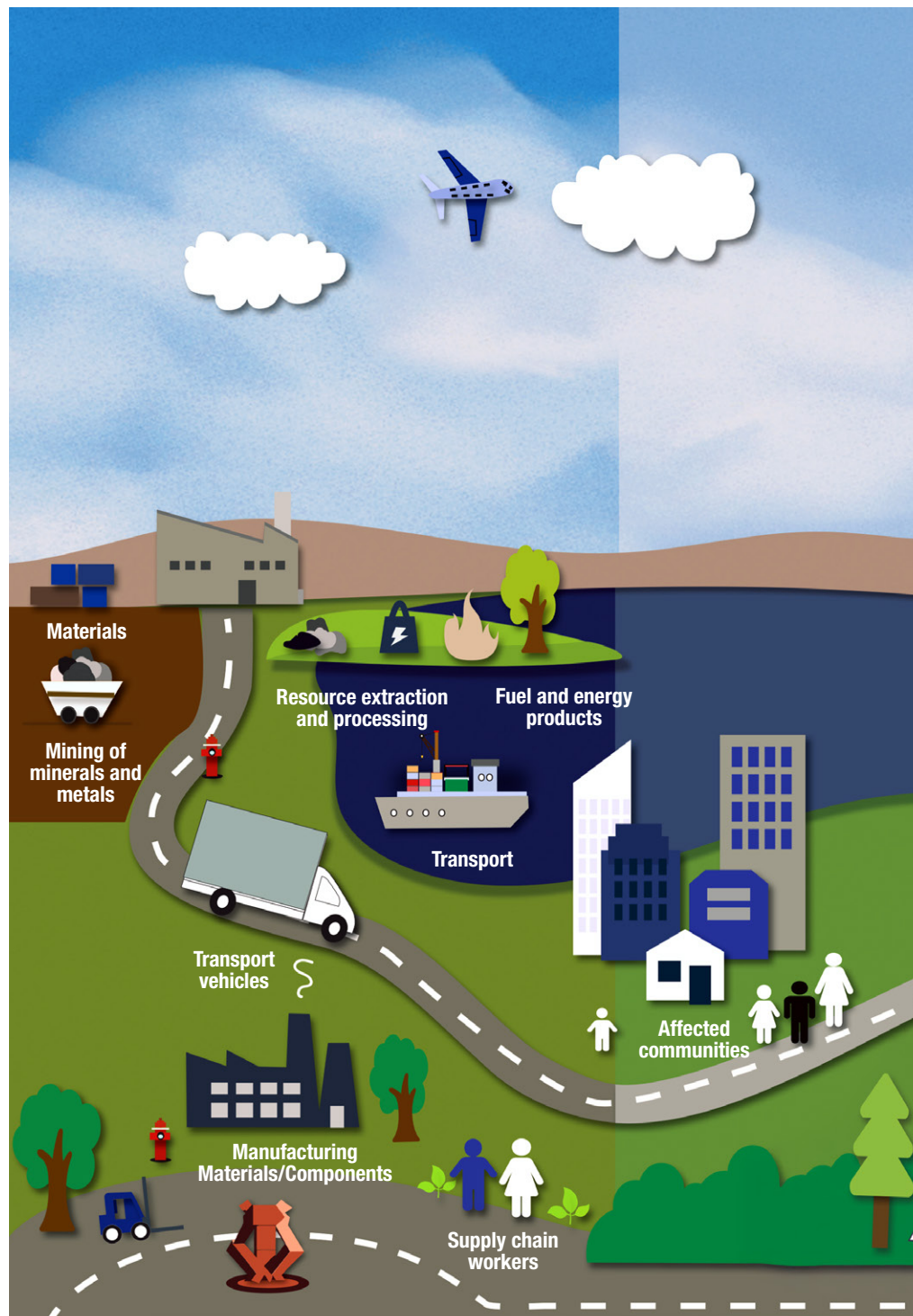
We prioritise processes that integrate circular economy principles, such as reusing materials from manufacturing waste to minimise environmental impact and support sustainability.

## Logistics

AVK has a robust logistics network designed to deliver products efficiently to global markets. Logistics is optimised through technological solutions to track inventory and manage global shipments via road, sea, and air, supporting our international operations and customers.

## Customers

AVK's customer base includes national as well as local municipal authorities, utilities, and industries in need of water, wastewater, and energy infrastructure solutions.







# OUR RISKS AND OPPORTUNITIES

All companies face risks and opportunities. For a company to grow, making the right choices at the right time is crucial. As an industrial Group of companies with sales in many market segments and all over the world, AVK is relatively resilient to fluctuations in individual markets. Furthermore, customer relationships are long-lasting and provide additional stability to AVK's business.

The general development of the global economy presents both opportunities and risks. This includes political decisions regarding infrastructure investments, especially in the water sector.

## **The global economy**

The global economy has been affected by several factors in the past years, and it is expected that these factors will continue to have an impact on the economy in the coming years. The global supply chain crisis, initially triggered by the COVID-19 pandemic and further exacerbated by ongoing geopolitical conflicts, has significantly driven up costs, heavily affecting the financial outcomes of many projects. Supply chains have stabilised, but subsequent inflation and higher interest rates have had a negative impact on investment in most markets. There is still much uncertainty on the general economic development, but we have seen prices stabilise and partly reduce in the last year, and we expect a more positive development for our markets in the coming year helped by lower interest rates. Geopolitical conflicts and new governments in many of the important markets for AVK can impact our business.

We see increased protectionism with trade barriers and political demands for local supply chains. For AVK, this means further investments in local manufacturing and supply chains, but overall, we are well positioned with our global network of companies and manufacturing presence in most major markets.

The Group's products hold substantial long-term potential, driven by the growing need for infrastructure investments in the water, wastewater, and energy sectors, particularly across Asia, Africa, and South America. An essential prerequisite for a safe supply of clean drinking water and less water waste is the use of quality products in the distribution network. Here, AVK has an advantage with our diverse product portfolio.

Many developed markets also experience significant water wastage, leading to both water loss and increased energy costs for pumping. The increasing focus on sustainability and thus reduced energy consumption increases the demands on the water supply and a reduction in the loss rate from waterworks to consumer. Therefore, there is a need for continued investment in renovating and improving the water supply. Likewise, there will be an increasing focus on intelligent products for water supply (Smart Water Systems) that ensure better monitoring and control of the distribution network.

## **Organisational development**

The AVK Group consists of more than 100 companies that largely act as independent entities, enabling the local companies to adjust to local business.

At AVK, sustainability is an integral part of our business and a key global focus for the Group. This commitment is supported by AVK Holding, reflected in our activities, and reinforced through coordinated requirements across all Group companies. The policies and

initiatives related to sustainability are governed by the Executive Directors and managed by a dedicated Group Sustainability and ESG function.

## **The AVK Sustainability Policy**

Our global presence requires high ethical standards and a strong coordination to ensure that we act in the same way across all countries.

We want to be a responsible and credible company that balances economic, environmental, and social matters. This is mirrored in our Sustainability Policy.

## **Group Policies**

AVK has established Group Policies that define how the individual companies are to comply with our sustainability efforts within the areas: environment, social, and governance.

The policies are available in the Group's management system (QHSE) and communicated to all companies in the Group.

In addition, through our Supplier Code of Conduct, we have defined principles and guidelines for environmental protection and human rights compliance that our suppliers are required to live up to.

In this way, we constantly strive to be a credible and ethically responsible partner for our customers and suppliers, a supportive workplace for our employees, and a responsible actor towards all other stakeholders.

## Our global presence

As we operate in countries where compliance with human rights, occupational health and safety, environmental and climate protection as well as anti-corruption are not necessarily a given due to existing culture and legislation, we are aware of the risk that our Group values are violated.

Because of this, we focus on compliance with our policies in all Group companies, and we support this effort with ongoing audits in our management systems. The most significant risks will be assessed in the following sections.

## Environment and climate

We estimate that the main risk related to climate impact is a lack of attention to minimising energy consumption. In addition, it is important to focus on material use and waste management to minimise the impact on the local environment and support a circular economy.

To minimise our climate impact, we have developed an environmental and climate strategy. We are focused on ensuring compliance with our environmental policy and work to continuously strengthen the policy to minimise the environmental and climate impact of the Group and our suppliers. We elaborate further in the section "Our environmental and climate effort".

## Employee relations

As a Group of companies with numerous industrial production facilities, we consider

work-related accidents a significant risk and hence a high priority area. Additionally, individual companies within AVK will pay attention to mental health and safety. Read more about initiatives within both areas in this report under the section "Our social responsibility".

## Human rights

We assess that the risk of human rights violations is most pronounced among workers further down the value chain, particularly in cases involving forced labour and unequal rights. We have more control over the suppliers in the value chain the closer they are to us. That is why we work systematically on registration, control, and follow-up via audits and further development of the collaboration with our suppliers. This is further elaborated on in the section "Our governance".

## Anti-corruption and bribery

As a global Group of companies, we assess corruption risks in some of the countries in which we operate. AVK does not accept any kind of action that may be considered corruption or bribery. We have zero tolerance for such incidents and consider it a gross misconduct that may result in disciplinary actions. The management of all our companies have signed our compliance manual with a requirement of compliance with national and international laws on anti-corruption and bribery. We will address this in the section "Our governance".

## The AVK Sustainability Policy

We recognise that our global presence requires high ethical standards throughout our organisation and in all our actions.

We want to be a responsible and credible company with the ability to balance economic, environmental, and social matters.

This means that:

- The AVK Group supports the UN Sustainable Development Goals (SDG). Our main area of attention is the goals relating to clean water and sanitation (SDG 6) and industry, innovation, and infrastructure (SDG 9) as these areas represent our core business. In addition, AVK also contributes to other goals. We consider SDG 17 on partnerships for sustainable development to be crucial to achieving the other SDGs.
- We ensure that sustainable initiatives are fundamental to our production and that we have a healthy and safe work environment. We focus on the environment and long-lasting solutions and have achieved certifications that we are proud of:
  - ISO 9001 – Quality management
  - ISO 29001 - Quality management in the oil and gas industry
  - ISO 14001 – Environmental management
  - ISO 45001 – Occupational health and safety
  - ISO 50001 – Energy management



# OUR CONTRIBUTION TO THE UN SUSTAINABLE DEVELOPMENT GOALS

The UN 17 Sustainable Development Goals (SDGs) are the framework for the global sustainable development efforts until 2030. The goals recognise that social, economic, and environmental development are closely interlinked, and that achieving sustainable development outcomes requires a concerted global effort. At AVK, we recognise that we have a shared responsibility. The SDGs 6 and 9 are particularly relevant to our business model, but we also work with other goals, either at a strategic level or through decentralised activities as described below.

Our product portfolio in AVK Water is a direct extension of UN SDG 6. This goal aims to ensure that everyone has access to clean drinking water and sanitation and that this is managed sustainably.



All three business units of AVK contribute to this goal as we design and manufacture innovative products, some of which are part of recycling initiatives and processes for energy, water, and infrastructure solutions.

Water influences health and quality of life.



By operating in the water and wastewater industry, we indirectly contribute to UN SDG 3 which is about ensuring healthy lives and promoting well-being. Water-related diseases are a major problem worldwide and wastewater can contaminate drinking water sources.

Our valve solutions help ensure clean drinking water in well-established water supply systems by providing reliable, long-lasting, and dependable water management and helping to reduce water waste and energy consumption. AVK products and solutions are applied to various processes aimed at ensuring responsible wastewater treatment and avoiding risks to the environment and health.

UN SDG 9 is concerned with developing reliable infrastructure, promoting sustainable industries, and investing in scientific research and innovation.

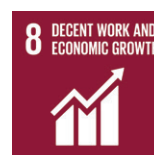


Sustainable energy is the core of SDG 7. This goal aims to ensure that by 2030 all people have access to affordable, reliable, sustainable, and modern energy. It specifies that the share of renewable energy in the global energy mix must increase significantly by 2030.



Our valves for wastewater treatment, biogas, and hydroelectric energy production contribute to a greater share of renewable energy.

We work with UN SDG 8 which is about decent jobs and economic growth. This means that we must provide healthy and safe workplaces for our employees both in Denmark and internationally and respect their right to equal and fair working conditions.



We only want to co-operate with suppliers who guarantee compliance with human rights legislation and our ethical standard, the Code of Conduct.

As a financially robust and responsible company, we make significant investments to strengthen our competitiveness and maintain our market share.



Our product portfolio contributes to clean water and sanitation which are the foundation for ensuring more sustainable cities and communities. Equally, our solutions can help cities adapt to extreme rainfall by using underground drainage systems to prevent flooding. In this way, we support SDG 11 on sustainable cities and communities.



UN SDG 12 is about responsible consumption and production. We support this goal by conducting life cycle assessments and by identifying methods and processes that enable us to recycle materials from our factories. We also apply large quantities of recycled materials in our production, both metals and plastics.



UN SDG 13 on climate action is concerned with reducing the increase in global average temperature and strengthening resilience and adaptation to climate change.



As a player in the water and wastewater industry, we contribute to this goal by addressing the link between water consumption and energy usage. The energy consumption for pumping water is reduced when our valve solutions reduce water loss and the pressure management in the distribution network is efficiently handled.

In the energy sector, our valves can be used in the distribution of water for district heating, biogas production, hydroelectric energy, and conversion of wastewater into green energy. To adapt society to extreme rainfall, climate adaptation solutions for flooding are needed.

This is another area where AVK companies can contribute with valve solutions.

In addition, we have developed an environmental and climate strategy with the primary aim of reducing CO<sub>2</sub> emissions through energy reduction in the life cycle of our products and investing in green energy sources.

We consider SDG 17 to be crucial for the success of the other sustainability goals. At AVK, we want to be part of creating a sustainable water and energy supply and build a community where circular economy plays a greater role. Collaboration across local, national, and international organisations, authorities, industries, and professions is necessary, and this is what we do through partnerships.



# WATER LOSS: PROBABLY THE MOST CRITICAL RESOURCE CHALLENGE OF OUR TIME

Water has a significant impact on health, quality of life, energy consumption, and on our climate. “Clean water and sanitation for all” is UN SDG 6 which emphasises that water is a vital resource. In fact, water plays a crucial role in solving many of the underlying problems that have led to all UN’s Sustainable Development Goals.

## Today, we are wasting tomorrow’s water

Water is a scarce resource in many parts of the world. Yet, in some countries, between 30 and 60% of the treated water is wasted on its way to consumers. When up to 60% of the treated water is wasted before reaching its destination, the same amount of energy used for production and distribution is wasted too. By 2040, approximately 79% more energy will be used for water management compared to 2014 if we continue to operate as we do now.

Non-revenue water (NRW) is produced, cleaned water lost somewhere in the water distribution system, never reaching its destination. This means water not used or paid for, affecting local economies as well as local resources available and wasted energy for pumping water.

The reasons for water loss are many, ranging from leakages, pipe bursts, poor water management to illegal connections and unauthorised consumption. Likewise, many solutions are available.

## The technologies are there – we just need the initiative

In Denmark, legislation does not allow a water loss rate of more than 10%. Over time, this has resulted in one of the world’s lowest average water waste rates of 7.8% and has placed

Denmark as a front-runner in water technology and solutions.

As water sources are already overexploited and populations are increasing, we need to apply better management. And what better way to start than by minimising our waste of water.

The revised EU Drinking Water Directive, which addresses water loss, drinking water quality, and infrastructure risk assessment requirements, gives hope that more decision makers will see the positive effects of legislation in crucial areas such as water infrastructure.

A conservative estimate is that the level of NRW is between 30 and 60% in some countries. This means that between 30 and 60% of the water pumped into the pipes from the waterworks is not billed, either because it is lost due to leaks or because of unauthorised consumption.





# AVK SMART WATER PROVIDES ACCESSIBLE AND RELIABLE DATA

Water utilities' primary duty is to ensure a safe and reliable supply of drinking water for their consumers. To do this, they must ensure reliable operations and functionality of the water distribution network and be able to react quickly when unwanted changes occur.

Nowadays, many utilities have installed metres that can measure water consumption which is essential to ensure correct billing and to reduce the amount of Non-Revenue Water (NRW). However, there is potential to collect and utilise a larger amount of data from the utility network by installing sensors, such as those AVK has developed in our Smart Water solutions. By applying AVK Smart Water solutions to key network assets such as valves or fittings, data can be delivered directly to a dedicated software platform where it is transformed into valuable knowledge and insight, saving both time, water, energy, and labour resources.

## Collecting valuable data

The AVK Smart Water solution is a combination of sensors and software. Our software allows easy integration with a preferred IT system as well as visualisation in AVK Smart Water's own platform, VIDI Cloud.

The sensors are designed for our gate valves, fittings, and hydrants. Once installed, they can provide data about pressure, flow, temperature, or open/closed position directly from applications in the distribution network. This way of monitoring network activities makes it possible to save resources, minimise water loss as well as optimise operation and maintenance activities, for example by quickly informing about leaks.

The sensors use the wireless IoT technology NB-IoT (Narrowband Internet of Things) to

ensure good coverage and long battery life. NB-IoT can penetrate closed structures such as wells, chambers, and other underground structures.

## Dividing the water network into sections

Leaks in pipes and other equipment caused by, for example, bursts or breaks are some of the main causes of water loss. When a leak occurs, it can take days, weeks, and even years before it is detected, and finding the exact area in a large, wide-reaching network is no easy task.

Therefore, dividing the supply network into separate sections, also referred to as District Metering Areas – DMA, is an effective technique that makes it possible to get an overview of what is going on underground. Water loss can be calculated in the sections individually, and operators can better plan and prioritise their efforts.

## Improved NRW calculations and support for active leakage control with VIDI Positioner

As part of the LEAKman project, VIDI Positioners, battery-operated devices, are installed on valves located at the boundaries of the DMAs. Here, they provide reliable data on valve status and opening ratio which is vital information for the water balance and NRW level calculations.

The LEAKman partners identified at an early stage the need for knowing if - and when -

## The LEAKman project

The LEAKman project (LEAKage MANagement) intends to demonstrate Danish solutions to reduce the loss of clean drinking water and to pave the way for new Danish water technology.

Read more in the chapter on "Our partnerships for sustainable development" or at <https://leakagemanagement.net/>.

the DMA boundary valves are operated as this affects NRW management and often leads to false results when conducting the water balance assessment and the minimum nighttime flow monitoring.

Water balance calculations are highly dependent on valid data. It is a well-known issue that if the boundary valves have been opened for maintenance, they are sometimes not brought back to the closed position afterwards. In other words, monitoring the open/closed position of boundary valves can help prevent unmeasured flow between DMAs and thereby ensure more reliable data and calculations.



### Pressure adjustment techniques to minimise leaks and reduce energy consumption

Pressure adjustment is considered an important and cost-effective leakage management activity. The higher the pressure, the more water is lost through bursts and leakages. Furthermore, most pipe bursts occur not only due to high pressure, but rather due to pressure fluctuations that cause pipes to constantly contract or expand, resulting in stress fractures.

Pressure adjustment is also a way to reduce unnecessary energy consumption. By allowing lower pressure in general, especially during off-peak hours, energy consumption for pumping can be reduced. The pressure can be adjusted to the critical point at a strategic consumer in the DMA which means that no energy will be used to pump water to a higher level than necessary.

Manually monitored Pressure Reducing Valves (PRVs) requires the utility to go to the valve location and manually check the pressure gauge. This is time-consuming and in principle, PRVs can fail within minutes of being manually inspected, meaning the pressure is not reduced correctly. Using wireless battery-powered pressure sensors, PRVs can be monitored every minute or every five minutes, achieving a constant online monitoring.

### WATER SUPPLY NETWORK OF THE FUTURE – SMART GATE VALVES INSTALLED IN THE NETHERLANDS

AVK Nederland and Evides have enjoyed a good customer-supplier relationship for many years. Evides, a provider of drinking water, is continuously working on making its business operations more sustainable. As part of the "Pipeline Network of the Future" research programme, they have investigated different techniques that help gain insights into the water supply network to secure that future investment can be made in a well-founded, targeted, and cost-effective manner, including attention to making various assets 'smart'.

In this context, Evides installed and tested eight AVK VIDI Positioner on four gate valves in Oud-Beijerland. The purpose of this installation was to smarten up the water supply network and to ensure that more information about the status of the gate valve could be collected.

#### The installation

The VIDI Positioners are installed in combination with an AVK extension spindle on multi-turn valves and transmits data wirelessly to Evides.

The starting position of the valve in question is activated via the AVK Assist app on any smartphone. As soon as the extension spindle is turned, the VIDI Positioner registers the movements. The device transmits data immediately via NB-IoT communication network (band 8 & 20) and retransmit the position after 5 and 10 minutes and after 1, 6, 12, and 24 hours. A live signal is transmitted every 24 hours if the position has not changed.

### Successful pilot at Evides

On valves that are not a part of the test, the preferred position of each valve is noted in writing. If the position changes, this is processed manually which means that information is not always up to date. If the actual valve position does not correspond to the one noted down, this can lead to problems in the event of malfunctions: an adjustment of the valve position can then cause more complaints.

After completing all the steps, the installation of the positioners went smoothly with good support from AVK. Likewise, the installation of the AVK Assist app was straightforward. The pilot has now lasted more than six months, and the positioners have been working flawlessly ever since transmitting the valve positions accurately and on time.

The conclusion of the pilot at Evides highlights that the VIDI Positioner improves the efficiency of the registration of the valve position and ensures that the registered position is correct. The VIDI Positioner also functions as an alarm when the valve is in a position other than the preferred position. Installing VIDI Positioners can therefore save a lot of time.

Evides supplies drinking water to 2.5 million consumers and companies in the provinces South Holland, Zeeland, and North Brabant.



# WASTEWATER AS A RESOURCE

The UN Environment Programme (UNEP), the leading environmental agency of the UN, reports that approximately 42% of all household wastewater is not treated properly, damaging ecosystems and human health.

Source: UN

## CASE

At the same time wastewater can generate biogas, heat, and electricity. It can produce about five times more energy than is required for its treatment – enough to provide electricity for around half a billion people per year.

Source: UNEP, 2023.

AVK develops, manufactures, and markets products specifically designed to handle the substances in wastewater management.

### **AVK VALVES HELP PRESERVE THE YANGTZE RIVER**

As part of China's commitment to sustainable development, the Zhujiqiao Wastewater Treatment Plant was recently upgraded and expanded. It is now equipped with various valves from AVK.

#### **Protecting the country's lifeline**

The significance of the Yangtze River is immense. It is the longest river in Asia and

China's largest water system. In addition, many of China's largest cities, including Shanghai, Wuhan, and Chongqing, are situated along the river. However, for some time, the ecological environment of the Yangtze River has faced severe challenges such as chemical encirclement and industrial wastewater discharge. And now, the situation is deteriorating.

In response to General Secretary Xi Jinping's call for "focusing on protection, not excessive



development”, various cities along the Yangtze River have shown their commitment to the protection and restoration of the river’s ecological environment.

### **Pilot city for green development**

Wuhu, located on the banks of the Yangtze River, has in recent years made a continuous effort to restore the ecological environment of the Yangtze River. In July 2018, the Three Gorges Corporation selected Wuhu as one of the first pilot cities for the Yangtze River protection efforts – an action that not only sets the tone for the future development of the city, but also marks a new historical stage in ecological protection and sustainable development in the Yangtze River area.

As the largest wastewater treatment plant in southern Anhui, the Zhujiqiao Wastewater Treatment Plant undertakes the comprehensive task of treating domestic wastewater from Wuhu and its surrounding area. To improve efficiency, achieve higher discharge standards, and enhance the regional water ecological environment, the plant has undergone multiple phases of upgrading and expansion. Phases I and II have a total treatment capacity of

220,000 m<sup>3</sup>/day, while Phase III added an additional 115,000 m<sup>3</sup>/day, bringing the total capacity to 335,000 m<sup>3</sup>/day. The long-term design capacity is 450,000 m<sup>3</sup>/day.

### **AVK valves for complex solutions**

The project of upgrading the plant involves adding advanced treatment units after the existing secondary treatment process, adopting further advanced and complex techniques in each of the project’s phases.

Amidst the phases, there are several technical processes such as precise control of biological treatment, achieving efficient flocculation and sedimentation, and implementing MBR flat membrane technology.

AVK Valves in Shanghai delivered a variety of valve solutions for the expansion project including gate valves, butterfly valves, check valves, and knife gate valves, ranging from DN50 to DN2000 – in total more than 400 units.

The AVK valves for wastewater treatment with precision control capabilities and corrosion resistance support stable and efficient biological treatment.

### **Enhanced capacity and environmental benefits**

Following the project, the plant has improved its treatment capacity. Now, the treated water lives up to the national Class A discharge standard. This means that the treated wastewater can be safely discharged into the Yangtze River, reducing its negative impact on the ecological environment.

Also, the project has positively influenced the surrounding aquatic environment, especially at the Wuhu Jiangdong Water Ecological Park which now receives 40,000 tons of tailwater daily from the plant. Through ecological purification facilities such as subsurface flow constructed wetlands, the nitrogen and phosphorus contents are reduced, elevating the water quality to meet the Surface Water Quality Standard Class IV. This cleaned water is then discharged into the surrounding Banshengyan and Baoxingyan water systems. By feeding the cleaned water into the urban river system, a constant source of freshwater is provided, improving the water environment, and achieving water pollution control, ecological restoration, and resource protection.



# RECYCLED PLASTIC IN OUR PRODUCTION

Recycled plastics is a value-adding component in the product manufacturing process in the AVK Plastics companies where thousands of tonnes of recycled plastics go into production every year.

The mission of the AVK Plastics group of companies is to contribute to a circular economy of plastics through the development, manufacturing, and sales of injection moulded products from recycled plastics.

AVK Plastics' major product categories are transport pallets, surface boxes, and waste containers. In addition to marketing their own

products, AVK Plastics also manufacture products and components for other companies within the AVK Group as well as outside the group.

Circularity of materials is becoming increasingly important, and recycling is an important part of AVK's business. The growth of the world's population and our current way of living is

causing us to consume natural resources faster than they can be generated. Environmental pollution from end-of-life product waste is another major topic, especially for materials as lasting as plastics. Implementing circularity also reduces CO<sub>2</sub> emissions significantly. All good reasons to work with recycling.

## CASE

### COLLABORATION TO INCREASE THE QUANTITY OF RECYCLED PLASTICS

In the financial year 2023/24, AVK Plastics recycled 33,000 tonnes of post-consumer plastics, an 18% increase from the previous year. AVK Plastics actively pursue value chain cooperation to develop product applications for unused plastic waste streams to support increased recycling levels. One example is the partnership with Recon Polymers that focuses on recycling beverage cartons.

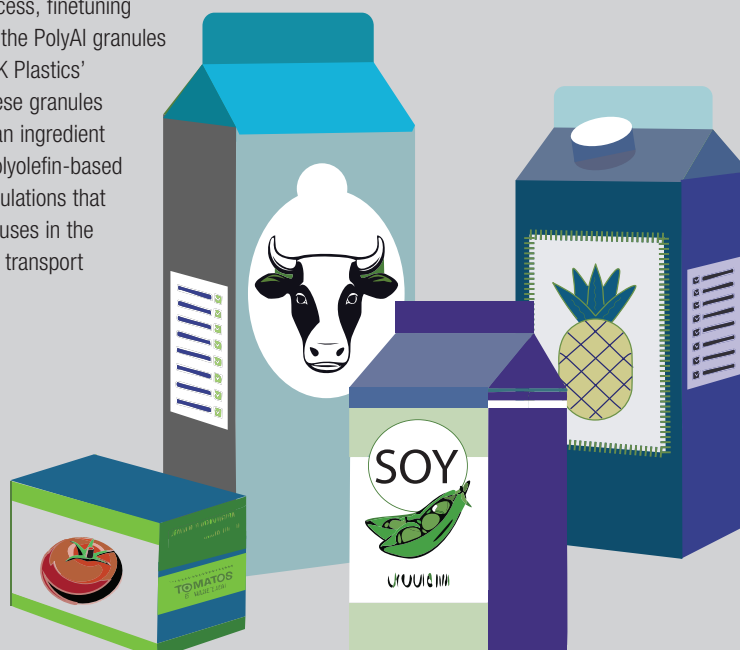
Beverage cartons, commonly used for packaging various beverages, pose a recycling challenge. In 2023, Tetrapak, a major brand in this sector, alone sold 179 billion packages. In response to increasing demands for recycling, Tetrapak invests €40 million annually to improve the collection and recycling of these packages. In 2023, about 1.3 million tonnes of beverage cartons were collected for recycling, an 8% increase resulting in a global collection rate of 27%. Source: TetraPak Sustainability Report FY23 p.34

A typical beverage carton, e.g. used for juice, consists of 70% paper, with plastic used in the closure system and a plastic-aluminium barrier layer in the wall of the package to extend shelf

life. During the recycling process at paper mills, a plastic residue containing aluminium, known as PolyAl, remains.

Establishing a pilot production in 2017, Recon Polymers, based in the Netherlands, has developed an efficient process to recycle PolyAl. Since early 2022, AVK Plastics has worked with Recon Polymers to optimise this recycling process, finetuning properties of the PolyAl granules for use in AVK Plastics' factories. These granules are used as an ingredient for several polyolefin-based material formulations that AVK Plastics uses in the production of transport pallets.

With financial support from Tetrapak, Recon Polymers' pilot production has become a commercial manufacturing facility. Meanwhile, AVK Plastics has invested in material handling equipment at their Balk operation and has over the past financial year used about 3,000 tonnes of PolyAl.



# LIFE SCIENCE – WHEN SAFETY, HIGH PURITY, AND STERILITY IS PARAMOUNT

The life science industry encompasses companies that operate in the research, development, manufacturing, and commercialisation of products that improve health and quality of life.

In this field, the importance of safety, purity, and sterility is crucial. AVK Group's products are designed to meet these stringent requirements, enabling safe and efficient production processes for food and life science products. This is achieved through valves manufactured with materials approved under FDA regulations, EN 1935/2004, and EU No. 10/2011.

## CASE

### **EFFICIENT SUGAR PRODUCTION — MINIMUM DOWNTIME WITH SPECIALISED VALVES**

The AVK company, InterApp, supplies a wide range of valves for the life science industry.

Südzucker AG, a customer of InterApp, is the parent company of the Südzucker Group which is divided into five diverse segments: sugar, special products, CropEnergies, starch, and fruit. The company is adept at transforming agricultural raw materials into an array of high-quality products, primarily targeting both industrial customers and end consumers. The product range extends beyond food items to include animal feed and various other goods for sectors across both food and non-food industries. A crucial aspect of Südzucker's operations is the complete and efficient utilisation and refinement of these raw materials.

Effective maintenance of production facilities as well as reliable production cycles are vital to avoid any interruptions during peak manufacturing periods. In response to this need, the Südzucker AG manufacturing site of Offenau has integrated InterApp valves into its operational framework due to the high reliability and easy maintenance of these valves.

InterApp has supplied an extensive range of valves. These include:

- For handling chemicals, Bianca butterfly valves from DN 50 to DN 200
- For various processes such as vapour generation, evaporation, etc., Desponia® butterfly valves from DN 50 to DN 1000
- For evaporation of syrups and vacuum, Desponia® plus butterfly valves from DN 50 to DN 500
- For beet processing and centrifugation, knife gate valves from DN 150 to DN 700
- For biogas production and pump protection, Rhea swing check valve from DN 100 to DN 300

Both manual and pneumatic actuators are used ensuring optimal functionality and automation.

This collaboration not only strengthens Südzucker's operational integrity, but also ensures a production with the highest quality and safety standards throughout the year. InterApp sees itself as a partner, collaborating with Südzucker to develop solutions that further optimise the manufacturing site. This partnership highlights a shared commitment to enhancing reliability and promoting sustainability in production processes.



# OUR PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT

It is difficult to create change on your own, and the sustainable transition is one of the biggest change management projects facing public and private companies, governments and the like. That is why we consider SDG 17, Partnerships for Sustainable Development, to be crucial for achieving the goals of the other SDGs.

At AVK, we therefore co-operate with partners across industries, governments, authorities, civil society, and the academic world. In recent years, we have had a special focus on partnerships in the water industry and thus, a special focus on SDG 6.

Read more about our formal partnerships in the next sections.

## Water Valley Denmark

Water Valley Denmark (WVDK) is a co-operation between Dansk Industri (Confederation of Danish Industry), DI Water (Confederation of Danish Industry - Water), water supply companies, universities, research units, and manufacturing companies, including AVK. The purpose of WVDK is to bring together the most skilled players to help create a CO<sub>2</sub> and climate neutral water sector, to develop solutions for the water industry, and to unlock the Danish water sector's potential to become a world leader and double the export of water technology by 2030.

REACT-EU is recovery aid to areas in Europe supporting investment projects that promote crisis management measures and contribute to a green, digital, and resilient economic recovery. The aid is an extension of the crisis preparedness and crisis management measures that have been implemented in response to the coronavirus.

AVK is one of the founding partners of WVDK and holds a position on the steering committee. Water Valley Denmark has received DKK 57 million as a part of the REACT-EU programme for the development of equipment and techniques, including the Water Living Lab (WLL). At AVK, we see great opportunities to further develop our Smart Water solutions as participation in WLL provides the opportunity to test innovative technologies, both hardware and software, together with other manufacturers, suppliers, utilities, consultants, and universities.

## Danish-Middle Eastern education collaboration established in Dubai

Since 2019, AVK has been a part of the Advanced Water Cycle Management Course

(AWCMC) collaboration with participants from all over the world. Water challenges have led the Dubai Municipality to contact the AWCMC to establish a similar initiative locally. In September 2024, representatives from Dubai and Danish stakeholders signed the MoU agreement to secure the new collaboration.

In the United Arab Emirates, all fresh water is based on desalinated seawater – an expensive and energy-intensive way of obtaining drinking water. In addition, the Emirates want to increase the production of their own food as approximately 80% of the current food supply is imported. To achieve this goal, even more freshwater is needed putting pressure on the current system.



As a result, Dubai Municipality has taken inspiration from AWCMC and now seeks to establish a collaboration agreement to develop a similar educational programme.

The purpose is to establish a Danish-Middle Eastern education collaboration, initially with a focus on Dubai. The new partnership is named the Danish Middle East Water Academy and will be developed in close collaboration between Be Pro Training Institute LLC and Ferskvandscentret in Denmark together with a strong Danish setup of Danish companies and organisations including AVK. WEMA (Water Efficiency Middle East Alliance) is a supporting collaborator as well, and the Danish Consulate General in Dubai has played a decisive role in facilitating the partnership.

AWCMC is a partnership between Grundfos, Kamstrup, DHI, Niras, IGIS, Clean, Aarhus University, WATEC Aarhus University Centre for Water Technology, Aarhus Vand, Danida Fellowship, Water Valley Denmark, and AVK. Read more about the Advanced Water Cycle Management Course and our effort within education in the section "Our social responsibility".

### **The LEAKman project**

LEAKman was initiated to demonstrate how Danish solutions can reduce loss of drinking water and pave the way for innovative technology. The LEAKman project has been developed by a confederation of nine Danish partners representing consultants, water supplies, the Technical University of Denmark (DTU), and technology suppliers such as AVK.

The LEAKman initiative aims to showcase Danish solutions for minimising losses in drinking water systems while paving the way for innovative technologies. Its goal is to create a state-of-the-art leakage management solution.

Denmark's Ministry of the Environment has expressed interest in launching a LEAKman 2.0 project to showcase the latest advancements in water technology. All LEAKman partners unanimously agree that this initiative should be carried out through Water Valley Denmark.

### **Danish Water Forum's participation in the largest conference in recent UN history**

The Danish Water Forum (DWF) is dedicated to advancing research, development, and innovation in the water sector both in Denmark and internationally. Its mission is to strengthen Denmark's position in the global water agenda by sharing Danish expertise and insights with international water organisations and initiatives within the industry.

Since spring 2023, AVK has held a seat on the board of DWF, enabling active involvement in decision-making processes. In 2023, AVK also participated as a representative of DWF at the annual meeting of the Ukrainian Water Association in Lviv to present Danish water competencies and solutions.

This year at Lviv Eco Forum, DWF signed a MoU with the Ukrainian Water Association with the title "Roadmap to sustainable water infrastructure". The first two activities are already in the planning: Ukrainian-Danish Water Days in Ukraine, and a fact-finding trip to Denmark for water utilities and wastewater companies.

On World Water Day, March 22, 2023, a global water conference was held at the UN headquarters in New York. Approximately 6,500 delegates attended over the three days, and around 200 side events were held. It was the first dedicated water conference in 50 years. AVK participated as part of the DWF delegation and took part in the side events arranged by DFW and the World Bank.

At this year's International Water Association (IWA), held in Toronto, August 2024, AVK in collaboration with WWD and DWF instigated a groundwater seminar with the themes "Strengths and weaknesses of a groundwater-based water supply", "Hidden opportunities of a groundwater-based water supply", and "Imminent threats of a groundwater-based water supply".

### **Green strategic partnership between India and Denmark**

DWF plays an active role in a green strategic partnership between India and Denmark, collaborating with DI Vand and the Danish Embassy in India to strengthen connections between water stakeholders in both countries. DWF contributes by organising workshops and conferences in India where Danish water technology is in focus.

In September 2020, Narendra Modi, the Prime Minister of India, and Mette Frederiksen, the Prime Minister of Denmark, signed an agreement through which Denmark and India entered a strategic partnership.

On May 3, 2022, Prime Minister Narendra Modi visited Denmark and met with representatives from leading Danish companies driving the green transition, including Niels Aage Kjær, Chairman of the Board and owner of AVK. At the meeting, Niels Aage Kjær exchanged a letter of intent with Larsen & Toubro (L&T),

an Indian multinational engineering and construction company. The purpose of the agreement is to strengthen the partnership for projects and opportunities within water and wastewater projects, thus creating a more reliable water supply for the people of India.

Since then, the Danish embassy, Dansk Industri, and Danish Water Forum have arranged delegation meetings for both India and Denmark. Likewise, the letter of intent has resulted in a Non-Revenue Water (NRW) project in the Indian city of Pune where AVK Valves India Pvt. Ltd. joined forces with L&T and several other stakeholders to reduce NRW from 30% to 15% using District Metering Areas. The project has ended, but it has captured the attention of other regions in India that are now seeking funding to undertake similar initiatives.

India has approximately 1.4 billion inhabitants and overtook China in 2023 as the most populated country in the world. Around 35 million people in India lack access to safe water and 678 million people lack access to a safe toilet.  
Source: water.org.

### **Water Technology Alliance**

The Water Technology Alliance (WTA) offers knowledge sharing between the North American and Danish water industry to promote the exchange of views and experiences within the water and wastewater field. It is a collaboration between American utilities and authorities and Danish players, utilities, and companies, including AVK. The collaboration originates in an agreement between the Californian state government and the Danish government signed in 2016.

Both AVK Holding A/S and American AVK actively participate in this collaboration. In Denmark, we host delegations on so-called fact-finding trips where we share insights into our role in Danish water supply and wastewater treatment. These insights are then adapted to the American context, with American AVK taking a leading role. The collaboration has significantly elevated the AVK brand in the U.S. market.

# OUR ENVIRONMENTAL AND CLIMATE EFFORT

## Our commitment to the environment and climate

We have already identified specific focus areas that require extra attention and will be prioritised:

- Reduction of CO<sub>2</sub> emissions according to Scope 1 and 2
- Mapping, tracking, and measuring the CO<sub>2</sub> emissions in our operations and per product
- Increasing the rate and use of green energy sources

Moving forward, we will implement processes and initiatives aimed at reducing energy consumption across both our own operations and those of our suppliers, thereby contributing to:

- Minimal energy consumption as a criterion during the design and production process
- Low energy consumption as a preferred criterion for investments
- A set level of our investments targeted towards energy savings
- Implementation of ISO 50001 in energy management by 2026
- Initiating Scope 3 data baseline in the coming year

Note: ISO definitions are given in the section 'AVK's ISO certifications'.

## Energy effort

### Tracking and measuring CO<sub>2</sub> emissions

At AVK, we aim to analyse, track, and measure our carbon footprint in relation to our products, processes, buildings, and value chains. We address both the CO<sub>2</sub> emission of operations and on individual products. This is in accordance with the UN SDG 12 on sustainable production.

We will begin by mapping the energy consumption of production processes across our manufacturing companies. This will be followed by an ongoing review and incremental

### Key highlights of 2023/24

- Three companies have maintained certification for the ISO 50001 Energy Management System
- Several additional Environmental Product Declarations (EPDs) have been achieved during this finance year and the AVK Group now has 15 EPDs, all approved by a third party
- The share of renewable green electricity has increased from 28.5% in 2022/23 to 31.75 % in 2023/24
- A global company car policy will be implemented over the next 3 years as cars are replaced where the use of electric vehicles (EVs) are possible due to availability of infrastructure for charging. The number of EVs in AVK has increased by 41%
- The number of ISO 14001 certifications has increased from 39 to 48 certificates

\* For further details see Environmental under Tables, comments, and accounting policies

### Future goals and activities

- We expect further implementation of ISO 14001 and ISO 50001 during the next years
- We will increase the number of EPDs to cover more of our product range
- We will install solar cell systems on additional manufacturing buildings
- We will implement a baseline calculation for Scope 3 for our larger EU companies in 2024/25
- We will continue to reduce water consumption, especially in countries with scarce water resources and AVK companies with high water consumption

improvements to individual processes, aimed at reducing both direct and indirect energy usage. The work will be conducted through local energy audits, which will enable us to define best practices and workflows for AVK companies. To ensure relevant implementation and retention of energy-improving initiatives, we will increase the share of certified companies according to the energy management system ISO 50001 in the coming years.

### Environmental Product Declaration

The demand for Environmental Product Declarations (EPDs) is driven by multiple factors, including customer requirements and an increasing focus on sustainability. Specifically, the construction and infrastructure

sectors are leading the demand for these declarations. Customers are seeking documentation of a product's environmental impact to make more sustainable choices. Four AVK companies have implemented processes to calculate CO<sub>2</sub> equivalents (CO<sub>2</sub>e) emissions across their value chain of the products. This process helps us as a company to integrate minimal energy consumption and CO<sub>2</sub> impact as criteria in design and production.

Furnes Jernstøperi and AVK International were the first companies in the AVK Group to create and receive third-party certification for an environmental product declaration (EPD). Since then, other companies have obtained EPDs. These declarations document the environmental impact of our products, including emissions



from transportation and manufacturing processes.

Companies within the AVK Group are currently preparing EPDs, and we will monitor global EPD projects moving forward. Starting in 2024/25, we will implement measures to track EPD availability on an ongoing basis. The number of EPDs with third-party approval continues to rise, and the AVK Group currently have 15 EPDs.

### Increased use of green energy sources

Green power and solar cells remain a focal point of our climate strategy to reduce our carbon footprint, especially in countries where the public energy supply is primarily based on a high proportion of fossil fuels.

Currently, the share of green power generated from renewable energy sources accounts for 31.75% of the AVK Group's total energy consumption. In our efforts to reduce CO<sub>2</sub> emissions, we will both purchase and produce green power ourselves. Some of our companies, such as Furnes Jernstøperi, AVK Armaturen, and Wouter Witzel EuroValve already use 100% certified green power.

The installation of solar cell systems at AVK companies is an ongoing effort, and it remains a key element of our climate strategy to equip our manufacturing sites with renewable energy solutions.

By the end of 2023/24, approximately 2.4% of our energy will be generated by our own installed solar cell systems. Overall, the share of green energy from solar cells continues to grow.

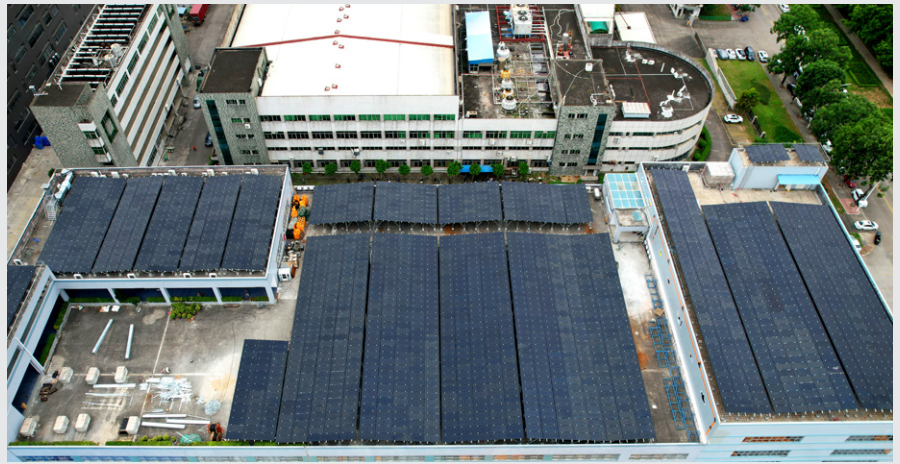
### Scope 3

A central objective for AVK is to establish a baseline for the Group's value chain emissions, also known as Scope 3 emissions.

Mapping Scope 3 is a large and complex task as our companies' value chains are diverse with great variation in the raw materials purchased and their carbon footprint. Therefore, we will strive to create a consistent approach in our Scope 3 data setup.

We will increase focus on AVK's total value chain emissions, Scope 3, and in 2024/25, we will define and calculate selected significant Scope 3 emissions based on a materiality assessment. Likewise, we will take necessary actions to reduce CO<sub>2</sub> emissions.

Mapping these emissions is a comprehensive task as we operate with multiple value chains



across our business divisions. Therefore, it is essential to ensure a consistent and robust approach.

As part of the project, our internal data systems will be upgraded to collect and report on Scope 3 emissions. The goal is for our larger EU companies to have a baseline calculation for Scope 3 ready by the end of 2024/25.

As previously described, we have launched a global initiative regarding Environmental Product Declarations (EPDs) to collect CO<sub>2</sub>e emissions calculations throughout the entire value chain of a given product. The decision to start working on EPDs before working on Scope 3 was partly made in response to requests from our customers.

### Electric vehicles as company cars

It is our ambition to reduce the total amount of environmentally harmful emissions, including CO<sub>2</sub> and particles from our car fleet. At the same time, we strive for an optimal operating economy for the car fleet.

In 2023/24, we have implemented a company car policy in Denmark. This means that from 2025, we will only use electric vehicles (EVs) as company cars. The policy has initially been implemented in our companies in Denmark, but it will subsequently be implemented in countries where the infrastructure for charging electric vehicles is in place. The policy will only apply to passenger cars.

This will allow us to gradually phase out passenger cars that use fossil fuels as current leases expire. By 2030, all AVK passenger cars that use fossil fuels in Denmark will be phased out. By the end of this financial year, we have 79 EVs globally, which is a 41% increase compared to 2022/23 when we had 56 EVs.

See Figure 1 on the following page.

Additionally, some companies within the AVK Group have installed charging stations for electric vehicles as well as electric bikes and electric scooters which is a growing trend both in Europe and Asia.

## CASE

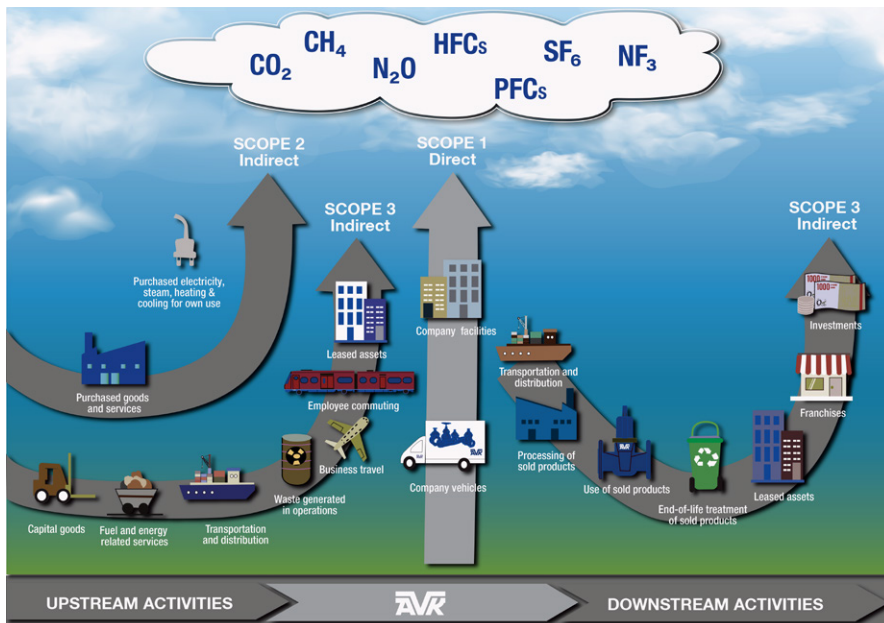
### AVK UK HARNESS SOLAR ENERGY

A year ago, a 600-panel solar cell system was installed on the roof of the AVK UK manufacturing and assembly site at Staveley, Chesterfield.

Solar power generation naturally fluctuates with the seasons and from year to year. Electricity production saw a significant increase starting in March as daylight hours extended. However, 2024 saw lower-than-average sunshine hours in the UK, with summer temperatures 1.55°C cooler than the long-term average. This stood in contrast to the record-breaking heat experienced across much of continental Europe. Despite these conditions, surplus electricity

was generated during months with longer daylight hours, contributing to a steady rise in the amount of electricity sold back to the grid. Based on average sunshine hours, the solar array is expected to boost generation by 5-7% in future years.

Revenue from selling surplus electricity helps offset the initial installation costs of the solar cell system. Additionally, it supports the procurement of the remaining electricity needed from carbon-neutral sources, further advancing sustainability goals.



well as the non-recycled waste. As we achieve a valid amount of data, we will start monitoring the handling and performance of the individual sites.

A large part of the iron used in our manufacturing comes from recycled cast iron. For example, at the AVK company, Furnes Jernstøperi, in Norway, 97% of the materials used in new products are made from recycled cast iron.

Our goal remains to ensure that over 65% of our waste is recycled and reused, with non-recyclable waste accounting for no more than 35% of our total waste volume by 2025.

To achieve this goal, we will continue to identify methods and processes to reduce waste and to reuse and recycle materials in our factories. It is our expectation that our work with Environmental Product Declarations (EPDs) will lead to the identification of new materials for recycling, both internally in the Group and in close co-operation with our suppliers.

## Other environmental and climate initiatives

Our approach to reducing our energy consumption also includes performing energy audits, switching to more energy-efficient equipment, and optimising operational processes. We continue to update LED lighting in all facilities and use programmable lighting and thermostats in offices and facilities. One way to do this is through energy audits where we collect best practices and identify innovative ways to save and reuse energy. When expanding manufacturing capacities and facilities, we carefully consider and include energy optimisation as a parameter when choosing solutions. A good example is at AVK Brasil where they have switched from gas powered forklifts to electric forklifts.

### Water

Water is primarily used as a resource in our pressure testing processes and for cleaning and sanitation purposes. We want to keep water consumption monitored and managed and to reduce wherever possible – for example through recycling in close circuits or similar initiatives.

In the coming years, we will focus on reducing water consumption. Particularly in countries with limited water resources and in AVK companies with high water usage.

## ISO 14001 – Environmental management

Our major manufacturing companies maintain a continuous focus on implementing and upholding the environmental management system ISO 14001. This system helps to ensure environmental policies, procedures, and routines. The number of ISO 14001 certifications has increased this year from 39 to 44.

As a Group, we are aware that some of our industrial manufacturing companies have resource-intensive manufacturing processes.

### Greenhouse Gas Protocol (GHG)

The Greenhouse Gas Protocol (GHG) is the leading international standard for how CO<sub>2</sub> emissions are measured and reported as CO<sub>2</sub> equivalents (CO<sub>2</sub>e). You measure according to three types of emissions, referred to as Scope 1, 2, and 3.

#### Scope 1

Direct emissions from activities that the company itself controls, i.e. emissions from own vehicles and own heat and energy manufacturing facilities.

#### Scope 2

Indirect emissions from supplied energy, including electricity and district heating. The emission happens elsewhere, e.g. at local heat and power stations or district heating sites.

#### Scope 3

Indirect emissions from the company's value chain.

Source: Klimakompasset

We will continuously strive to minimise our energy consumption, expand the use of renewable energy sources, promote recycling of materials and products, and manage waste in an environmentally responsible way. Our ongoing efforts are documented through data collection and continuously set new targets for improvement.

## Recycling and circularity

In our manufacturing sites and foundries, equipped with ISO 14001 certified environmental management systems, we have implemented waste reduction and recycling programmes. These initiatives focus on sorting waste into appropriate fractions and ensuring efficient recycling processes.

Internally, we have initiated a data collection project to get the full overview of the total amount of waste in our Group. This includes both the waste that is reused and recycled as

### Electric cars

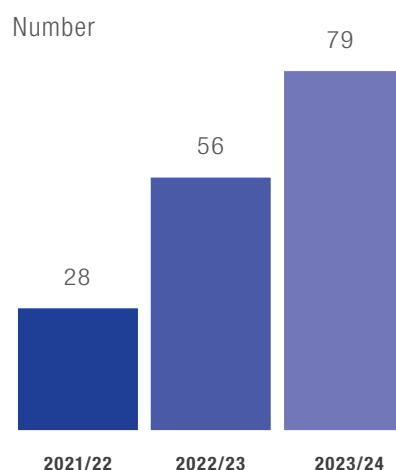


Figure 1

## REFURBISHMENT OF VALVES AS A BUSINESS CASE

In addition to recycling the waste generated in the manufacturing and to use recycled materials in our cast iron and plastic production, Glenfield Invicta, part of the AVK Group, refurbishes old Glenfield valves that would otherwise be scrapped.

Glenfield Invicta has been providing valve, penstock, and engineering site solutions across a wide range of water, wastewater, and non-utility infrastructure projects for over 170 years. Some of the valves installed through the past many years could use a refurbishment. A case of such refurbishment is the two 24" gate valves from Munnoch Reservoir.

Munnoch Reservoir is a small 25.8ha/63 acres service reservoir located in Scotland. The reservoir was decommissioned in 2008. In 2022, work on the site was commissioned to lower water levels and rewild the surrounding area. The reservoir now acts as a flood prevention measure.

When the conservation works were being undertaken, two 24" gate valves were found hidden in dense undergrowth. Although nobody can say for sure, it is possible that the valves were removed when the reservoir was decommissioned in 2008. The original use of the valves is likely to have been scour protection or reservoir drawdown.

### Scope of works

Scottish Water, a waterworks supplying more than 5 million customers with drinking water in Scotland, contacted Glenfield Invicta to check if the valves could be refurbished. The valves were delivered to Glenfield Invicta's manufacturing site in Kilmarnock where they were cleaned, disassembled, and all components were subjected to a detailed condition assessment.

Whilst the valves carried the Glenfield markings of that era, there was no mark or date on the casting to identify when it had been manufactured. However, the flange configuration and the use of coach-type bolts indicated that the valves were probably the originals installed when Munnoch Reservoir was built in 1902.

Once cleaned, the valves were disassembled into their component parts which, on visual inspection alone, appeared to be in good overall condition. Glenfield Invicta's engineers then completed a detailed condition assessment. Scottish Water agreed with the report's suggestion to refurbish the valves and gearboxes because it was a cost-effective option.

The refurbishment process took six weeks. Firstly, the valves' castings were shotblasted and spray coated with repeated protective layers of paint that is used on our current valve range, and the seat rings were cleaned manually.

During reassembly, the original fasteners were replaced with new, as were the non-metallic seals and packing.

### The benefits of refurbishing legacy valves

Benefits of valve refurbishment, when compared to new replacement valves, include carbon emission savings from the casting process and transport of the components, lower costs, and faster turnaround. Returning a refurbished valve to its original location and function also ensure that the dynamics of the pipework/system configuration remain unchanged.

In recent years, Glenfield Invicta refurbished around 10 valves annually. However, now there is a growing number of refurbishment inquiries from the UK market.



# OUR SOCIAL RESPONSIBILITY

## Key highlights of 2023/24

- The number of ISO 45001 certificates on management of occupational health and safety has increased from 31 to 33
- The 2023/24 goal of a Lost Time Accident Frequency Rate (LTAFR) below 5.0 has been reached with a rate of 4.63
- In 2023, AVK established the People & Leadership function which focuses on inclusion and diversity, amongst other leading priorities
- During the financial year of 2023/24, we have launched a succession planning process to structure our approach to talent management and leadership development
- We have stated developing a Code of Conduct for employees. This will supplement the already existing Code of Conduct for external partners

## Future goals and activities

- We expect further implementation of ISO 45001 in 2024/25
- We will intensify our safety work to reach our target of an LTAFR of less than 3.0 by 2030
- We will set global measurements of sick leave and monitor the status
- We will implement our Code of Conduct for employees in all our companies

\* For further details see Social under Tables, comments, and accounting policies

## Our employees

As an international Group, we take our social responsibility seriously. This means that we provide attractive jobs and want to create a solid framework for employee development and well-being. Our employee handbook and policies aim to set the guidelines and provide reassurance for employees to better understand their opportunities, rights, and obligations.

The AVK Group has over 5,300 employees working in our companies across the world. As a result, we are characterised by a high degree of diversity, and our employees represent many different professional functions and backgrounds. We consider diversity to be a strength, and we respect and value everyone regardless of age, gender, ethnicity, religious beliefs, or sexual orientation.

Our employees are an invaluable resource. Since we work with innovative solutions and complex products for many different types of customers, and very often in both an international and local regulated context, it places great demands on our overall competencies. This requires close collaboration throughout the organisation and continuous development of employees, both professionally and personally. Therefore, maintaining a high level of commitment to employee well-being as well as ongoing education and training remains a priority for us.

As we want to focus further on the development of our employees, we established an AVK Group People & Leadership function in AVK Holding A/S in 2023. This function will set the direction within this field through several global initiatives. One of the initiatives is the

launch of “The AVK Way of Leadership” which, in addition to focusing on our five core values, also lists our seven leadership principles. These principles will guide how we practice good leadership in the AVK Group. “The AVK Way of Leadership” will form the basis for our future work with succession planning, leadership development, talent management, recruitment and much more.

## Occupational health and safety

Workplace safety has always been a high priority in AVK, and we are committed to taking good care of our employees. This is achieved by implementing relevant safety processes and necessary safety equipment at and around the workplace.

## Management systems and work environment organisations

In the largest of our manufacturing companies, the internationally recognised occupational health and safety standard, ISO 45001, has been implemented to ensure and improve employee health and safety. The aim is to support our systematic efforts to maintain a positive work environment while ensuring ongoing evaluation and improvement.

The ISO 45001 occupational health and safety management system ensures, through established procedures and processes, that our management remains focused on minimising occupational accidents and their negative consequences. This happens through causal analysis and the establishment of action plans on security as well as ongoing improvement activities.

At both office and manufacturing facilities, internal work environment organisations perform local evaluations and improvement throughout the company to maintain attention to security and reduce the number of accidents.

The number of ISO 45001 in management of occupational health and safety has increased this year from 31 to 33.

### Safety First

Several AVK companies operate within the process industry or involve varying degrees of manual labour, making workplace health and safety a particularly critical focus in these areas. The processes are not considered high risk, but accidents can occur. Therefore, Safety First is a priority at AVK.

Through various initiatives, we want to maintain and improve security behaviour among our managers and employees. Our goal is to ensure that no one takes unnecessary risks and that everyone reports unsafe conditions, unsafe actions, and near-miss incidents, actively contributing to accident prevention.

In workshops, we focus on how to proactively identify safety risks, developing a strong safety culture, and implementing measures in our factories to enhance employee safety.

Locally, we have focused on the implementation of frequent safety walks as part of a proactive approach to safety. Some of our latest initiatives are safety walks that focus on communication, training, and visibility of safety and improvements.

It is an important parameter to learn from previous accidents. Therefore, we use SQDIPP

boards (Safety, Quality, Delivery, Inventory, Productivity and People) in the ongoing follow-up.

We continuously work with selected companies within the AVK Group to implement local processes such as ensuring registration of near-misses and unsafe acts. Ultimately, to create the right level of safety.

In 2022/23, our focus has been on implementing preventive safety activities, and our dedicated efforts within this area will continue in 2024/25.

### Safety First

“Safety First” is a programme designed by AVK Holding as a way of working with workplace safety for the individual companies within the AVK Group. The programme focuses on improving workplace safety by reducing accidents and enhancing the safety culture within the organisations.

Through targeted workshops, the Safety First programme promotes proactive identification, reporting of risks, and ensuring employees are engaged in maintaining a safe work environment.

The programme includes analysing the current safety situation, verifying safety activities, and collecting staff input on risks and unsafe practices.

Via continuous safety improvement, the goal is to establish a strong safety culture, minimise accidents, and reduce absenteeism caused by injuries.

### Work environment

Everyone deserves a safe workplace, and we remain dedicated to our goal of minimising accidents. In the coming year, we will focus on reducing the frequency rate of occupational accidents. Our goal is to achieve an accident rate of Lost Time Accident Frequency Rate (LTAFR) below 3 by 2030, and efforts and improvements are still needed to reach this ambitious goal. To reach this goal, security work will be further intensified during 2023/24 and in the following years.

### Sick leave

To strengthen our focus on global well-being, we will begin collecting standardised global sickness absence data starting in 2024/25. We anticipate that this data will enable us to set goals and share targeted global initiatives in this area moving forward.

**Lost Time Accident (LTA)** is an injury sustained by an employee that results in loss of productive work in the form of absenteeism or tardiness (> 8 hours of absence).

**Lost Time Accident Frequency Rate (LTAFR)** is the number of LTAs that occur in a workplace per one million hours worked. An LTAFR of 7 shows that there have been seven cases of lost time due to injury in a workplace for every one-million hour worked.

### Safe physical work environment and improved ergonomic

Ensuring an economically efficient and safe physical work environment is a top priority for AVK when planning and establishing new or refurbished manufacturing and warehouse facilities.

At AVK, we prioritise minimising repetitive tasks and reducing injury risks by implementing solutions such as overhead cranes for lifting, height-adjustable tables in manufacturing areas, warehouses, and offices, as well as other measures to limit monotonous work. While we always comply with local regulations, AVK adheres to its own set of standards. For instance, we install overhead cranes when handling items weighing more than 15 kilograms. As a rule, the stricter of either local regulations or AVK standards must always be followed.

The AVK Group Project Department assists in the process of planning and setting up new manufacturing and warehouse facilities and finds solutions that can aid the employees in their work. Likewise, good work procedures are incorporated into our warehouse management system.

### Employee well-being

The AVK Group operates with a decentralised structure, comprising many companies worldwide, each managing its own business. As a result, a diverse range of initiatives is implemented across our companies to enhance employee well-being. This ranges from creating meaningful and interesting tasks, well-being policies, mental health promotion activities, employee benefits of various kinds, sports activities, team building events, and social activities arranged by staff associations. In addition, we actively participate in charitable giving with a diverse focus, supporting a wide range of causes that align with our values and demonstrate our commitment to making a positive impact in the community.

**FOCUS ON OCCUPATIONAL HEALTH AND SAFETY**

In January 2024, AVK Belgium moved into their new location in Lokeren, Belgium. As the previous facility became too small, a new location was identified. Only, the new location needed to be updated to meet the requirements of AVK Belgium. When designing and upgrading the new facility, AVK Belgium joined forces with the AVK Group Project Department to ensure the focus on improving employee safety, comfort, and ergonomics. At AVK, we believe that a well-designed workspace boosts well-being as well as productivity.

In the offices, we have installed height-adjustable desks, allowing employees to alternate between sitting and standing, which

helps alleviate the strain of prolonged sitting. Additionally, the entire office block is heated by underfloor heating powered by heat-pumps, ensuring a comfortable indoor environment.

In the warehouse and assembly areas, we have installed six overhead cranes, one for each workstation, along with an ergonomic screw system for flange connections. These upgrades significantly reduce the need for manual lifting and lower the risk of injuries.

Safety is a top priority. We have equipped our forklifts and reach trucks with maintenance-free NexSys Pure batteries that pose no safety risks to employees. In addition, all refrigerants in the HBC controller are stored outside the building, ensuring the safety of those inside in case of a leak. These measures are all part

of our commitment to enhancing workplace safety.

To ensure a healthy indoor environment at the facility, our climate control and ventilation systems constantly monitor the air quality. Additionally, to promote a healthy lifestyle and support the sustainability goals, we have installed 16 charging stations for electric bikes in a dedicated bicycle shed. To further encourage cycling to work, we offer a wide range of lease bikes to our employees.

By focusing on ergonomics, safety, and comfort, AVK Belgium aims to provide a safe, healthy, and productive environment for all employees.

AVK is a family-owned Group with strong values and traditions dating back to the founding of the company. Based on our five core values; quality, innovation, reliability, sustainability, and customer service, we want to create the best framework for employee development and well-being. Many of our employees celebrate 25 or even 40 years with us, which we see as a testament to being more than just a workplace.

**Human rights**

We adhere to the UN declaration of human rights, including equal rights regardless of gender, religion, or political views, as a core aspect of our commitment to social responsibility. This commitment is reflected internally in our Code of Conduct for employees.

In 2023/24, in response to increasing customer demands and the upcoming ESRS requirements, we undertook a comprehensive update of our internal Code of Conduct and global policies. Several sections, including the section on fundamental human rights, such as the prohibition of child and forced labour and the right to collective bargaining, have been clarified and expanded with new and updated policies.

The revised Code of Conduct will be implemented globally in 2024/25.

**Diversity**

At AVK, the recruitment and appointment of managers are based on the principle of selecting the most qualified candidate for the

role. However, the technical and industrial nature of our industry has historically been male-dominated, resulting in a gender imbalance both at the management level and among employees overall. Recognising this, we are committed to making our company more appealing to women and promoting greater gender diversity.

In the coming years, we will intensify our focus on inclusion and diversity. The responsibility is embedded into all senior management positions and is anchored in the newly established People

& Leadership function. During the financial year of 2023/24, we launched a succession planning process to structure our approach to talent management and leadership development.

At the same time, we will improve our diversity data. Initially, our measurements will focus primarily on the gender composition of the management team. However, we will adopt a broader understanding of diversity that include age, seniority, nationality, and other relevant parameters for which we will begin data collection.

**FOCUSED WORK WITH INCLUSION AND DIVERSITY CREATES GREAT VALUE**

Welcoming new colleagues from different countries can indeed bring significant benefits to a company. The AVK company Furnes Jernstøperi in Norway has recognised this, which is why they received the annual Integration Award from Stange Kommune, the local municipality. This award acknowledges their efforts in promoting integration and confirms the value of their long-term commitment to creating an inclusive work environment.

The value of investing in diversity, communication and unity is evident. Through internal Norwegian courses and training in the foundry trade, the aim is to give all the employees the opportunity to participate actively in the company's development.

The Integration Award is an annual award that honours individuals, organisations or companies that have made significant contributions to promoting the inclusion and integration of minority language and multicultural individuals in the workforce and local community. This award has been presented every year since 2007.

Today, Furnes Jernstøperi consists of 137 employees, of which 38% come from countries outside Norway, and they have employees from 13 different countries.

The award inspires us to keep investing in diversity and inclusion. We strongly believe that by creating a workplace where everyone feels seen and heard, we build a stronger and more forward-thinking company.



## CASE

### **LAURA, A COMMITTED INDUSTRIAL TECHNICIAN**

In June 2024, Laura Husted Andersen, a newly graduated industrial technician, was honoured with the Regional Apprentice Award from Dansk Industri (The Confederation of Danish Industry).

Laura completed her apprenticeship with both AVK International A/S and the Tech Department at AVK Holding A/S. Her nomination highlighted Laura's strong commitment both at AVK and during her time at school, where she consistently performed tasks with exceptional care and a keen focus on quality. In addition, she is a well-liked colleague who has always been ready to welcome and help the new apprentices at AVK.

Laura is an excellent role model who effectively shares her passion for the field with other young people. She actively participates in educational fairs and events, promoting both the industrial technician profession and the opportunities available at AVK. At the same time, she is a young woman in a male-dominated field, and in this way, she challenges traditionally gender roles, inspiring others to pursue careers in similar areas.



As women are underrepresented in leadership positions within the AVK Group, we have focused on highlighting women in our industry in connection with International Women's Day over the past few years. On this day, we share stories through internal and external media that showcase the contribution of several female employees across different companies in the AVK Group.

For more information on gender balance in management, please see the "Report on unequal gender representation in management" in the section on "Policies and ESG reporting".

## Education

We strive towards achieving a culture of knowledge by making it easy for our employees to update their knowledge and strengthen their competencies. We do this to help them feel equipped to perform their job and act according to the values of the AVK Group. Therefore, we have developed an e-learning universe for all employees, the AVK Academy.

The AVK Academy is an increasingly important part of employee training. It is part of the onboarding process for new hires and ongoing employee training. Furthermore, it offers management a platform to deliver online training to a wide group of employees. This includes mandatory courses, such as IT security, which all employees with PC access are required to complete. And as mentioned in the section about occupational health and safety, all manufacturing employees must complete a safety training module to avoid accidents.

Additionally, new key employees in the Group participate in an in-depth introduction course to provide a thorough insight into AVK and our expectations to them as managers.

### Educating the next generation

We do not only focus on the education of our employees. We believe it is our responsibility to educate the next generation of employees and partners and to create a forum where we can share the latest knowledge, technologies, and trends within the water industry. Likewise, we always have trainees and student workers among our employees.

For the past few years, AVK Holding has participated in the Danish nationwide campaign "Girls' Day in Science", now "Science Day", which aims to inspire more young people to choose an education in the field of science, technology, engineering, or mathematics (STEM education) and ensure more diversity in education choices and in Danish workplaces. As part of the campaign, we invite local students to a one-day event at the AVK Academy & Visitor Centre to spark their interest in our industry and introduce them to a variety of job opportunities.

### Bachelor of Business and Water Technology

The water industry is experiencing a growing demand for sales people and advisors with expertise in business and the latest water technology. For years, AVK Holding has advocated for a more business-oriented education that highlights the opportunities within the water industry and emphasises understanding the various business cases surrounding water's journey through society. We aim to inspire young people to take an interest in good water infrastructure and contribute to the changes needed for better and more efficient water management.

In collaboration with Aarhus Water and Aarhus Business Academy, we have been actively involved in the development of the new bachelor's degree in Business and Water Technology, from the initial concept

to ministerial approval. In August 2024, the programme welcomed its second cohort of students.

### Advanced Water Cycle Management Course

Since 2019, AVK Holding has participated in the summer school course "Advanced Water Cycle Management" alongside other companies and utilities from Eastern Jutland, Denmark, all of which contribute their knowledge and expertise. This is an international course designed to upgrade the students' skills within water management, while also improving knowledge and giving a wider understanding of water resource management, water distribution, wastewater treatment, and recycling of resources.

The course is offered by the Centre for Water Technology at Aarhus University, Denmark, and counts for 5 ECTS credits. This year, 45 participants of 14 different nationalities participated.

Interest has been shown from countries such as India, Morocco, and Ukraine to host local versions of the Advanced Water Cycle Management Course, and the city government of Dubai has been inspired and now intent to enter into a cooperation agreement to set up a similar education.

Read more about the Danish-Middle Eastern education collaboration in the chapter "Our partnerships for a sustainable development".





## Charity and humanitarian efforts

The AVK Group is involved in various kinds of charity, handled locally by both the management and through employee involvement. This social responsibility is reflected locally, nationally, and internationally through humanitarian work.

### Local commitment and support to charity organisations

As a global Group, it is impossible to highlight all the charitable initiatives undertaken by our individual companies, but a selection of key initiatives is detailed below.

At AVK Holding, we support numerous associations and initiatives that make a difference within health, community spirit, art, culture, and sports. We support both local sports clubs, such as Galten Forenede Sportsklubber, and elite sports teams, including Skanderborg AGF Handball for men and Skanderborg Handball for women and youth.

The AVK Group also supports many charities such as cancer societies, the Danish Heart Foundation, the Danish Blind Society, the Make-a-Wish Foundation, Families with cancer-affected children, Danish Hospital Clowns, and the World Wildlife Fund WWF.

We also contribute to foundations that support individuals with mental disabilities or families in need, helping them celebrate their child's birthday or cover expenses for tuition and schoolbooks.

Other forms of support include donations of food, toiletries, or similar essentials for the homeless or those in need. Finally, we support parasports and associations for individuals with disabilities, participate in local and beach clean-up initiatives, and take part in donation events.

Additionally, we take part in various national fundraising campaigns, such as "Danmarks Indsamling," a televised event where AVK contributes DKK 100,000. Alongside other companies and private individuals, we support the efforts of 12 charitable organisations working to aid the world's most vulnerable populations.

### AVK UK PARTNERS WITH AQUABOX TO PROVIDE CLEAN WATER AND AID

Over the spring and summer months, each AVK UK based company has organised a Walk4Water and associated communal activities. As well as bringing colleagues together, Walk4Water has raised funds for the amazing charity, Aquabox.

Whenever a natural disaster occurs such as an earthquake or flooding, or in times of armed conflict, displaced people often have little choice other than to collect water from whatever local sources they can find, such as streams, rivers, and random well. Such water is often contaminated, unsafe to drink, and carries the risk of water-borne diseases like cholera.

In the UK, the population are extremely privileged in having a constant supply of treated potable water, and it can be extremely difficult to imagine the trauma and difficulties faced by those in need of water. The last indigenous case of cholera in England, for example, was in 1893. That is over 130 years ago!

Since it was established back in 1992, Aquabox has despatched over 125,000 water filters to disaster areas and conflict zones in over 50 different countries. It is estimated that the filters have converted 2bn litres of contaminated water into safe, clean drinking water.



# OUR GOVERNANCE

## ESG management structure at AVK

As a global company, we face growing demands related to sustainability and ESG responsibilities which require strengthening our processes and procedures for data collection and documentation. Sustainability and ESG are, and will continue to be, a focus. On 1 February 2024, a dedicated central Group Sustainability & ESG function was established, reporting directly to AVK Holding's top management.

With the establishment of this new ESG function, AVK has allocated additional resources to ensure the organisation is prepared and future-proofed for compliance with evolving ESG regulations and reporting standards, including customer expectations and the EU Sustainability Directive (CSRD).

## Anti-corruption

AVK maintains a zero-tolerance policy against any form of corruption, extortion, or bribery. Such actions are regarded as gross misconduct and may lead to severe disciplinary actions.

Upon employment, it is standard practice for the general managers of all Group companies to sign our compliance policy which requires compliance with national and international anti-corruption and anti-bribery laws. This policy is reviewed annually during the board meetings of all companies to ensure that it remains a key point of attention in day-to-day business operations. Ultimately, these practices should ensure that we avoid breaches.

## Supplier management and collaboration

During the financial year 2023/24, we have faced challenges with longer freight times between Asia and Europe and subsequent higher prices on freight due to the situation in the Red Sea. This has resulted in increased

### Key highlights of 2023/24

- A central Group Sustainability & ESG function has been established
- 53 supplier audits have been conducted in 2023/24 as part of the 2023/24 audit plan
- A programme has been initiated to ensure the level of environmental certification for metal foundries in China
- Ongoing revision of our Code of Conduct for suppliers

\* For further details see Governance under Tables, comments, and accounting policies

### Future goals and activities

- We will develop an AVK Sustainability Roadmap based on the results of our double materiality assessment in 2024/25
- We will focus on our Code of Conduct for suppliers and initiate an internal audit process to ensure compliance in 2024/25
- We will review our Business Ethics Policy and Anti-Corruption and Anti-Bribery Policy in 2024/25

attention to supplier selection at AVK. Our top priority has been to live up to agreements and ensure timely delivery to our customers.

Part of this work has required an extra effort to ensure that both existing and new suppliers have been able to deliver while complying with agreed requirements and standards.

Despite the various challenges in our value chain, we have managed to deliver to our customers and integrate new suppliers. These suppliers have been subject to our normal approval processes, including supplier audits, to ensure responsible behaviour.

### Code of Conduct

With the specified supplier requirements and the Code of Conduct, we want to make sure our suppliers are aware of and work on decreasing their environmental impact, that they respect human rights, and that they do not use forced labour or child labour. AVK's Code of Conduct is integrated into all purchase agreements with suppliers, it is part of our standard terms and conditions for purchase, and it must be accepted for all purchase orders.

If an AVK supplier or collaborator does not comply with our Code of Conduct, we will

initially notify them of non-compliance and initiate a dialogue to improve. In case of repeated non-compliance against our Code of Conduct and it is deemed that compliance is unlikely, we will move to terminate the collaboration with the supplier.

We are in the process of revising our supplier Code and Conduct, including process and documentation. This is to increase transparency in our supply chain and to ensure that we comply with relevant legislation and international standards.

### Supplier selection

We only work with suppliers that guarantee compliance with all legislation on safety, environmental, climate, and human rights. Additionally, all selected suppliers must comply with our ethical standard outlined in the AVK Code of Conduct.

We work continuously with registration, control, follow-up, and further development of the supplier collaboration to ensure compliance with the Group's policies, including the Code of Conduct.



### Auditing

Ongoing supplier audits are conducted on-site according to a set programme. The frequency of audits is based on an internal country and product-based risk assessment. Risk management is documented and managed in our internal ISO 9001 documentation.

Internal AVK auditors conduct supplier audits and consistently verify the ISO and third-party certifications required by our standards. We use a checklist that covers various topics and areas, which we continuously improve. We pay particular attention to countries with an increased risk of violating social and environmental responsibility.

In 2023/24, the global AVK purchasing organisation initiated a new programme to ensure the level of environmental certification for metal foundries in China. The purpose of the programme is to ensure that suppliers, managed by the AVK Group, have the minimum certification level. This helps minimise environmental impact while reducing supply chain risks, such as potential closures by local or national governments due to lack of certifications.

In the future, all existing foundries will be required to meet or exceed specific national standards. Additionally, any new potential supplier must fulfil the minimum requirements to qualify as an AVK supplier.

## AVK Group Policies

AVK has established Group Policies outlining how individual companies should align with our sustainability efforts across environmental, social, and governance areas.

To ensure that the Business Ethics Policy and Anti-Corruption and Anti-bribery Policy match both our Code of Conduct for employees as

well as our Code of Conduct for suppliers, the two policies will be revised and shared with the companies in the AVK Group.

## AVK's ISO certifications

AVK has been working with ISO since 1990 where we achieved our first ISO 9001 certification. Since then, ISO documentation has been integrated into our QEMS (Quality and Environmental Management System).

The ESG data overview at the end of the report provides a summary of how many of our manufacturing companies hold each certification. This overview is based on the certification descriptions provided by ISO.org, the International Organisation for Standardisation.

### ISO 9001

ISO 9001 is a management tool ensuring that organisations of all sizes and sectors improve their performance, meet customer expectations, and demonstrate their commitment to quality. Its requirements define how to establish, implement, maintain, and continually improve a quality management system (QMS).

### ISO 29001

ISO 29001 defines quality management system requirements for product and service supply organisations to the petroleum, petrochemical, and natural gas industries. This document is written as a supplement to ISO 9001. The supplementary requirements and guidance to ISO 9001 have been developed to manage supply chain risks and opportunities associated with the petroleum, petrochemical, and natural gas industries and to provide a framework for aligning requirements with complementary standards employed within the industries.

Improper handling of explosives and gases can lead to serious consequences for both people

and the environment. For this reason, AVK has chosen this ISO superstructure (of additional requirements) in our supply chain for the oil and gas industry to demonstrate a high-quality level and proper management of the company's processes.

### ISO 14001

ISO 14001 is a management tool within environmental management which acts as the framework for the environmental performance. By adhering to this standard, we can ensure that we are taking proactive measures to minimise our environmental footprint, comply with relevant legal requirements, and achieve our environmental objectives. The framework encompasses various aspects, from resource usage and waste management to monitoring environmental performance and involving stakeholders in environmental commitments.

### ISO 45001

ISO 45001 is an international standard that specifies requirements for an occupational health and safety (OH&S) management system. It provides a framework for organisations to manage risks and improve OH&S performance.

ISO 45001 utilises the Plan-Do-Check-Act methodology to systematically manage health and safety risks. It applies to organisations of all sizes and can be integrated with other ISO management system standards.

### ISO 50001

ISO 50001 is an international standard for energy management. The purpose of ISO 50001 is to specify requirements for establishing, implementing, maintaining, and improving an energy management system (EnMS). The intended outcome is to enable an organisation to follow a systematic approach in achieving continual improvement of energy performance and the EnMS.



# ESG KEY FIGURES – TABLES, COMMENTS, AND ACCOUNTING POLICIES

The data compiled in this report is from the financial year 2023/24 and include activities from the AVK Group. The report details initiatives, any new initiatives launched, and the results we have achieved over the past year. This is part of the AVK Group's annual report for 2023/24 which covers a mandatory section on social responsibility, gender balance in management, and data ethical policy.



# ENVIRONMENTAL

**Table 1: Environmental data, results**

	Unit	Water	Industry	Advanced	AVK Group 2023/24	2023/24 Without acquisitions	AVK Group 2022/23	Development %	Description (2023/24 figures)
CO <sub>2</sub> e, Scope 1	Tonnes	12,430	1,265	608	14,748	12,664	10,218	44.33 (23.94*)	Direct emissions from burning of e.g., natural gas, oil, and petrol. *Development % without acquisitions.
	Tonnes CO <sub>2</sub> per DKKm (turnover)	2.00	0.83	0.57	1.63	1.57	1.29	26.36	
CO <sub>2</sub> e, Scope 2	Local based Tonnes	16,393	1,499	9,063	27,620	26,946	23,254	18.78	Indirect emissions from purchase of energy, e.g. electricity and district heating.
	Marked based Tonnes	16,871	1,265	16,656	36,229	35,681	33,588	7.86	
	Marked based tonnes CO <sub>2</sub> per DKKm (turnover)	2.71	0.82	15.71	4.01	4.43	4.29	-6.53	
Energy consumption (Electricity)	MWh	56,737	2,391	40,002	104,032	100,261	91,508	13.69	Of these, 33,038 MWh (31.75% ↑) derive from renewable energy sources with certificate and own solar cell systems.
	MWh per DKKm (turnover)	9.14	1.56	37.73	11.52	12.45	11.52	0.04	
Heat consumption (District heating)	MWh	2,151	0	520	2,966	1,305	940	215.53	
	MWh per DKKm (turnover)	0.34	0	0.49	0.33	0.16	0.12	173.81	
Heat consumption (Natural gas)	M <sup>3</sup>	3,826,114	465,775	155,641	4,557,320	3,615,028	3,198,366	42.49	Of these, 183,865 M3 (4% ↑) derive from biogas.
	M <sup>3</sup> per DKKm (turnover)	616.81	304.22	146.83	504.85	448.79	402.77	25.35	
Water consumption	M <sup>3</sup>	152,679	11,134	36,420	206,088	194,547	166,948	23.44	
	M <sup>3</sup> per DKKm (turnover)	24.61	7.27	34.35	22.83	24.15	21.02	8.61	
ISO 14001-certifications	Number	26	11	7	44		39	14.71	AVK consists of 108 production and sales companies.
ISO 50001-certifications	Number	1	1	1	3		3	0	AVK consists of 108 production and sales companies.
EPD certification	Number	14	0	1	15		1	1400	Applicable for all AVK production companies.

\* We have a few companies outside the three mentioned business segments – these companies are included in Total AVK Group.

# Comments to Environmental

All figures are based on total consumption for all companies.

## Greenhouse gas emissions and recalculation of CO<sub>2</sub>e emissions

For the past five years, we have measured Scope 1 and Scope 2 emissions in accordance with the Greenhouse Gas Protocol (GHG). Finding the method for calculating CO<sub>2</sub>e emissions is an ongoing process, and for some locations, we previously had to rely on best estimates due to the unavailability of specific data or accurate emission factors.

This year's Scope 1 and Scope 2 emissions have been calculated using international standards, resulting in an observed upward trend in reported CO<sub>2</sub>e emissions. To ensure consistency, we have also recalculated the 2022/23 results using updated global emission factors.

Some countries still depend on coal to produce electricity and heating, which cause increasing CO<sub>2</sub>e emission factors. Our focus on local production combined with an increased dependence on coal due to geopolitical instability is the reason why AVK has experienced an increase in Scope 1 and Scope 2 CO<sub>2</sub>e emissions.

In 2023, Scope 1 CO<sub>2</sub>e emissions increased in some countries due to higher energy consumption driven by a colder winter and continued reliance on fossil fuels and gas.

The total Scope 2 CO<sub>2</sub>e impact (measured in tonnes) has increased, primarily due to acquisitions and higher energy-related emissions.

Emissions data from newly acquired companies has been incorporated into the 2023/24

## Scope 1 - CO<sub>2</sub> emissions

Tonnes CO<sub>2</sub> per DKK million (turnover)

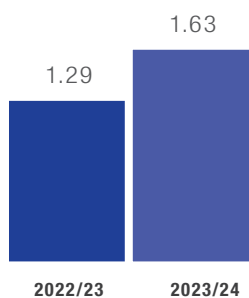


Figure 2

figures, but was not included in the 2022/23 figures. To compare 2023/24 figures with last year, 2023/24 figures without acquisitions have been included in Table 1.

**Scope 1** emissions increased in the financial year 2023/24, driven primarily by acquisitions, fossil fuels, and a significant rise in natural gas consumption for heating. To address this, we are actively pursuing a global transition from gas to low-energy solutions, including the implementation of heat pumps.

**Scope 2** emissions have increased slightly, partly due to acquisitions. We remain committed to increasing our procurement of certified renewable energy, expanding self-generated electricity through solar cell systems, and optimising energy efficiency across our operations.

The overall CO<sub>2</sub> intensity, measured as the emissions intensity, reflects mixed trends. The Scope 1 index increased from 1.29 to 1.63, while the Scope 2 index decreased from 4.29 to 4.01.

See Figure 2 and Figure 3.

## Scope 2 - CO<sub>2</sub> emissions

Tonnes CO<sub>2</sub> per DKK million (turnover)

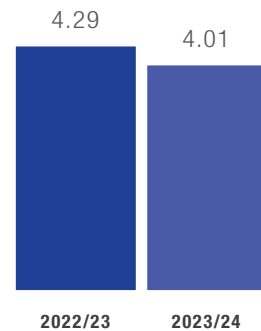


Figure 3

## Energy consumption

The table and charts below show the AVK Group's electricity consumption in the last four years.

Our total electricity consumption has increased in 2023/24, with the overall electricity index showing a slight increase compared to last year.

This increase in total energy consumption is primarily due to acquisitions. Data from acquired companies is integrated in 2023/24 accounts.

## Environmental data (consumption) - Electricity

MWh per DKK million (turnover)

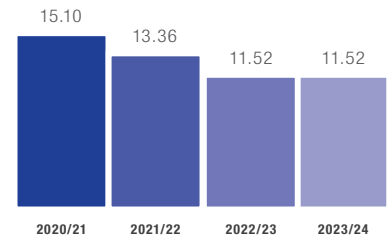


Figure 4

## Environmental data (consumption) - Water

M<sup>3</sup> per DKK million (turnover)

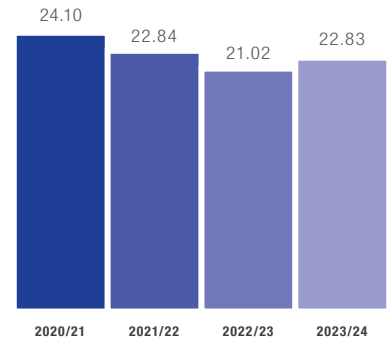


Figure 5

31.75% of our total energy consumption is sourced from renewables, supported by certificates of origin and our own solar cell systems.

## Water consumption

The total water consumption has increased, partly due to acquisitions. Additionally, some AVK companies have reported higher water usage than last year.

The overall water consumption index shows an increase of 8.61% compared to last year. We remain committed to minimising water consumption, prioritising efforts on companies with the highest usage levels relative to their total turnover in DKKm.

See Figure 4 and Figure 5

# Accounting policies (E)

## Greenhouse gas emissions

Reporting of greenhouse gas emissions is based on the GHG Protocol. The reporting follows the GHG Protocol's division into Scope 1 and Scope 2. Scope 3 emissions are not yet included in group-level reporting.

The reporting includes emissions of greenhouse gases specified in the GHG Protocol such as carbon dioxide, methane, nitrous oxide, HFCs,

and others. These are reported together in CO<sub>2</sub> equivalents (CO<sub>2</sub>e).

**Scope 1** covers all direct emissions. These are greenhouse gas emissions associated with the burning of fossil fuels such as gas, diesel or the like. The figures are calculated based on data from purchases and consumption.

Consumption figures are calculated by multiplying usage data with the relevant emission factors. Company cars are included in Scope 1 emissions if they are owned or leased. The companies directly collect fuel consumption data.

For hybrid and electric vehicles, electricity consumption is collected and multiplied by the emission factors for the country where the car is registered. This is then included in Scope 2 emissions.

This is not yet reported as a separate entry but will be implemented starting with the 2024/25 financial statements. Registered electric vehicles are only 100% electric vehicles.

**Scope 2** covers indirect emissions from the consumption of electricity, district heating, or cooling purchased from external providers.

Consumption data from companies is collected from energy bills or meters to calculate energy usage.

Reporting follows both location-based and market-based CO<sub>2</sub>e accounting methods. Location-based calculations are based on emission factors from the IEA and market-based on other sources both in compliance with the GHG Protocol. The location-based method reflects the emissions intensity of the electricity grid where we operate, while the market-based method accounts for the emissions from the energy contracts we purchase, including renewable energy.

#### **Energy consumption**

Energy consumption data is collected locally from all our companies through the monthly financial reporting which is based on globally defined specifications and definitions. Both direct and indirect energy consumption is reported as well as the amount of energy from renewable and non-renewable sources.

#### Share of renewable energy

To classify electricity as sourced from renewables, appropriate certificates are required to verify an emission factor of 0 for the specific electricity consumption. Renewable energy sources include wind, solar, nuclear power, biogas, or green hydrogen.

#### Emission and Energy intensity

**The emission intensity** is the total greenhouse gas emissions in tonnes of CO<sub>2</sub>e (scope 1 and scope 2) divided by the total turnover in DKKm.

**Energy intensity** is a measure of energy expenditure in relation to a measure of activity. Energy intensity per turnover is defined as the total energy consumption in MWh or M<sup>3</sup> divided by the turnover in DKKm.

#### **Water consumption**

Water consumption data is collected locally from all our companies through the monthly financial reporting which is based on global described specifications and definitions. Water consumption is collected via local meter reading and invoices.

#### **Environmental Product Declarations (EPDs)**

EPDs are prepared locally in accordance with international standards such as 14025/EN15804.

The scope of the EPD includes the full product life cycle or specified life cycle stages (e.g., cradle-to-grave, cradle-to-gate). The data is collected directly from the manufacturing process, including energy consumption, material usage, and emissions.

The EPD is independently verified by a qualified third party to ensure compliance with applicable standards and accuracy of the declared data. The EPD includes a validity period (typically five years) and can be subject to revision if there are significant changes to the product or processes.





# SOCIAL

**Table 2: Social data, resultat**

	Unit	Water	Industry	Advanced	AVK Group 2023/24	AVK Group 2022/23	Development %	Description (2023/24 figures)
Number of employees	Number	3,256	1,130	638	5,342	4,880	9.47	The average number of full-time employees in the AVK Group as per 30 September 2024.
Fatalities	Number	0	0	0	0	0	0	All AVK companies.
Number of work-related accidents resulting in absence	LTA	29	9	9	47	49	-4.08	LTA = Lost Time Accident = number of accidents with >1 day's absence. All AVK companies.
Number of accidents per 1 million working hours	LTAFR	4.69	4.19	7.42	4.63	5.28	-12.31	1,900 working hours are used as an average (ref. OECD). All AVK companies.
ISO 45001 certifications	Number	16	10	4	33	30	11.11	Applicable for all AVK production companies.

\* We have a few companies outside the three mentioned business segments – these companies are included in Total AVK Group.

## Comments to Social

### Work accidents

To reach our 2030 goal of reducing the Lost Time Accident Frequency Rate (LTAFR) to below 3.0, we have established several milestone targets. LTAFR shows the number of accidents per one million working hours. Read more about our goal for decreasing our work accidents in the chapter "Our social responsibility".

The goal for 2023/24 was to reduce the Lost Time Accident Frequency Rate (LTAFR) to below 5.0. By the end of the year, the LTAFR had decreased to 4.63 accidents per million hours worked, down from 5.28 in 2022/23.

It is important to emphasise that the accidents that have occurred this year are all minor and have not led to long-term absence.

Figure 6 provides an overview of the accident frequency rate in the past four years, taking into account changes in the number of employees.

### Health and Safety management (ISO 45001)

ISO 45001 plays a key role in strengthening our Health & Safety (H&S) structure and to ensure continuous improvement. Already, 35 of our companies have achieved this international certification, emphasising our commitment to the systematic management of workplace health and safety.

### Safety performance

Number of accidents per 1 million working hours

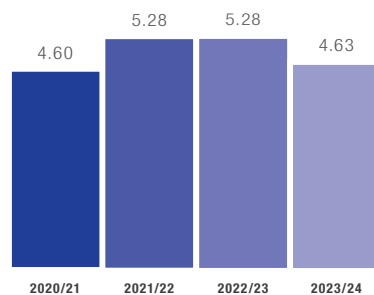


Figure 6

We are actively working to increase the number of certified companies in the AVK Group to ensure a consistent approach to health and safety across all business units. This effort supports our long-term strategy to promote a safe and healthy work environment for all employees, reduce work-related risks, and enhance our compliance with regulatory and customer-specific requirements.

## Accounting policies (S)

### Accidents, Lost Time Accident Frequency Rate, and fatalities

Information on accidents is collected locally from all our companies through monthly financial reporting, following globally defined specifications and definitions. The specifications

and definitions of accidents resulting in lost time are outlined in AVK H&S document 01.020.

Reported accidents are verified by the AVK Group's Sustainability & ESG function to secure that reported accidents are inside the scope of accidents with lost time definition. Details about accidents and causes are documented.

The total number of accidents refers to work-related incidents that led to absences extending beyond the day of occurrence. Lost Time Accident frequency (LTAFR) is calculated as the number of accidents per million working hours.

Lost Time Accident Frequency Rate =  $(\text{Total Working Hours} / \text{Total Number of Accidents}) \times 1,000,000$

To ensure consistency and transparency across our global operations, AVK set an average of 1,900 annual working hours per employee. The benchmark of 1,900 annual working hours per employee is based on the global OECD standard for average working hours. This figure is adjusted to reflect the geographic distribution of our workforce, with the majority based outside the EU, including in China, and considers regional variations in working hours and labour legislation.

Fatalities are defined as accidents that occur at the workplace or while performing tasks directly related to one's employment.

# GOVERNANCE

**Table 3: Management data, resultat**

	Unit	Water	Industry	Advanced	AVK Group 2023/24	AVK Group 2022/23	Development %	Description (2023/24 figures)
ISO 9001-certifications	Number	36	16	7	67	63	6.35	Number of companies with said ISO certification.
ISO/TS 29001 certifications (Gas)	Number	6	2	1	11	11	0	Valid for all AVK companies that design, manufacture, and supply products for gas.
Supplier management and audits	Number				53	72	-27.78	Our Code of Conduct applies to all suppliers, but we audit based on a risk assessment in risk areas.

\* We have a few companies outside the three mentioned business segments – these companies are included in Total AVK Group.

## Comments to Governance

### Supplier management

In the financial year 2023/24, we performed 53 on-site supplier audits at selected suppliers, a decrease from 72 audits in 2022/23.

Ongoing supplier audits are conducted on-site according to a set programme. The frequency of audits is based on an internal country and product-based risk assessment. Risk management is documented and managed in our internal ISO 9001 documentation.

No major incidents were identified among the audited AVK suppliers that warranted the issuance of major non-compliance statements or other corrective actions.

See Figure 7

### Anti-corruption

No confirmed cases of corruption or bribery have been reported in the Group.

## Accounting policies (G)

### Board of directors

Diversity on the board of directors' level is measured as the ratio of women to men among the elected board members of AVK Holding A/S, the ultimate parent company not including employee elected members.

This is calculated at the end of the financial year.

### Anti-corruption

Anti-corruption is measured by the proportion of the relevant workforce – typically management, sales, purchasing, and others with external contact – who have formally confirmed their adherence to the policy.

Registrations are made directly by the local companies, and their share is reported to the parent company.

### Personal data protection

A Group-level Data Ethics Policy is applicable to all companies within the AVK Group.

### Supplier audits

Number

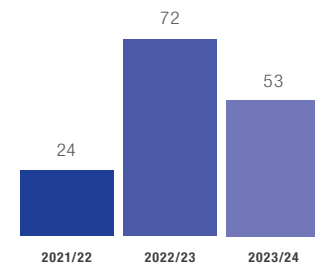


Figure 7



# POLICIES AND ESG REPORTING

## Risk assessment

We are closely monitoring the upcoming requirements related to the implementation of CSRD and ESRS. We fully understand the obligations this place on us as a Group, including the need for a future risk assessment. AVK will develop a comprehensive risk assessment applicable to the entire Group.

During 2023/24, the work with a double materiality assessment was initiated to align the ESG themes and the upcoming requirements of CSRD. The work on the double materiality assessment as well as the gap-analysis will extend over the next year.

## We will identify our risks and align them with relevant policies

Existing and new policies must be assessed and determined in each of the three areas (E, S and G) in accordance with the requirements of the CSRD, ESRS, and the future CSDDD. In the AVK Group, we have several policies, however, particular attention will be paid to policies in the following areas:

- E: Environment and Climate Policy
- S: Ethics/Human Rights Policy; Diversity Policy, Employment Relations Policy and Work-Related Health and Safety Policy
- G: Business Ethics Policy and Anti-Corruption & Anti-Bribery Policy

## Report on unequal gender representation in management

When recruiting and appointing managers at AVK, we adhere to the principle of selecting the most qualified candidate for the role. However, the technical and industrial nature of our industry has traditionally been male-dominated, resulting in a gender imbalance both at the management level and among employees overall. As such, we also have a responsibility to make our company more attractive to women and ensure a better balance between men and women.

Therefore, we have set a target of achieving 25% female representation on the Board of Directors in 2025/26. In the financial year 2023/24, women make up 17% of the Board of Directors excluding employee representatives.

On 1 October 2023, a new management team came into force with a Group Executive Board. On this board, two out of eight members are women, representing a proportion of 25%.

Management level 2 is AVK Holding Management Group. The AVK Holding Management Group comprises department managers from AVK Holding. The group demonstrates a gender diversity rate of 40%, with 4 of its 10 managers being women.

In all three management levels the gender composition remained unchanged compared to 2022/23.

To further reduce the gender diversity gap, management ensures, whenever possible, that qualified female candidates within the candidate pool are included in the final interviews for management positions at AVK Holding. At the same time, we want to strengthen efforts to increase the number of women in global leadership positions. Therefore, we pay special attention to gender equality when promoting

managers in the Group and reflect this in the succession planning process.

## Report on Data Ethical Policy

In line with digital developments, such as artificial intelligence, machine learning, and the increasing cyber threats, the AVK Group is increasingly focusing on the use of data and how to ensure that physical persons remain at the centre of the processing. A responsible data culture involves, among other things, ensuring transparency, protecting privacy, being accountable for data usage, and staying informed about digital developments, cyber threats, and the tools employed. Therefore, AVK adopted a Data Ethical Policy in the financial year 2021/22, revised in the financial year 2023/24.

Our Data Ethical Policy reflects AVK's core values regarding data usage, ensuring that we handle data with respect for individuals. The policy is accessible on the AVK Group's intranet.

AVK Holding	2023/2024	2022/2023
<b>AVK Boards of Directors:</b>		
Total number of members	6	6
Percentage of underrepresented gender	17	17
Target %	25	
Target year	2026	
<b>Group Executive Board (level 1):</b>		
Total number of members	8	8
Percentage of underrepresented gender	25	25
Target %	25	
Target year	2026	
<b>Management Group (level 2):</b>		
Total number of members	10	10
Percentage of underrepresented gender	40	40
Target %	40	
Target year	2026	

# OUR FUTURE ACTIVITIES AND AREAS OF ACTION

In the AVK Group, innovation and development of new and improved high-quality products with a long lifespan and recycling in mind play a crucial part. At the same time, it is in our DNA to act responsibly towards both employees, the environment, and the society around us.

Below is a summary of planned activities and efforts we have set out for the coming years.

## Our environmental and climate effort

In the coming years, we will implement processes and initiatives in line with the AVK Sustainability Roadmap. This includes prioritising minimal environmental impact and energy consumption as key criteria in both the design and production processes.

Planned activities for the coming years to reduce our environmental and energy impact include:

- Further implementation of ISO 14001 and ISO 50001 during the next years
- Increase the number of EPDs to cover more of our product range
- Continuing the installation of solar panels on manufacturing buildings
- Implementation a baseline calculation for Scope 3 for our larger EU companies in 2024/25
- Continuing efforts to reduce water consumption, especially in countries with scarce water resources and AVK companies with high water consumption

Likewise, we will continue to work on identifying methods to reuse and recycle materials in our factories. We will engage in partnerships that can ensure that we receive sufficient recycled materials for production, such as plastics and metals.

To reduce our energy consumption, we will conduct energy audits and update to LED lighting as well as implement programmable lighting and thermostats.

## Our social responsibility

As a global Group, we take our social responsibility seriously. This means that we provide attractive jobs and want to create the

best framework for employee development and well-being.

Planned activities for the coming years related to our social responsibility include the following:

- Further implementation of ISO 45001 in 2024/25
- To reach our safety target of an accident frequency rate (LTIFR) of less than 3.0 by 2030, safety work will be further intensified during 2024/25 and in the future
- Set global measurement of sick leave and monitor status
- Implementation of our Code of Conduct for employees in all our companies

Minimising the number of occupational accidents and ensuring the health and well-being of our employees remain a high priority for us. To achieve this goal, we will continue to focus on health and safety during 2024/25 and the following years. In addition, we strive to enhance safety behaviour by prioritising internal communication and training and by increasing visibility around safety and improvements.

Moreover, in our ongoing commitment to ensure that our suppliers act respectfully and adhere to our Ethics and Human Rights Policy, we will implement a newly revised Code of Conduct for employees and provide training on human rights policies and procedures.

AVK aim to remain an attractive workplace by fostering an environment that supports employee development and well-being. The newly created People & Leadership function will continue to set the direction for how we conduct good leadership in the AVK Group as well as how we work strategically with processes for succession planning, leadership development, talent management, and recruitment. In addition, we will improve our diversity data. Initially, the measurement is

primarily on the gender composition of the management team, but diversity in this context is understood more broadly to include age, seniority, nationality, and other parameters on which we will initiate data collection.

Similarly, to enhance our focus on global well-being in the future, we will begin collecting global sickness absence data, using a standardised definition, starting in 2024/25. We expect to be able to use collected data, set goals, and share targeted global efforts within this area in the future.

## Our governance

ESG must be a fundamental aspect of our business. As a company, we are committed to meeting the legislative requirements set forth by CSRD, ESRS, and CSDDD in the coming years. Consequently, during 2024/25, we will develop an AVK Sustainability Roadmap based on our findings of our double materiality assessment. This roadmap will provide a comprehensive overview of requirements and integration of activities.

Planned activities for the coming years related to governance include:

- Develop an AVK Sustainability Roadmap based on the findings in our double materiality assessment
- Increased focus on our Code of Conduct for suppliers and initiate an internal audit process to ensure compliance
- Review of our Business Ethics Policy and Anti-Corruption and Anti-Bribery Policy

In the coming years, we will optimise our process and documentation around the Code of Conduct as well as for anti-corruption and anti-bribery. We work continuously and systematically with registration, control, follow-up, and further development of the supplier collaboration to ensure compliance with the Group's policies, including the Code of Conduct.

At the same time, we will ensure positive communication with our employees, our customers, and other stakeholders to achieve the support and commitment needed to succeed on the future sustainability and ESG journey.

# OBJECTIVES FOR THE FINANCIAL YEAR 2024/25

Table 4: Environmental data, objectives

Environmental data	Unit	Result 2023/24	Objective 2024/25	Action (Description)
CO <sub>2</sub> e , Scope 1 + scope 2 (Marketbased)	Tonnes	50,977	5% ↓	Reduction of CO <sub>2</sub> emissions by phasing out fossil-fuelled company vehicles and natural gas, increasing our use of renewable electricity, and installing solar energy systems. Reduction in number of fossil company vehicles and natural gas.
Water consumption	M <sup>3</sup>	206,088	1% ↓	Local improvement initiatives such as recycling of water at test stations and water-economical lavatories.
Waste for reuse/recycling	%	46%	> 65%	Degree of waste that can be recycled. Monitor local waste fractions and thus increase recyclability.
ISO 14001 certified production companies (number of total)	Number	48	49	One additional AVK company in the process of achieving its ISO 14001 certification.
ISO 50001-certifications	Number	3	>6	Three additional AVK companies are in the process of achieving ISO 50001 certification.
EPD certification	Number	15	>15	Applicable for all AVK production companies.



**Table 5: ESG key figures, objectives for the financial year 2024/2025 →**

Social data	Unit	Result 2023/24	Objective 2024/25	Action (Description)
Number of employees	Number	5,342	--	The average number of full-time employees in the AVK Group as per 30 September 2024.
Number of work-related accidents resulting in absence	LTA	47	<45	LTA = Lost Time Accident = number of accidents with >1 day's absence. All AVK companies.
Number of accidents per 1 million working hours	LTAFR	4.63	<4.5	1,900 working hours are used as an average (ref. OECD).
ISO 45001 certifications	Number	33	35	Three additional AVK companies in the process of achieving their ISO 45001 certification. Applicable for all AVK production companies.

**Table 6: ESG key figures, objectives for the financial year 2024/2025 →**

Management data	Unit	Result 2023/24	Objective 2024/25	Action (Description)
ISO 9001 certifications	Number	67	68	Applicable for all AVK production companies.
ISO/TS 29001 certifications (Gas)	Number	11	11	All AVK gas companies have implemented ISO 29001.
Supplier management and audits	Number	53	>50	We audit based on a risk assessment in risk areas. We will expand our activities to other countries such as India and Brazil.



